

ZEPHYR



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Atmospheric Environment Service



CHRISTMAS ISSUE 1985

Working Christmas Shifts — Just Like Any Other Day

Two out of five AES employees will give up at least part of their Christmas to carry out essential work — helping to supply the public with weather information at a crucial time of year.

Even though operational staff regard working overnight on Christmas Eve or early or late on Christmas Day as something slightly unnatural, a recent Zephyr survey drew the overwhelming response: "Working Christmas shifts is no different from working at any other time. There is nothing really special about it". Despite the above, there is no doubt that the challenge of working over Yuletide creates uncommon bonds between all the staff involved. Al Campbell, of the Weather Services Division at AES Downsview Headquarters, says "There is a feeling of being part of a unique team at a special time of year."

The Zephyr survey also revealed that there is some celebrating on the job; that given cooperation from the weather, Christmas shifts are fairly quiet and that the main thoughts of personnel at the weather offices are with their families.

For employees like Ron Huibers, Marcel Savard, or Gary Cormick, who have spent much time in isolated or northern stations, there are memories of special Christmas fare served at the forecast desk sometimes part of a "smorgasbord" contributed by the families of various duty personnel. "The worst shift is the 4 p.m. to midnight stint", says Gary Cormick, currently working at Yellowknife, N.W.T. It means that Christmas with your family ends around 2 p.m. just when everyone else is getting started". Francophone Marcel Savard, now at Frobisher Bay, says his loneliest Christmases occurred when he had problems speaking English. Huibers, now at Toronto Weather Office, but previously serving at Arctic weather stations, says one advantage of spending Christmas in remote outposts is getting to reflect on the meaning of Christmas and

how it feels to be separated from friends and family.

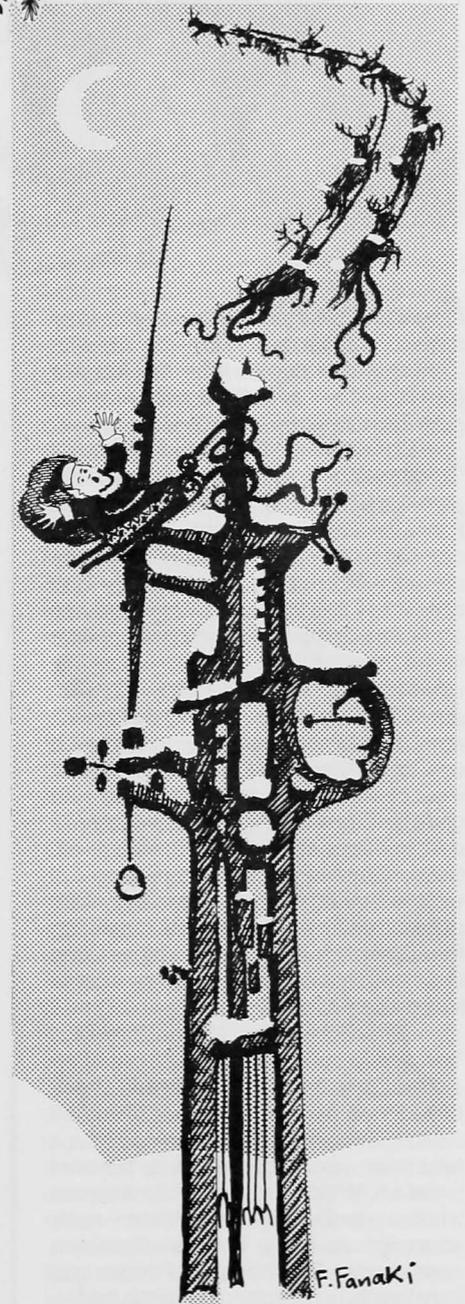
All three agree that one of the best ways to pass a quiet Christmas shift is to watch the many Christmas messages on the AES communications system. These include ornate computerized drawings, personal greetings from "ocean to ocean", or reports on the progress of Santa Claus coming south from the North Pole. It may not create waves of excitement, but the annual Christmas greeting from the ADM to AES staff away from their homes and families is highly appreciated.

Dave Burnett, shift Supervisor at the Edmonton Weather Office, says that there is some flexibility in scheduling Christmas shifts. He tries to arrange for employees with young families to get Christmas off entirely. He achieves this by giving many employees a choice of working Christmas or New Year's. Those who for religious or other reasons do not observe Christmas are most likely to work on December 25. "We're not that busy most years, so we can reduce staff working at the Office on Christmas from around six to four", he adds.

Burnett says that those who do work often receive friendly messages from radio or TV stations, who salute AES people as essential workers. They also receive cakes, fruit, chocolates and other gifts from listeners or viewers. Since the number of "serious" calls is frequently less, staff don't mind answering the inevitable "barometer calls" that flood in once presents have been handed out. If someone has just received a barometer, they tend to phone in to ask how it works. Burnett says he has no objection to staff handling "leisure enquiries" provided other business is quiet.

To suppose that Christmas shifts are full of bizarre incidents is a myth. If there's anything to remember about Yuletide, it's

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Canada

Nostalgic Christmas at the Regina Weather Office



Regretting that times have changed beyond recognition, Prairie Weather Centre meteorologist Anna McDougald takes a sentimental look back at Christmas celebrations on the job in Saskatchewan.

Christmas at the Regina Weather Office was a zany and irreverent affair, perhaps best appreciated by anyone who has been forced to spend that holiday in a combat zone. Smack in the centre of the operational area stood a scrubby and completely unbotanical-looking specimen of plastic planthood purported at one time to be a scotch pine, but now simply referred to as "The Office Tree". Wrestled out of its storage carton in early December, and trimmed by muttering "elves" who used clumsy loops of Pibal string to anchor most of the ornaments, it shed tinsel and glass globes at the slightest provocation—and occasionally, for no reason at all. Cussed as often as it was complimented, it went on trying to live up to everyone's expectations without ever quite managing to succeed. Maybe that was why we loved that little tree; in some strange way it came to represent all of us.

On Christmas Day, though, the Office Tree finally came into its own, standing ineffectual guard over a mountain of gift-boxed nuts and candies that dwindled steadily as even the most diet-conscious sent their calorie budgets into terminal overdraft. Windows, meanwhile, flaunted whole galaxies of snowflakes, each scissored carefully from a discarded weather map. Punched-paper ribbon was transformed into ragged garlands and—as much an adjunct to Christmas as turkey and mistletoe—sheets of paper bearing step-by-step instructions on how to set and read an aneroid barometer were tacked beside every telephone. (It is common knowledge that Christmas-Day callers can be segregated into three distinct groups;

law enforcement officers, working fire-fighters, and people who get barometers as gifts.)

As the day wore on a spirit of mischief pervaded even our staid old distribution networks. Raunchy Christmas cartoons managed to insinuate themselves into facsimile schedules. Poems scrolled out of the teletype between data collections, to be followed by the most cherished Christmas messages of all, the metre-long "graphics" that were the work of anonymous communicators at isolated weather stations, consisting of entire Nativity or festive scenes carefully executed in blocks of text. Cartoons, poems and artworks were collected and displayed around the operational area, our Christmas greetings to one another, unique and most definitely non-regulation, but something entirely apart from the more conventional ones festooning all the carpeted offices across the hall.

"Santa", of course, had paid us his annual visit about a week before, during the annual Staff Party. This was a very informal affair highlighted by the handing out of gifts purported to be from the Old Fellow but which actually were from staff members themselves. Donors and recipients had been matched through an "all ranks" name draw conducted in early December.

Santa's deputy and helper was Ludo Bertsch—a lanky, gentle giant of a man with a happy talent for combining old-world gallantry with a rough-and-ready "frontier" wit. More than one holiday traveller waiting for a flight was treated to the spectacle of Judo, swathed in a candy-striped robe and with a red toque askew on his head, striding through the airport lobby like a fantastic Pied Piper and playing Christmas carols on his concert violin while the rest of us came tagging behind.

Field Services Becomes Weather Services

As AES employees we have all had the following experience when talking to friends and acquaintances. The inevitable question comes up, "and what do you do for a living"? The response: "I work for the Atmospheric Environment Service" is usually followed by an explanatory statement such as: "you know, the Weather Service" and we get nods of understanding.

Now, as a result of a name change, approximately three-quarters of AES employees who work for the Field Services Directorate can state that they do, in fact, work for the Weather Services Directorate. The name change was announced by ADMA Jim Bruce on October 23, 1985. In his memorandum on the subject, Mr. Bruce stated he was confident that the re-naming of the largest AES Directorate would serve to emphasize to all our clientele, both external and internal to the Federal Government, that the major role of the AES is the provision of high quality weather services. The name change precedes an organizational change within the Weather Services Directorate at Downsview which will see the responsibility for planning, functional direction and control of the Weather Services Program under a single director-general. The target date for implementation of the new structure, under Dr. Ian Rutherford, as director-general of Weather Services, is April 1, 1986.

December 25, 1972 — A Christmas Day rainstorm in Vancouver broke the all-time 24-hour rainfall record of 89.4 mm. More than 50 precipitation stations in the Vancouver district recorded in excess of 100 mm during the storm.

ZEPHYR

ZEPHYR is a staff magazine for employees of the Atmospheric Environment Service, Environment Canada, produced by the Information Directorate of Environment Canada.

Please address correspondence or article contributions to: ZEPHYR, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario M3H 5T4.

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Environment Canada / Environnement Canada

Atmospheric Environment Service / Service de l'environnement atmosphérique

Christmas shifts, Continued

probably unusual weather. For example, Raymond Guérin, Officer-in-Charge of the Dorval Weather Office, recalls the stormy Christmas of 1966, when it took him 5 hours to drive from his home in St-Hyacinthe (normally less than an hour's drive away), to his work at the Central Analysis Office, which had just received its first weather forecasting computer. Since heavy snow had been forecast for Christmas, Guérin left his Christmas Eve Reveillon early, to be sure of getting to work on time around 7 a.m. Christmas morning. But 15 inches of snow on the road so slowed him down, he didn't make it until 9:30 a.m. Saying that all Christmas shifts are "sacred" for the assignees, Guérin was pleased to note that six out of eight meteorological staff showed up despite the storm.

Vern Leblanc, a presentation technician at Dieppe, N.B. worked the 4 p.m.–12 shift one Christmas Eve. But when heavy snow prevented the midnight shift from relieving him, he and a flight services officer carried on working until 10 a.m. next morning. He remembers sitting at the console trying to keep awake, answering a steady stream of enquiries about the storm. Finally the FSS officer went home with him for a belated Christmas dinner.

Over 2,500 Canadian volunteer climate observers take temperature and precipitation readings 365 days a year. Most remember their Christmas Day work only when there is some unusual weather. Lloyd King who has been a volunteer observer for 25 years and lives on an Indian reservation at Hagersville, Ontario, keeps careful records reminding him that Christmas 1982 saw the thermometer hit a balmy 14 degrees C, whereas Christmas 1980 was so cold and snowy he had to shovel his way through 20 centimetres of snow to reach his instruments. Mrs. Harold Smith, a retired farmer at Baldur, Manitoba, recalls that Christmas 1983 saw a record 39 degrees C below. While one of her six grown children was trying to rescue his truck from a snow bank down the lane, Mrs. Smith was out in the storm dressed in her skidoo suit and mukluks in near-zero visibility taking her observations at 7:45 a.m. "just like any other day". Everett Cahill, a stock farmer of Alberton, Prince Edward Island, had a bad Christmas when all seven of the wooden summer cottages he rents out to vacationing tourists, were washed out to sea. He and his brother managed to rescue them with a bulldozer. This Herculean task did not prevent Mr. Cahill from taking his readings at the climate station.

Unusual Christmas incidents in weather offices are quickly forgotten — or perhaps AES staff are reluctant to talk about them. Despite this, an unusual story does sometimes surface. (Please see specially contributed Christmas articles

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A Christmas Message from Jim Bruce

This issue of Zephyr honours the many hundreds of AES staff, and thousands of volunteer observers, who give up all or part of Christmas and other holidays to carry out essential observational forecasting and dissemination tasks. My special thanks to all of you.

Many other government services can be delivered to the public from 9 to 5, 5 days per week. But the weather warnings and forecasts which serve to protect lives and property must be issued and updated on a 24-hour-a-day basis every day of the year. In Canada, where we live on the cold margins of human habitation, such services are vital to survival and to economic activities. It is not surprising then that they have been part of government services for well over a century. You who are working on Christmas day 1985, are carrying on a very long and honourable tradition of service to Canadians.

In the past year AES has renewed its emphasis on the provision of high quality weather information in a number of ways. Perhaps most significantly we have re-named our largest Directorate, including all of our regional operations. It is now the Weather Services Directorate, instead of the Field Services Directorate, to emphasize the most important output of the Directorate and of the whole of AES. In a more practical way we have seen significant improvements in the quality of the forecast weather maps from CMC, with new models introduced on the CRAY; new radar and satellite read-out and data processing facilities have helped sharpen our short-range forecasts in a number of regions; dedicated marine forecast desks have been initiated in Vancouver, and the Canadian Atlantic Storms Project is being mounted in the Atlantic Region, both efforts to improve weather and sea-state forecasts to fishermen and boaters; improved radar data for southern Ontario from King City; new Arctic aviation services have been introduced including a daily aviation weather broadcast carried by CBC that covers most of the far north.

These are but a few of the important advances of the past year. They illustrate that even with serious constraints on dollars and staff numbers, we are able to make improvements and are able to serve Canadians even more effectively than in the past.

In addition to these improvements in weather services, we have been making major advances in other aspects of AES responsibility. The Canadian Climate Program is creating a new awareness among Canadian political and business leaders of the importance of climate and climate change to improving many major economic decisions. International consensus is growing on the increasing concentration



of greenhouse gases and their role in warming the earth's climate. There is also increasing realization that the increases of CO₂, CFCs, tropospheric ozone and other gases that are warming the earth's climate, are only one manifestation of an increasing contamination of the atmosphere of our small planet. Other consequences are acid rain, and threats to the stratospheric ozone layer which protects all living creatures from excessive ultra-violet solar radiation. On these issues, AES has not only been contributing to knowledge at the leading edge of the science, but staff members have played key roles in translating the science into international action in the Ozone Layer Convention signed in Vienna last March, and the protocol for SO₂ emission reductions signed by twenty European countries and Canada in Helsinki in July.

Yes, we can be proud of our collective achievements since Christmas 1984, and can expect additional major initiatives in 1986, especially in the ice program where new iceberg forecasting services will be introduced.

In such interesting times, I have very mixed feelings in noting that this will be my last Christmas with you as ADM-AES, since I will be retiring from the Service early in January, after 36+ years with the Government of Canada. I leave, knowing that the leadership and management of AES, and the staff at all levels, are exceptionally competent and dedicated to the provision of services of high quality to Canadians.

Best wishes to all friends and colleagues in AES and have a great year in 1986.

Jim Bruce ADMA



Air Quality's Clean-up Extends to Inner Space

The Air Quality Research Branch at AES Downsview may regard the quality of the atmosphere as its top priority but it is also concerned with the quality of its inner space. This was evident in September when branch director Jim Young decided to hand out his 1985 Clean-up awards.

The certificates were awarded for outstanding effort by four branch employees who had made the most progress in tidying up paper-clogged offices.

Dr. Young explains that a review team went twice to all participating offices and carefully noted how much paper had been recycled, how many reports had been filed and how many books had been returned to the library between the first and second visits.

Prizes were then awarded for percentage improvement. First prize went to Pat Pearson, with an impressive 80 per cent score. Evonna Mathis came second with 71 per cent. Ita Gandhi scored 67 per cent and Bob Vet scraped in with 50 per cent.

Dr. Young, who lays no claims to being a tidiness expert himself, says this was his second clean-up award. The first, held about two years ago, was considered a success, so he decided to repeat and

Christmas shifts, Continued

and some offbeat items in the Christmas Breezes section.)

Some interesting accounts have been sent in by Paul Ladouceur, OIC St-Hubert, Québec. They were compiled by former work colleague Jean-Claude Leblanc. The latter remembers working the overnight Christmas shift at St-Hubert in 1975. To keep him company, he took his large Samoyed dog with him. Regulations bar pets inside weather offices, so he tied it up outside. When he went outside for a break, he found the dog was missing — its leash broken by a violent wrench. Not sure what to do, he alerted the military at the St-Hubert Base. All during Christmas night, a platoon in combat uniforms, waving flash lamps searched the airport in a military operation. As dawn approached, M. Leblanc was about to give up hope when there was a knock at the door. Two militiamen entered holding his dog by the collar. They had spotted it on one of the runways. "Its return was my greatest Christmas gift", recalls Leblanc.

Not all Christmas stories are happy. The wife of a Met Tech in the Maritimes brought in a smoked turkey as the mainstay of an on-the-job Christmas dinner. Unfortunately, it caused food poisoning and landed at least two people in hospital. Occasionally you get negative reactions to Christmas. For example, some AES employees say that Christmas in the High

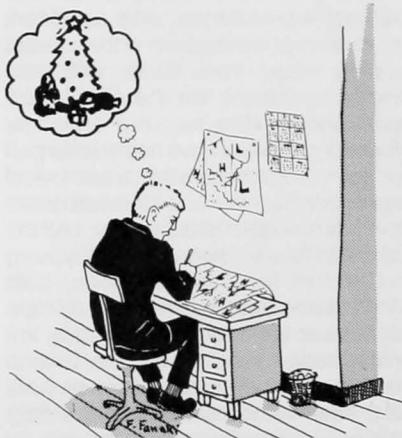


At ceremony, left to right. Back row: Dr. Jim Young, Dr. Bob Vet. Front row: Ita Gandhi, Pat Pearson, Evonna Mathis.

expand the initiative. He says the "philosophy" behind the clean-up is to take one day in the year and attempt to create some much-needed extra space in branch offices. He adds that the clean-up campaign is a voluntary, good-humoured affair and concludes "Non-participants or low-

scorers are never penalized. We just want to recognize people who make an effort leading to more efficient use of space."

Honourable mentions were given to Gerry den Hartog, Fouad Fanaki, Keith Puckett and Barb Grogan.



Arctic is "for the birds" and if you happen to be there during this totally dark season, you might as well "forget it".

"Not so" says Ted Drozd who was OIC at Mould Bay in the early seventies. He maintains that, with the right atmosphere, Christmas can be a memorable occasion for those serving in the Arctic Archipelago. Drozd remembers how Christmas dinner, specially prepared by the chef for about 10 men (in those days there were no women), was something to look forward to and a rare moment for relaxation and banter. In fact it bred a sort of "AES family spirit". "The Christmas meal was one of the few times that we had candles and linen on the table. Those who participated probably still remember the meal".

In the days when mail and supplies came only about once a month, Drozd says the prompt arrival of the plane was a major event for all AES staff. Ideally the aircraft touched down a week before Christmas, and the presents were unloaded on a large pool table, soon to be eagerly opened by the men. The same plane usually took two or three employees out for some promised Christmas leave. Drozd says these people became very tense when the scheduled pick-up date drew near. "We could hear the planes circling round waiting for a break in the weather. We would go out and put flares on the runway to attract them down. When a plane landed, it was a great relief. Sometimes they had to give up the attempt and head off down south. In that case it would be a gray Christmas — no mail or supplies.

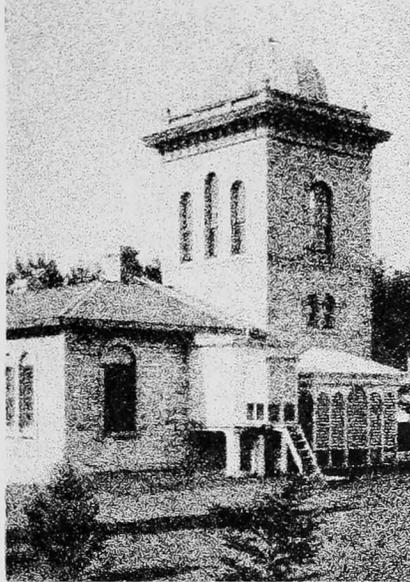
Doug Fraser, head of the Forecast Systems Section, Downsview, says although a large proportion of the weather service now works over Christmas, he does not foresee any great expansion of this type of work in the future. True, weather centres now have more meteorologists doing professional work than ever — both at Christmas and during the rest of the year. But with the onset of automation and the rationalization of AES, Fraser foresees an eventual lessening of the numbers required to work shifts. . . and happily that means more AES personnel will get home for Christmas.

Christmas 1839

The first Christmas for meteorological staff in Canada was in 1839. The newly appointed director of Her Majesty's Magnetic and Meteorological Observatory, Lt. C.J.B. Riddell, Royal Artillery, arrived in Toronto late in October that year and began to make arrangements for an observatory and accommodation for his staff at Fort York, near the foot of Bathurst Street at the lake. The detachment arrived in Québec on November 1 after 57 days at sea during which a portion of the cargo had to be thrown overboard to lighten the ship during a storm. The meteorological equipment was apparently saved, however, since the detachment with "the whole of the instruments" consisting of 40 or so packages weighing 8 to 10 tons arrived in Toronto on November 24.

The detachment consisted of 3 non-commissioned officers to act as observers — Corporal James Johnston, Bomber James Walker and Acting Bomber Thomas Menzies without wives or families, and two gunners, George Watson and Joseph Graham, to act as orderlies and messengers, with their wives and 5 children. An unoccupied barracks was made available for living quarters and one room was altered (plastering, double windows, shutters, etc.) for use as a temporary observatory. Just before Christmas, Riddell sought permission from King's College (later the University of Toronto) to use two acres of their property for an observatory and accommodations for the staff. On December 31, 1839 the College granted the land and Riddell began to plan for the "special observing program" which had been authorized to last for three years. The new observatory was subsequently occupied on September 1, 1840.

As far as can be told from the records available today, Riddell and his detachment spent Christmas Day in the Fort York barracks. There had been some difficulties in December over the eligibility of the families to draw Army rations. This was authorized, however, and so we can assume the families enjoyed Christmas dinner in the barracks. How comfortable they were there is questionable since the authority for plastering, adding double windows and other alterations applied only to the observatory room and not to the living quarters.



Weather Observatory, Toronto, 1871

There is a legend that the first meteorological observations were taken on Christmas Day, and this may be true since the official Toronto Observatory data series begins with January 1840 and several days of trial observations must have been taken first.

Christmas 1871

By December 1871 Professor George Kingston had been director of the Toronto Observatory for 16 years and had, a few months previously, obtained a few thousand dollars to set up a national weather observing program. By early 1871 Kingston was in correspondence with several dozen observers who sent monthly reports to him. In June 1871 the department authorized the establishment of 3 chief stations where complete observations were to be taken every 3 hours and sent to Toronto weekly by mail — G. Murdoch at

Saint John, Frederick Allison at Halifax and Dr. Charles Smallwood at Montreal. However, before this system could become well established Kingston had begun to negotiate with the Americans for a daily exchange of data and he found he needed observers to report daily by telegraph.

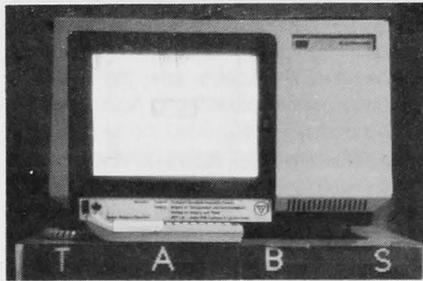
Consequently, during the summer and fall of 1871 Kingston's role changed from that of the director of a small observatory to that of a federal bureaucrat. The Americans did not want, at that time, telegraphed data from Québec and the Maritimes but from stations in the lower Great Lakes area. During that fall Kingston was successful in recruiting J. R. Stewart at Saugeen (Southampton), M. Payne at Port Stanley, H. Morgan at Port Dover and S. Woods at Kingston and each began sending telegraphic reports regularly on January 2, 1882 which were forwarded to Washington. Montréal and Toronto reports were already being sent daily to the Americans. Contact had also been made with the Bishop of Rupert's Land for a chief station in Winnipeg, with Professor J. Montgomery for one in Woodstock, Ontario and with J. Murray for another at Spence's Bridge, B.C.

By Christmas 1871, Professor Kingston had a meteorological family stretching from the Pacific to the Atlantic, even if there were large gaps west of the Great Lakes and all reports were received by mail. At Toronto the observatory staff numbered only 3 observers and a messenger. Outside Toronto the observer at each chief station received a salary of \$400 a year and each telegraph observer about \$25 a month. The remainder of the stations, 80 or more by Christmas, reported voluntarily. Incidentally by Christmas, Kingston did not have formal authority to pay either the telegraph reports or telegraphic charges but he had offered to do so out of his own pocket, if necessary, for the month of January.

Christmas 1871 was not then a very affluent Christmas for the meteorological family but Kingston and others must have had a great sense of achievement and perhaps realized that the first step in establishing a national service had been taken. However, they never would have believed that an agency as large as today's AES would ever result from their pioneering efforts.

Morley Thomas

EMPLOYEE EQUIPMENT



TABS is Telidon Aviation (Weather) Briefing System — a test project jointly funded by Transport Canada, the Province of Ontario and monitored by AES. The system itself is maintained by the MEP Co. under contract to Transport Canada. It is designed to reduce the load of telephone calls flooding Weather Offices and Flight Service Stations.

The test project consists of telidon terminals installed in 24 airports around Southern Ontario. Each terminal is programmed to display data the aviation industry needs to know about current and forecast weather conditions. Data is of course drawn from AES weather centres but shorn of everything inessential to aviation. For example, a pilot about to make a flight westward from Toronto will want to know what upper air conditions are around, say, Thunder Bay. A simple combination on the keyboard raises a brightly coloured graphic displaying cloud formations, their height, the location of ice and turbulence, and the freezing level between Toronto and Thunder Bay, to a height of 18,000 feet. But as TABS is state of the art meteorology, it can display a complete variety of weather information — especially pertinent data which the aviation industry needs to know. And the scope of TABS is potentially continental.

The specifications for TABS were created by John O'Reilly of AES Weather Services Division and Tom Ostry of the



Ontario Weather Centre. The idea is that pilots and aviation personnel will use the TABS terminals to collect the Weather information they need instead of phoning weather offices or barging in in person. Quality control of TABS data is monitored by Ontario Region who also monitor the rate of aviation telephone calls — to see if TABS is reducing them.

The test continues until March 1986. John O'Reilly believes that the test may then be extended for another year. If test results are substantial, Transport Canada will consider installation of the system across Canada.

Meanwhile, for its organization and inclusiveness of aviation weather data — for the entertaining effects of its graphics — and for simplicity of operation — TABS cannot be better done — a claim that can be checked out by visiting the TABS terminal in the Downsview lobby.

The TABS spokesman — John O'Reilly — has had an interesting career. He is a graduate of Upper Canada College, has a B.Sc. in aeronautical engineering, took postgraduate training in meteorology with Transport Canada, and has been an operational meteorologist and weather office OIC in many stations in northern and eastern Canada. His tours of duty brought him to the Ontario Weather Centre in 1968 and to AES Downsview in 1975.

Clarence C. Boughner 1910-1985

Following a lengthy illness, C.C. Boughner, retired first Director General of the Central Services Directorate, passed away on August 21, 1985 in Etobicoke, Ontario.

A native of Norfolk County, Ontario, Clarence Boughner graduated in the first M.A. course in meteorology from the University of Toronto in 1934. A few months later he joined the Climatology Section of the Meteorological Service of Canada and became its Chief in 1949. Over the next 20 years Mr. Boughner directed and led the climatological activities of the Service as the strength of his division grew in size from about two dozen to 150 people. In 1966 he was awarded the Patterson Medal and in 1970 was acting Director of the Service for a lengthy period.

In the reorganization of the Service in 1971-72 to form the Atmospheric Environment Service of Environment Canada, Mr. Boughner became Director General of Central Services which then consisted of the Meteorological Applications, Ice and Training Branches. Both before and after reorganization Mr. Boughner played a leading role in planning and administering the Service through his active participation in Management Committee and in acting for ADMA in the latter's absence. His retirement date was October 23, 1973.

Mr. Boughner also played an important role for Canada in international meteorology. At the 1947 meetings of the technical commissions of the International Meteorological Organization in Toronto he was a delegate to both the Agricultural Meteorology and Climatology Commissions. Later that year he was a delegate at the Conference of Directors in Washington where plans for the present WMO were developed. Over the next 25 years he represented Canada at numerous WMO meetings in Geneva and foreign national capitals. He was an active participant in the first six sessions of the Commission for Climatology and served as the Commission's vice president and then president over the 1956 to 1969 period. His practical common sense was appreciated in WMO circles; he was twice elected chairman of meetings of the Commission Presidents and for a period represented the commissions on a Panel of Experts dealing with the structure and organization of WMO.

On retirement Mr. Boughner retained an active interest in AES and WMO activities. He was an avid sports fan and enjoyed bowling and playing golf. Mr. Boughner was predeceased by his wife three years ago.

\$32,541 raised in United Way Campaign

The total raised by Environment Canada for the 1985 United Way campaign in Metropolitan Toronto was \$32,541. This represented a participation rate of 46.4 per cent.

According to Sonia Ventresca, 1985 United Way departmental coordinator, this year's participation rate was almost on a par with that of 1984 but the actual amount contributed increased by 10 per cent.

Environment Canada participants in the campaign included AES Head-

quarters, Ontario Region, Ontario Weather Centre, Environmental Protection Service, and the Regional Director General's office.

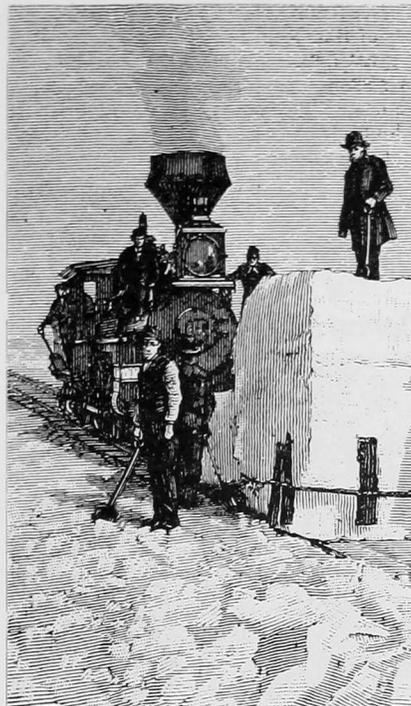
The group that contributed the largest amount was the Atmospheric Research Directorate (Downsview), which raised a total of \$6,696 for a participation rate of 33 per cent. The group with the highest participation rate was Information Directorate (Downsview) with 100 per cent participation.

"Workin' on the Railroad"

Jack Gubbins, a freelance contributor, recalls steam-era days working Christmas shifts for Canadian National Railways.

There are vast areas of Canada where there will always be snow on the ground on Christmas Day and one of them is the area north of Lake Nipigon. I was up there working as a telegraph operator in a railway station called Ferland on Christmas Day, 1946 — a long time ago in terms of our brief three score years and ten. Ferland was the station itself, and a water tower and coal chute — for those were still the days of steam locomotion. In a clearing across the tracks from the station stood a log cabin inhabited by four wood cutters and a white mongrel horse. We used to spot a box car down a spur and they would fill it full of dressed wood and ship it to a customer down south. We had three telegraph operators on eight hour shifts. Mine was the middle shift — 4 pm to midnight — the rotation decided by seniority. My day off was worked at time-and-a-half overtime and I fancied myself growing rich, as all my expenses were met by the railway except food. Including the four wood cutters and the man working the water tower and coal chute, we were a community of eight, with a small nearby colony of native people — and we were surrounded by a million acres of Christmas trees.

But it was cold up there on Christmas Day — so cold that the lubricants in the train order gear system would granulate.



That is why throwing the train order signal was like pumping iron. When it was 40 below, I would have to jump on it with my feet to get the lever to go down. We didn't get a lot of snow but it was delivered to us by howling winds from the north. In the dark, at 11 p.m., when Number Four, the Transcontinental west, stood at the water tower, panting and steaming, snowflakes would slant horizontally across the long poking beam of its headlight. But every flake that fell remained on the ground until spring. Ten below (Celsius) was the mildest spell we ever got. And the snow would

accumulate into windblown drifts which made excellent deep freezers for perishable foods such as meat.

We had a waiting room in the station — I don't know why, because nobody ever got on or off a train at Ferland. And there was a huge pot-bellied stove in the waiting room which, ruby red, kept the station at a comfortable 35 degrees C. It actually sent sweat trickling down my spare, boyish ribs — so that when I stepped out on the platform to highball a freight or hand up a train order, my entire body from head to foot contracted like a vise.

My bed was upstairs at the back, far away from the stove — and I was always loathe to come out from under my pile-up of ten blankets and get dressed, my knees knocking together like billiard balls. But on Christmas morning — trained by 22 years of wondering what Santa had brought — I jumped out of bed in my longjohn underwear — which as far as I remember, out of necessity to keep warm, I did not take off from October 1946 to the end of April 1947. I put on my thick flannel shirt, pulled on my pants, my thick woollen stockings, my felt-soled boots, put my arms into my Second World War battledress jacket with the six campaign ribbons above its left breast pocket, got into my parka, pulled the hood up over my head, dashed downstairs and out the door to see what Christmas Day was like. Well, it was dazzling — blue sky, the sun up above the Christmas trees, the snow crunching underfoot, my nosetip feeling the nip — and the eastbound Continental stood stock still on the track, ten cars long, its big 6100 engine up by the water tower, letting off cloudy white steam. Up above me were long rows of windows with people staring down as though I were a rare species of animal in a zoo — and all the time eating sumptuous Christmas breakfasts in the diner.

It was a great sight on Christmas morning — that beautiful long passenger train sitting there with its great long black locomotive — steam shooting out from around spoked wheels taller than I was. Exhilarated, I climbed aboard and went through the day coaches "Merry Christmas" everybody and sharing just a little of their Christmas cheer. When I returned to the station waiting room, I cozied up to the stove, took a package of Sweet Caporal cigarettes from my beribboned battledress pocket, lit up, and puffed away contentedly. The package was empty so I threw it in the stove, then suddenly realized that my crumpled pay cheque, in that same pocket, had also accidentally dropped into the stove. For a moment my mind went blank. Was my Christmas going up in a fiery inferno? But I calmed down. I did not really need the money. I could ride the trains to all the stores within a 40-km radius and obtain my groceries on credit. Then, by the end of January, a benevolent railway company would gladly replace the incinerated cheque.



When the new deputy minister Dr. Geneviève Ste-Marie visited AES Downsview Headquarters on September 26, one of her main activities was to present Royalty Awards to four scientists in the Experimental Studies Division of the Atmospheric Research Directorate. They are seen standing left to right: Dr. James Kerr, Dr. Wayne Evans, Dr. Thomas McElroy and Dr. David Wardle. Looking on are Joe Boll, director, AES Administration, seated far left, and ADMA Jim Bruce (far right). The scientists were all involved with research on and early development of two key instruments in the monitoring of atmospheric ozone: the Brewer Ozone Spectrophotometer and the Cosmos Sun Tracker.

FUTURE FORUM

Education, Dissemination Help Public Understand Severe Weather

All things considered, AES achieved quite a good lead time for the tornadoes that devastated parts of southern Ontario on May 31, 1985. But many people did not hear the warning — or did not know how to respond to it. As a result we asked eight employees of AES Ontario Region to express themselves freely about the effectiveness of Severe Weather Watches and Warnings and how the situation could be improved.

Norm Seguss



OIC, Mount Forest Weather Station

Unfortunately the public doesn't seem to know the difference between a Warning and a Watch. I've received many calls from people after a Watch has been issued wanting to know how close are the tornadoes, or how bad are the thunderstorms. If you tell them a Watch is just an alert of potential severe weather, they say they heard it on the radio. Maybe broadcasters should be better educated on how to expand on these bulletins. Maybe we should look at changing the term Weather Watch to Weather Advisory. Watch and Warning sound too similar. Advisory and Warning are obviously two different words.

Donna Elliott



Clerk, Data Acquisition

You have to be listening to a radio to know there is a Severe Weather Warning. If you're at a shopping centre or out on the street, you would have no idea, unless you looked at the sky and saw the bad weather. The public should be made more aware that we live in a tornado-prone area. They still think it only happens down in the United States, not in Canada. We need more publications telling people where they can get further information on severe weather. The public should know what to look for and what to do in case of a tornado. More people watch TV than listen to radio. The TV stations could put captions across the screen when a Watch or Warning is issued. Most of the time radio stations mention severe weather at the end of the news. The media should take a more responsible role.

Bernice Castonguay



Secretary, Scientific Services

The public and media should know why it's so important to listen for Severe Weather Watches and Warnings and understand the dangers involved. We should use billboards and signs to tell the public where they can get more information about severe weather. We should educate the kids in school who will then go home and tell their parents. There should be a universal sign like the Block Parents sign that the TV stations can flash on the screen once a warning is issued. Even kids who can't read would then know about the Warning and tell their parents. If the electricity fails, there should be a siren that lets people know what is going on. Basically, we need to educate people about the severity of severe weather.

Phil Aber



Regional Director

I would like to have our efforts concentrated on the detection, forecasting and dissemination of severe weather. The system that operates in Ontario Region is excellent. To improve it we have to discover its weak points and ensure that individuals get more lead time to enable them to take evasive action to protect their lives or livelihood. Newer radar developments such as Doppler Radar provide opportunities for earlier detection and better identification of areas likely to cause severe weather. Meteorologists' training covers advanced scientific knowledge but the best forecast in the world is not much use if nobody knows about it. So the emphasis is on dissemination. Weatheradio is up-to-date, timely in getting the information out and has an alert feature. We should now educate the public on its availability while

extending Weatheradio coverage into all populated parts of Ontario. Dissemination also means collaboration with the media. We have discussed with the television industry the idea of having "crawlers" across the screen announcing any severe weather events. We have discussed with radio people the interruption of regular programming immediately after weather warnings are issued. Lastly we must understand the listener, raise his or her educational level in the area of understanding warnings, their meaning and their immediacy. We are talking about it to provincial boards of education. We also hold media workshops, print severe weather pamphlets and use this theme for exhibits at city and country fairs.

Donald Jackson



Superintendent, Inspection Services

I think AES is making a reasonable attempt to inform the public. A brother of mine who is a farmer depends on weather reports to a certain extent. But like many people, he cannot listen to the radio 24 hours a day. He has a choice of radio stations but for some reason there are often inconsistencies between these stations when reporting the weather. This problem may not be within AES control. But we might persuade people to wear a little Walkman radio around their necks all day. Sometimes my brother has just happened to listen to the radio and then managed to get the barn door closed in time before severe weather struck. He says Weatheradio is wasted since many parts of Ontario cannot receive it. Personally, I don't think there should be Weatheradio unless *everyone* receives it. It's elitism to serve two big cities and ignore huge areas of the province. It's time we had a blanket of repeaters.

Mike Leduc



Severe Weather Meteorologist, Ontario Weather Centre

AES does a very good job monitoring and detecting severe weather and we're succeeding in getting the Warnings out of the office quickly. Our main responsibility is to distribute Warnings over the broadcast circuit to the media. But the media needs to be more efficient in getting the message out. Maybe there are other people to whom we could send the message who could help us ensure the public knows storms are threatening. I worked the day of the Barrie tornado, issued all the right Watches and Warnings with as much lead time as possible. But in reality most people in Barrie never heard those Warnings because the power was out at the radio and TV stations. One might question what responsibility the media has to ensure that they are broadcasting all the time, perhaps using emergency generators. Some local emergency groups should have guaranteed power and the capability of receiving messages through telex.

Sandy Radecki



Assistant Weather and Climate Services Technician, OCC

The warnings are very timely for large areas like Toronto or southern Ontario but they become less effective away from the Forecast Centre. In the south you get rapid information but in the north it sometimes doesn't get issued at all. Being highly

populated, southern Ontario receives the majority of Weather Watches and Warnings, which are somewhat lacking in the sparsely populated, data-poor north. The main problem is communications. If we really wanted to make the system effective, we should have better communications with the remote northern areas. In the case of the Barrie tornado the forecasters realized what was happening the day before and started issuing weather watches 12 to 24 hours in advance. They did a very good job.

Tony Chir



Officer-in-Charge, Waterloo-Wellington Weather Office

We presentation technicians and forecasters understand our responsibilities, but there is some public misconception. For example, there is a private meteorological sector and there is some confusion when one radio station in town carries an Environment Canada Weather Watch or Warning and the other station uses a private consultant, minus the advisories.

I think the two-tiered system of Watches and Warnings is good; at least most AES staff and other people know the system. But there should be more public education about the system, its timeliness and the difference between a Watch and a Warning. The emergency people have to know there is severe weather approaching. But in talking about mass dissemination, is it possible to find other ways to reach the public? You can make the most contacts by putting tags on the TV screen. Seen by thousands of people, they create instant reactions. Let's tell the media that weather warnings deserve top priority. It isn't good enough for a disc jockey to say he didn't issue a warning because he had a record playing. He just has to get these warnings on the air.

ZEPHYR BREEZES



Merry Christmas!

Standby for the Santa Sonde

Just before Christmas 1984 a Santa Claus was required for a party given for the children of Big Trout Lake, Ontario.

Local organizers were informed that good old Saint Nick could not attend owing to contract negotiations with the Elves. When notified of this, aerological technician Denis Thibodeau volunteered to be his replacement.

AES staff members donated time and money preparing treats for about 100 kids. The goodies were handed out at the Community Hall causing great excitement for both children and Santa.

All went well except Santa had to leave to attend another event known as an upper-air flight.



In this rare photo Santa is shown preparing to release a radiosonde.

And now, just for comparison's sake we bring you the Canadian General Weather Prediction for the Christmas—New Year period as published in the 1986 Canadian Farm and Home Almanac: "December 20-23. Cold West; mild East. Rain and snow continues to move east across Ontario and Québec followed by very cold polar air. 24-27. More moderate now. Rain and snow is lighter. Moderately clear and cold in Manitoba and Saskatchewan. 28-31. Cold with snow. All provinces experience cold weather with snowstorms from Alberta into Labrador. Warmer temperatures only on the West Coast and in southern Rockies.

January 1986 — 1-3. Clear, very cold Central Provinces; heavy snow and gales British Columbia and Alberta; variable skies but cold Manitoba to Atlantic Coast. 4-7. A breather from the cold. Storminess moves south as milder temperatures move inland; Manitoba and east are cloudy with frequent snow periods."

One of the more original entries in response to our invitation to write about how it feels to work at the weather office on Christmas Day came from a duty briefer in the Atlantic Region.

Typing his entry on an official Public Service Commission competition form, he writes up a tongue in cheek vacancy for "Work on Christmas Day" for a presenta-

tion technician. (Class EG-ESS-6).

Under *Duties* it says this person should "perform the daily duties the same as every other day regardless of the fact that it is Christmas. He should be extra nice and responsive, ensure kids with new sleds that it is going to snow (sometimes), and those with new bikes that a heat wave is coming (but not when). He should coordinate travel from place to place convincing people that streets will be passable (it may be by dogsled only, but why spoil their fun?)

Under *Qualifications* the gag competition sheet says it seeks experienced weather people who are tough-skinned and hard-nosed with preferably no family to leave at home eating the Christmas turkey alone. *Salary* is listed as "not enough" and the announcement ends with the slogan, "You, too, can work on Christmas Day."

The personnel of Argentia, Newfoundland Weather Office have written us a joint letter which reads in part: "Christmas Greetings arrive from Wabush, Churchill Falls, Deer Lake, Stephenville and our neighbours at YYT St. John's. And it makes us feel good to know we are not forgotten by AES at Bedford or Toronto.

"We are also glad to be housed in the Coast Guard Centre here at Argentia. They

are a wonderful bunch of people and they do enjoy joining with us in celebrating Christmas. We have a Christmas party, exchange gifts and decorate a tree. Needless to say it often falls down; then we decorate the janitor who is a very fun-loving person and he enjoys it fully. One shift may have the tree in one place and the second shift may like it somewhere else, and so on. So our tree is called a 'travellin' tree'. During these goings on, that's when we celebrate the most.

"Because the weather doesn't take a holiday on Christmas, many of us won't either. But cheer up, maybe we'll be off next year. . . ."

Peter Chen: then an MT-2 at Canadian Forces Weather Office, CFB, Cold Lake, Alberta, now with AES Ontario Region Scientific Services, submits this vignette dated December 25, 1975:

Another cold bright morning at CFB Cold Lake. . . A Christmas breakfast of filet mignon and eggs at a near empty mess seemed appropriate compensation for work on this day.

The official business of the day for the duty forecaster was about to commence as the last finishing touches of the morning map were completed. The base commander and the base master warrant officer arrived, hugging a large thermos of

"special" egg nog and a Polaroid camera. The photo with the Colonel was obligatory. The egg nog wasn't bad.

Can anyone tell us why the city of Medicine Hat, Alberta has been called the Place Where the Weather Comes From? The 1982 Edition of the Dictionary of Canadian Quotations and Phrases says this precisely is the nickname given to this southern Alberta city. The listing adds one clue — "after the establishment of the weather station, 1910". But an old Met Service work-book says a telegraphic weather station was set up in the city as long ago as 1884. The only mention of 1910 is the appointment of a new director — H.H. Hassard. Is it possible this person thought of this unique weather slogan and publicized it nationally? If you have any information, please let us know.



Jim Bruce serves bouillabaisse.

Now it can be told. The recipe for the delicious Bouillabaisse (fish stew) served by ADMA Jim Bruce at the AES Downsview Cafeteria during the United Appeal Awareness Day (September 25) and confirmed as being part of a family recipe, runs as follows:

Ingredients: 2/3 cup salad oil; one minced carrot; three onions minced; three pounds fish fillets; two bay leaves; one cup tomato pulp; three cups water; a few clams; two pimentos minced; two teaspoons salt; 1/3 teaspoon paprika; two tablespoons lemon juice; toast; two tablespoons minced parsley.

Preparation: use any kind of fish in small pieces. Heat oil with carrots and onions five minutes in heavy pot — add fish and bay leaves. Cook five minutes and add tomato and water; cover, simmer for 20 minutes; turn down; add clam meat and heat again.

SMERF is S'Marvellous!

5,4,3,2,1, contact . . . We have liftoff. No it isn't NASA's space shuttle; it is a Canadian-built Black Brant ARS-III-B-70 rocket (named for a species of goose). It has just been launched from the Churchill Rocket Range (CRR), in Churchill, Manitoba as part of the SMERF (Solar Mesospheric Explorer Rocket Flight) program of Environment Canada's Experimental Studies Division, ARPX.

Two flights have made up the SMERF program. The SMERF I launching took place on May 11, 1984 and SMERF II one year later on May 6, 1985. The purpose of the rocket flights was to carry a radiometer on the highly successful Black Brant Rocket to the upper limits of our atmosphere to gather information on stratospheric ozone concentration.

Here's how ozone is measured: during the chemical transformation of ozone to oxygen light is emitted with a wavelength of 1.27 micrometres which we call the O2 Singlet Delta band. As the radiometer ascends through the atmosphere, it can measure the intensity of this emission at different altitudes. These measurements enable us to infer the vertical distribution of ozone. It was important for SMERF II to coordinate the flight with an overpass of



the Solar Mesospheric Explorer satellite so that the data could be correlated later.

Bob Hoogerbrug, of ARPX, was the mission controller for Environment Canada assisting at all pre-flight manoeuvres. On April 25-25, the spin-balance tests were carried out at the David Florida labs in Ottawa. Then on April 28-30, vibration testing and clamshell development of the rocket were performed at Bristol Aerospace in Winnipeg. On May 1, at CRR, assembly and testing of the SMERF payload as well as pre-flight qualifications of rocket motor systems took place. SMERF II was launched on May 6, 1985 at 17:45:00 CDT.

Christmas Events in the Weather Calendar

December 24, 1879 — *Coldest day in Winnipeg's recorded weather history — -47 degrees Celsius.*

December 25, 1980 — *A severe cold Christmas Day in Ontario and Quebec; temperature -25° to -40° C and strong winds.*

December 25, 1982 — *Warmest Christmas Day ever across southern and central Ontario. Toronto's 17.2°C was the warmest in 142 years.*

December 26, 1980 — *Boxing Day floods near Vancouver did \$13 million in damage along the Squamish River. Residents were evacuated following a week of heavy rains and flooding. Hope A recorded 444 mm of precipitation in December.*

December 25-26, 1872 — *Toronto's greatest Christmas snowstorm — 58.4 cm in 42 hours accompanied by gale-force winds and temperatures of -15°C or lower, adding to the windchill.*

Christmas snowfall — Percentage chance of a White Christmas in various Canadian cities: Vancouver 7; Edmonton 98; Calgary 65; Regina 93; Winnipeg 100; Toronto 56; Ottawa-Hull 82; Montreal 80; Quebec City 100; Halifax 50; St. John's 50.

STAFF CHANGES / CHANGEMENT DE PERSONNEL

Promotions/Appointments Avancements/Nominations

R. Weiss (EG-5) Pres. Tech./Tech. en prés., ARWC, Edmonton, Alta./Alb.

P. Mallinson (MT-2) Meteorologist/Météorologiste, ARWC, Edmonton, Alta./Alb.

P. Lacasse (EG-5) Pres. Tech./Tech. en prés., ALWC, Edmonton, Alta./Alb.

C. Hansen (EG-5) Pres. Tech./Tech. en prés., WO4/BM4, Calgary, Alta./Alb.

P. Dubreuil (MT-7) Meteorologist/Météorologiste, Head, Regional Scientific Services/Chef régional, Serv. Scientifiques, QAES, St-Laurent, P.Q./Qc

R.J. Spokes (EG-5) Ice Tech./Tech. en climat. des glaces, ACIF, Ottawa, Ont.

E.Y. Poon (CS-2) Programmer/Programmeur, ACIF, Ottawa, Ont.

D.W. Coleman (MT-5) Meteorologist/Météorologiste, Ice Forecaster/Prévisionniste, climat. des glaces, ACIF, Ottawa, Ont.

Y. Whiteway (EG-5) Instruments Tech./Technicien préposé aux instruments, ACSL/M, Downsview, Ont.

W. Gayton (TI-4) Sr. Quality Assurance Insp./Assurance de la qualité, inspecteur principal, ACSQ, Downsview, Ont.

D. McCulloch (MT-5) Meteorologist/Météorologiste, PWC/CMP, Vancouver, B.C./C.-B.

M. Boulay (EG-5) Pres. Tech./Tech. en prés., ALWC, Edmonton, Alta./Alb.

J. McLeod (EG-6) OIC/Responsable de station, WO4/BM4, Inuvik, N.W.T./T.N.-O.

N. Vigneault (EG-1) Met. Tech./Tech. en mét., WS3/SM3, Cambridge Bay, N.W.T./T.N.-O.

D. Nemeth (CR-3) Clerk/Commis, AAGR, Downsview, Ont.

R.J. Mills (EX-2) Director, Field Met. Systems Branch/Directeur, direction des systèmes météorologiques extérieurs, AFSD, Downsview, Ont.

E. Oja (MT-5) Meteorologist/Météorologiste, Vancouver, B.C./C.-B.

R. Bourque (EG-6) Weather Services Specialist/Spécialiste des services météorologiques, Goose, Nfld./T.-N.

J. Yarema (EG-8) OIC/Responsable de station, Calgary, Alta./Alb.

O. Lange (MT-5) Meteorologist/Météorologiste, PWC/CMP, Vancouver, B.C./C.-B.

J. Morissette (MT-3) Meteorologist/Météorologiste, QAEM-CMQ, St-Laurent, P.Q./Qc

N. Charbonneau (EG-1) Met. Tech./Tech. en mét. QAEOO, WS3/SM3, Ste-Agathe, P.Q./Qc

J. De La Sablonnière (EG-1) Met. Tech./Tech. en mét. QAEOO, WS3/SM3, Baie Comeau, P.Q./Qc

M. Élie (EG-1) Met. Tech./Tech. en mét. QAEOO, Mirabel Int., P.Q./Qc

J. Laroche (EG-1) Met. Tech./Tech. en mét. QAEOO, WS3/SM3, Chibougamau, P.Q./Qc

L. Leblanc (EG-1) Met. Tech./Tech. en mét. QAEOO, WS3/SM3, Chibougamau, P.Q./Qc

J. Lehouillier (EG-1) Met. Tech./Tech. en mét. QAEOO, WS3/SM3, Ste-Agathe, P.Q./Qc

J. Roy (EG-1) Met. Tech./Tech. en mét. QAEOO, WS3/SM3, Baie Comeau, P.Q./Qc

J. Sauriol (EG-1) Met. Tech./Tech. en mét. QAEOO, WS3/SM3, Ste-Agathe, P.Q./Qc

M. Rossetti-Longarini (FI-1) Financial Officer/Agent financier, AAFS, Downsview, Ont.

G. Burrige (CS-2) Programmer/Programmeur, CMC, Dorval, P.Q./Qc

S. Bisanti (CS-2) Programmer/Programmeur, CMC, Dorval, P.Q./Qc

S. Iqbal (EG-7) Met. Tech./Tech. en mét. ARQM, Downsview, Ont.

Transfers/Mutations

M. Jones (EG-4) U/A Tech./Tech. en aér., WS2/SM2, Whitehorse, Y.T./Yuk.

L. Lefavre (MT-3) Meteorologist/Météorologiste, QMC/CMQ, St-Laurent, P.Q./Qc

B. Lohnes (EG-5) OIC/Responsable de station, WS3/SM3, Cape St. James, B.C./C.-B.

J. Burrowes (EG-2) Met. Tech./Tech. en mét., Vancouver, B.C./C.-B.

N.C. Burnett (CR-4), Clerk/Commis, AAL, Downsview, Ont.

D. Grimes (MT-6) Revenue Generation Met./Mét. préposé à la création de revenus, AFWC, Downsview, Ont.

I. Okabe (MT-2) Devel. Meteorologist/Mét. en formation de perfectionnement, PWC/CMP, Vancouver, B.C./C.-B.

P. Clarabut (EG-1) Met. Tech./Tech. en mét., Victoria, B.C./C.-B.

C. Olsen (EG-3) Met. Tech./Tech. en mét., WS3/SM3, Cape St. James, B.C./C.-B.

R. Dunkley (MT-5) Meteorologist/Météorologiste, PWC/CMP, Vancouver, B.C./C.-B.

D. McLennon (MT-5) Meteorologist/Météorologiste, PWC/CMP, Vancouver, B.C./C.-B.

D. Dubé (MT-2) Devel. Meteorologist/Mét. en formation de perfectionnement, PWC/CMP, Vancouver, B.C./C.-B.

B. Marguis (MT-2) Devel. Meteorologist/Mét. en formation de perfectionnement, PWC/CMP, Vancouver, B.C./C.-B.

A. Frappier (MT-2) Devel. Meteorologist/Mét. en formation de perfectionnement, PWC/CMP, Vancouver, B.C./C.-B.

E. Oja (MT-5) Meteorologist/Météorologiste, PWC/CMP, Vancouver, B.C./C.-B.

R. Picard (EG4) U/A Tech./Tech. en aér. QAEOU WS1/SM1, Maniwaki, P.Q./Qc
J. Thériault (EG-4) U/A Tech./Tech. en aér. QAEOU, LaGrande IV, P.Q./Qc
Y. Gervais (EG-4) U/A Tech./Tech. en aér. QAEOU, LaGrande IV, P.Q./Qc
G. Coulombe (EG-5) Supervisor/Chef de service, QAEOU, LaGrande IV, P.Q./Qc
G. Leger (EG-4) Met. Tech./Tech. en mét. WS1/SM1, Sable Island, N.S./N.-É.
B. Crowe (MT-6) Meteorologist/météorologiste, PRWC, Winnipeg, Man.
J. Zawatsky (MT-6) Meteorologist/météorologiste, PRWC, Winnipeg, Man.
B. Martin (EG-6) Air Quality Tech./Tech. de la qualité de l'air, ARQM, Downsview, Ont.
J. Reid (SM) on assignment/en mission, MOSST, Ottawa, Ont.
G. Lunn (EG-3) U/A. Tech./Tech. en aér., WS2/SM2, Fort Nelson, B.C./C.-B.

Departures/Départs

D. Mignacca, ARWC, Edmonton, Alta./Alb.
C. Nobert, ARWC, Edmonton, Alta./Alb.
J.R. Thibault, QAEOU, WS1/SM1, Maniwaki, P.Q./Qc
P.G. Goreczny, ACIF, Ottawa, Ont.
R. Arsenault, WS3/SM3, Charlo, N.B./N.-B.
J. Wilk, WS1/SM1, Sachs Harbour, NWT./T.N.-O. University of Alberta/Université de l'Alberta
S. Lewis, WO4/BM4, Calgary, Alta./Alb.

Temporary or Acting Positions/ Postes temporaires ou intérimaires

M.F. Gauthier (MT-4) Meteorologist/Météorologiste, ACIF, Ottawa, Ont.
K.L. Garrison (FI) Financial Officer/Agent des services financiers, OAED, Toronto, Ont.
E. Elliotson (PG-4) MIU Project Officer/Chargé de projet, ameubl. et matér. en utilisation, AAB/M, Downsview, Ont.
J. Glover (LS-4) A/Chief Material Management/ Chef, gestion du matériel, AAM, Downsview, Ont.
L. Stripnieks (LS-4) A/Chief Library Services/ Chef, services de bibliothèque, AAL, Downsview, Ont.
A. Cappuccitti (AS-8) Admin. Officer/Agent d'administration, AAM, Downsview, Ont.
B.M. McVean (AS-5) A/Chief General Admin./ Chef, administration générale, AAG, Downsview, Ont.
M. Leblanc (MT-6) Project Meteorologist/Mét. chargée de projet, AFWC, Downsview, Ont.
A. Drouin (EG-6) Supervisor/Chef de service, QAEOU, WS1/SM1, Inukjuak, P.Q./Qc
G. Dugay (EG-1) Met. Tech./Tech. en mét. CASP Project, MAED, Bedford, N.S./N.-É.
F. Boulay-Racine (CR-4) Clerk/Commis, AAL, Downsview, Ont.
B. Kuntz (LS-2) Librarian/Bibliothécaire, AAL, Downsview, Ont.
B. Grogan (SCY-3) Secretary/Secrétaire, OAED, Toronto, Ont.

Leave of Absence/Congés autorisés

C. Lauze, PWC, Vancouver, B.C./C.-B.
R. Stainer, WS3/SM3, Cape St. James/B.C./C.-B.

Retirements/Rétraites

E.C. Jarvis, ARMF, Downsview, Ont. July/juillet, 1985
R.J. Polavarapu, ARQL, Downsview, Ont. July/juillet, 1985
J.Z. Rautenberg, AAG, Downsview, Ont. July/juillet, 1985
J. Strecansky, AAG, Downsview, Ont. Dec./déc. 1985
L. B. Melanson, ACSM, Downsview, Ont. Oct./oct 1985.
M. Sh-Cyr, CMC, Dorval, P.Q./Qc. Sept./sept. 1985

Deaths/Décès

M H. McGill, ACPO/IO, Downsview, Ont. Oct./oct. 1985