First in The Valley

UPPER AIR STATION WAS OFFICIALLY OPENED NOV. 26.

VERNON, B.C. – The Okanagan Valley's first atmospheric weather station has been completed in Vernon and becomes an important link in the world-wide network system of measuring upper air data.

RECENTLY COMPLETED Atmospheric Environment Department weather station near Vernon, B.C., is situated atop a small mountain and was designed by architects in the construction branch of Ministry of Transport. General contractor Gilmore Construction and Engineering of Westbank, B.C. levelled the rocky mountain top, built an access raod to the site and constructed the facility. Nine-foot hydrogen-filled weather balloons carrying sensitive radio transmitters necessitated installation of 16-foot overhead doors in the building. Balloons are filled with gas inside the building prior to being released to collect atmospheric data. Picture shows dignitaries at recent official opening ceremonies.

The station was located in the heart of British Columbia's southern interior in order to fill an upper level atmosphere data gap over western Canada. The nearest station to the north is Prince George and to the south, Spokane.

To mark the occasion, the Atmospheric Environment Service held an official opening ceremony for their new station at 11 a.m. Friday, November 26.

Douglas Stewart, M.P. for Okanagan-Kootenay riding, cut the ribbon to open the $200,000 fully instrumented station.

It is located on the Canadian forces base, turned over by the Department of National Defense for this purpose.

BALLOON CARRIES SENSORS

John Knox, Pacific Regional Director of the Atmospheric Environment Service, said the data makes possible more precise weather forecasts for the Valley and a means of measuring the structure of low level atmosphere for knowledge of pollution dispersal.

He described the technique for sounding the upper air.

"A hydrogen filled rubber balloon carries a package of instruments, called a radiosonde, into the atmosphere. Fastened to the balloon by a strong cord, it contains a radio transmitter, barometer, hygrometer and an electrical thermometer," Knox explained.

"The instruments measure pressure, humidity and temperature and this information is transmitted by radio signal to the radar antenna in the station dome. The station tracks the course for wind speed and direction.

"This information is recorder, analyzed and fed into the network of atmospheric stations." he said.

EXPLODE IN THE AIR

Knox said the six foot wide balloons will be a familiar sight over Mission Hill on their twice-daily fact finding flights.

They rise through the atmosphere at 1,000 feet per minute and expand as they rise. The limit of their strength is reached at a diameter of 20 feet and height of 80,000 to 100,000 feet when they burst.

The materials, including the instrument package, balloon, battery, parachute, and hydrogen cost about $35 for each ascent. They are rarely recovered as the radiosondes may drift several hundred miles in ascent, and usually float slowly down to earth in remote locations.

It takes two men working about five hours to complete one upper air observation, including the preparation of hydrogen, monitoring signals, computing and coding the data and checking the computations.

The information is sent by rapid radio and landline communication network to forecast offices where the results are analyzed on upper air charts by meteorologists.

STAFF IN CHARGE

Lloyd W. Bryant is Officer-in-Charge of the station, coming from Fort Smith, North West Territories to take the post.

Meteorological technicians on the staff include Donald McBain from Norman Wells, North West Territories. Clay Wheeler, Edmonton, Alberta and Russell Colville whose last posting was on the Pacific weather ship.

LONG HISTORY

Canadian investigations of the upper atmosphere have been carried out for more than 30 years. The original sounding equipment was carried aloft by balloons and the information registered on a smoked plate.

Other early experiments involved using kites and even airplanes which rarely got above 20,000 feet.

Upper air data, while costly from the standpoint of materials and time expended, has become indispensable to the modern day forecaster.

The data is also used for research into atmospheric processes and for studies of climate. A knowledge of the upper winds also has a defense value in the prediction of radioactive fallout from atomic explosions.