

Masonic funeral services for Ralph I. Waterman, 59, retired Army master sergeant and accomplished marksman, will be at 11 a. m. tomorrow in the Green Lake Funeral Home.

Sergeant Waterman, of 8825 Densmore Ave. N., died Monday in Reno. He became ill on a trip to Seattle from his winter home in Tucson, Ariz.

Sergeant Waterman was in the Army 23 years. He saw duty in Europe in World War II and also served in Korea. He was a recruiter in the Roosevelt Station here six years before his retirement in 1962.

BORN IN OLDHAM. S. D. Sergeant Waterman had lived in Seattle 27 years. Between Army hitches he was an electrician.

Sergeant Waterman won a number of marksmanship medals. In March, 1955, while firing a carbine, he hit 80 consecutive bullseyes, a feat which won him mention in Ripley's "Believe It Or Not."

Survivors are his wife, Maxine; a daughter, Specialist 4th Class Sharon Waterman, in the Women's Army Corps in Germany; a son, Robert W. Waterman, in the Army in Kansas; two brothers, Perry W. Trip, Tucson, and Charles Trip, Sioux Falls, S. D.; a foster brother, Charles Waterman, Tenafly, N. J., and a sister, Mrs. Vera Brown, Osawatimie, Kan.

WOODROW ERNEST MILLER Funeral services for Woodrow Ernest Miller, 52, of 5254 116th Ave. S. E., Bellevue, a Boeing engineer, will be at 11 a. m. tomorrow in Green's chapel, Bellevue. He died Monday.

Born in Redford, Mich., Mr. Miller moved to Seattle in 1953 and Bellevue in 1960. He was a graduate of Michigan State University. He was a Marine Corps sergeant in World War II. From 1944 to 1953 he was assistant manager of Pacific Trailways, Bend, Ore.

Surviving are his wife, Thelma M.; a daughter, Mrs. Ralph Seyler, Renton, and three brothers, Ray, Rochester, Mich., Theodore, Tucson, Ariz., and James Miller, Michigan.

MRS. GEORGE FLOWERS Funeral services for Mrs. Patsy Flowers, 26, of 19215 161st Ave. S. E., Maple Valley, who died Tuesday will be at 7 p. m. tonight in the Stokes mortuary, Renton, with burial at Pendleton, Ore.

Born in Port Townsend, Mrs. Flowers went to Renton in 1965 from Pendleton. She was a member of the Pendleton Eagles' auxiliary.

Surviving are her husband, George; her parents, Mr. and Mrs. Louis Wells, Pendleton; two brothers, Lanney Wells, Renton, and Richard Wells, Fort Riley, Kan.; a sister, Linda Wells, Pendleton, and grandparents, Mr. and Mrs. H. R. Swanson, Port Townsend, and Mr. and Mrs. E. N. Schweppe, Renton.

DR. HERBERT L. DAVIDSON Memorial services for Dr. Herbert L. Davidson, 65, of 4636 E. Mercer Way, Mercer Island, a dentist, will be at 11 a. m. Saturday in Mercer Island Presbyterian Church. Cremation will be directed by Bonney-Watson mortuary.

Mr. Davidson died today in a hospital after a brief illness.

Born in Bordman, Ohio, Dr. Davidson went to Mercer Island in 1948 and became the first dentist on the island. He was a graduate of Western Reserve University, Cleveland. He served in World War II as an Army colonel.

Dr. Davidson was a member of the Mercer Island Presbyterian Church, the Retired Officers Association, the Seattle-De District Dental Society, the Washington State Dental Society, and the American Dental Society. He was a Mason.

Surviving are his wife, Mary H.; a daughter, Mrs. Roland B. Peterson, Reno, Nev.; a son, Dr. Thomas G. Davidson, Mercer Island, and a brother, Joseph E. Davidson, Dayton, Ohio.

The family suggests remembrances to the American Cancer Society or to the Heart Fund.

There are an estimated 14,000 moose in the United States.

Funeral services for Robert A. Ross, 76, San Leandro, Calif., former Seattle resident, were held Tuesday at Hayworth, Calif. He died Friday in a hospital.

Born in New Brunswick, Nova Scotia, Mr. Ross came here in 1928. He retired in 1956 as a maintenance man for The Boeing Co., then moved to San Leandro.

Surviving are his wife, Marguerite M.; four daughters, Mrs. Roberta Richardson, Seattle, Mrs. Muriel Oyer, Fremont, Calif., Mrs. Lorraine Hodges, San Leandro, and Mrs. Valerie Cole, Phoenix, Calif., and a son, Forrest R. Ross, Seattle.

MRS. WILL A. MUNSIE Funeral services for Mrs. Mary Munsie, 86, of 29 1/2 Etruria St., will be at 1 p. m. tomorrow in the Bleitz chapel. Burial will be in Evergreen-Washelli.

Mrs. Munsie died Tuesday in a hospital. Born in Norway, she moved to Nebraska in 1902 and to Seattle in 1907.

Surviving are her husband, Will A. and a brother in Norway.

MRS. FRANK RAFFERTY Funeral services for Mrs. Mabel E. Rafferty, 83, of the Masonic Home, Zenith, will be held at 2 p. m. tomorrow in the Price-Helton Funeral chapel with burial in Mountain View, Auburn. She died yesterday in Zenith.

Born in Clitheral, Minn., Mrs. Rafferty moved to the Auburn area in 1918. She was a member of the Order of Eastern Star, the White Shrine of Jerusalem and the Episcopal Church, Auburn. Her husband, Frank, died in 1956.

Surviving are a son, Francis C. Rafferty, Auburn, and a brother, Roy Harriman, Tacoma.

MRS. LAMAR HILLIARD Funeral services for Mrs. Argola E. Hilliard, 63, of 2311 E. Roy St., will be at 10 a. m. Saturday in the First African Methodist Episcopal Church. Burial will be in Lake View. Arrangements are by Evergreen Funeral Home.

Mrs. Hilliard died yesterday in a hospital after a long illness. She was born in Jefferson City, Miss., and moved to Seattle from Weed, Calif., in 1943.

Surviving are her husband, Lamar; four sons, Barney, Bill and Ray, all of Seattle, and Hartsel Hilliard in the Army in Vietnam; three brothers, Sam Smith, Baton Rouge, La., Anderson Smith, Weed, and John Smith, New Orleans, and a sister, Mrs. Willie Mae Dillon, McComb, Miss.

PERC E. BOVARD Memorial services for Perc E. Bovard, retired watchmaker, were held today in Pompano Beach, Fla. He died Tuesday in Pompano Beach where he spent recent winters.

Mr. Bovard, of 1112 Fourth Ave. N., had the watch-repair shop at Frederick & Nelson 28 years before his retirement in 1963. Born in Great Falls, Mont., he came to Seattle in 1919.

Mr. Bovard was a Mason and member of Scottish Rite Bodies and Nile Temple of Shrine.

Survivors are his wife, Della M., and a daughter, Mrs. Grant Kuhn, Chamber, Ga.

The family suggests that remembrances be made to the Shriners' Hospital for Crippled Children, Spokane.

MRS. WILLIAM L. BARBEE Funeral services for Mrs. Mattie E. Barbee, 73, of 7418 N. E. 145th St., Bothell, will be held at 2 p. m. Saturday in the Johnson & Sons' chapel followed by cremation. She died last night in a Seattle hospital after a brief illness.

Born in Seattle, Mrs. Barbee graduated from Foster High School. She lived in Seattle all of her life except for 10 years in Omak while her husband, William, was superintendent of the Okanogan County Public Utilities District. Her husband, former owner of the Barbee Ship Yards, died in February.

Mrs. Barbee was a member of the Daughters of the Nile and Order of the Eastern Star.

Surviving are five sisters, Mrs. Lola Grant, Mrs. Ollie Patterson, Mrs. Fannie Jones and Mrs. Clara Snyder, all of Seattle, and Mrs. Nellie Broad, Everett, and a brother, Dorsey Goff, of Union, Mason County.

Oil Man Dies WHITTIER, Calif. — (AP) — Herman C. Smith, 85, pioneer in development of oil-drilling tools and founder of Smith Industries International Inc., died Tuesday after a long illness. He retired as chairman of Smith Industries in 1966 but retained the title of honorary chairman.

Vermont leads all other states in the production of maple-sugar products.

Students To Discuss Leadership

Thirty-three foreign students will participate in a week's leadership seminar beginning here tomorrow under sponsorship of the Urban League and the Agency for International Development.

The students will visit institutions and agencies and meet with city officials and leaders. Discussions will center on problems and solutions in education, government, industry, social welfare, race relations and intergroup communications.

Mrs. Phyllis Lamphere, city councilwoman, and Ben Weeks, president of the Seattle Urban League, will speak at an orientation program at 9:30 a. m. tomorrow in the Municipal Building.

The students are from Ethiopia, Nigeria, Somalia, Tanzania, Zambia, Kenya, Malawi, Thailand, Vietnam, Afghanistan, Turkey, Nepal, Pakistan and the Dominican Republic.

Storm-Buffered Navajos Hopeful

WINDOW ROCK, Ariz. — (AP)—Navajo officials saw a ray of optimism today in their battle to stave off starvation and illness among tribal members hit by a series of severe snow storms.

Many Navajos were being admitted to hospitals on or near the reservation suffering from pneumonia, exposure and respiratory ailments brought on by the cold weather.

Officials said there had been three deaths attributable to the storms which first struck the nation's largest Indian reservation December 13.

Police Arrest Men Returning Stolen Parts

Police, acting on information supplied by the victim, arrested two men, 21 and 17, on suspicion of burglary at 1 p. m. today as the suspects were returning some stolen automobile parts to their owner.

Jack L. Karamanos, 20, of 1901 Tenth Ave. W., told police he had learned the identity of persons who stole automobile parts from his residence Sunday.

The victim confronted the suspects with his information and the suspects agreed to return the automobile parts, except for a carburetor and racing tires.

Police concealed themselves in the rear of the victim's home and arrested the two as they returned with part of the stolen property.

The value of the items was estimated at \$300.

Parent Observer Classes Planned

Observation classes for parents involving youngsters 1 1/2 to 3 years old will be offered at several places beginning January 2 by Seattle Community College.

The parents will be able to observe their children painting, pounding and squeezing play dough and listening to stories and music at morning programs. Instructors will meet with parents during the morning sessions and at evening classes.

Additional information can be obtained from the family-life office at the college.

Man Flushed From Hide-out

A young man in his 20s was flushed from a hiding place at 1115 E. Thomas St. about 8:30 p. m. yesterday when Patricia Smasal and Linda Haney returned home.

The women told Police Officers Larry Farrar and Benny DePalmo they were investigating a light in a utility room when the man jumped out of a small room and ran out the back door.

Ex-Kress Co. President Dies

SAN MATEO, Calif. — (UPI)—William Lloyd Baker, 83, former president of S. H. Kress & Co., the variety store chain, died yesterday.

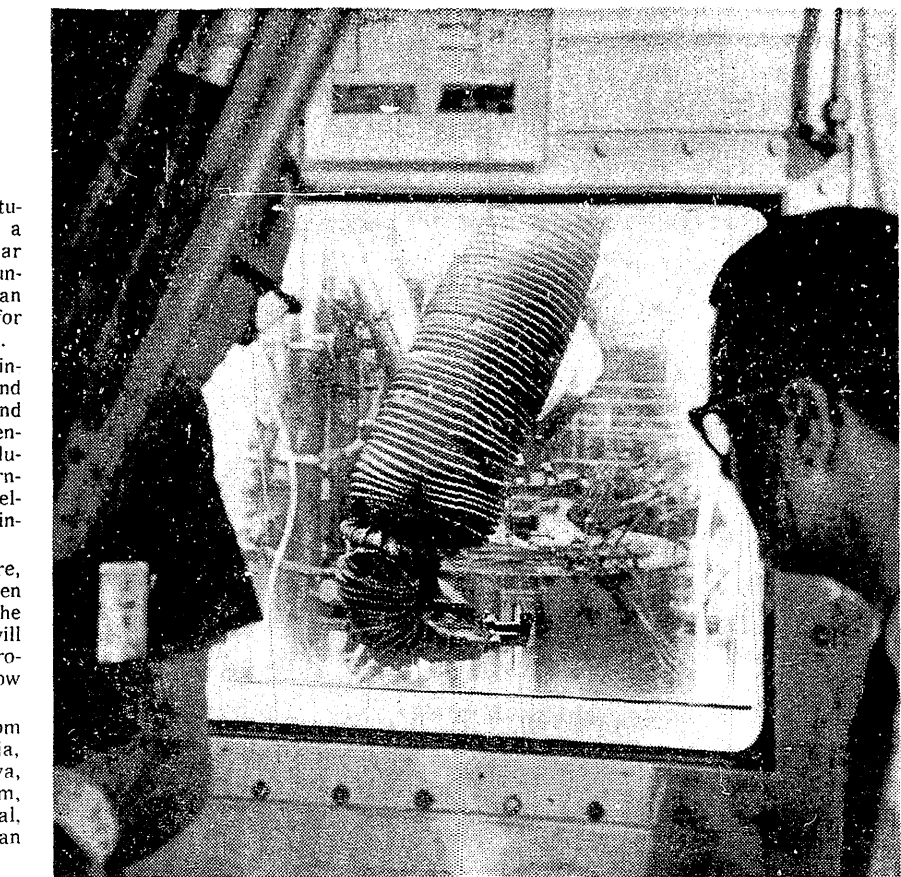
Baker started with the store in 1903 as a stockman in its Coffeyville, Kan., branch. He became a vice president in 1931 and was elected president in 1945. He retired in 1948.

Police Officers J. L. Brown and R. J. Mackey put a witness in their car and searched until he pointed out the two youths at Harvard Avenue and Union Street.

The youth was caught after a brief chase, but his companion escaped.

Oil Crosses Alps

INGOLSTADT, Germany — The new Transalpine pipeline will carry crude oil from the port of Trieste on the Adriatic through the Italian and Austrian Alps to a refinery here in Bavaria.



Researchers viewed a cup of molten nuclear-fuel waste through a shielded window at Hanford. The material in the cup was part of the first production-scale conversion of liquid waste to a glasslike solid. The researchers were J. G. Carter, technician, left, and Kenneth J. Schneider, research associate.

Nuclear Electricity Nearer As Waste Is Turned Into Solid

By HILL WILLIAMS Science Editor, The Times Researchers at Hanford have reported significant progress on a problem of the future: What do you do with the waste from nuclear fuel after it is used to generate electricity?

Unfortunately, there is no nuclear-age garbageman who comes around each Monday, picks up the trash and dumps it out of sight and out of mind.

THE WASTE from nuclear plants is so highly radioactive that it will have to stay in mind, if not in sight, for centuries.

Spent fuel from a nuclear-power plant is processed to recover materials of value. The remainder, a liquid, is "garbage."

There is only a trickle of this waste today. But it is estimated that up to 6 million gallons of it will be produced each year by the end of the century.

The problem of getting rid of this waste safely and as economically as possible is a responsibility of the Atomic Energy Commission.

The A. E. C. has stored the waste from its Hanford weapons plants underground in steel tanks. This method has worked well at Hanford, but it would have disadvantages for populated areas.

The waste is highly corrosive and the tanks must be checked constantly for leaks. Leaks could contaminate the soil or even the ground water with radioactivity.

If the liquid could be changed into a solid it would simplify long-range storage. Two years ago, the A. E. C. selected three of the most promising methods for solidifying wastes and assigned Battelle-Northwest to find out if they were on a practical production scale.

BATTELLE announced recently that all three methods have been demonstrated successfully with highly radioactive waste from the Hanford plants.

The method most recently tested not only turns the waste into a glasslike solid but also ends up with less than one tenth the volume of the liquid, an added economy for storage.

Albert G. Blasewitz, manager of Battelle's waste-solidification development program, said that 350 gallons of waste were converted to 30 gallons of solid glass.

Suspect Held After Chase In Parking Lot A man, 54, was arrested about 1:45 p. m. yesterday when Forrest L. Wells, a Pier 51 parking lot attendant, saw him with his arm inside a car, chased him a short distance and captured him.

Wells told police the suspect punched him in the face several times. Nothing was taken from the vehicle. The suspect was booked in the city jail without charge.

The job is complicated by the necessity to process the waste by remote control. It is so radioactive that researchers must work behind shielding.

All three of the methods involve heating the liquid to reduce its volume by evaporation. At the end stage, the solid is sealed into a metal container.

The gasses given off during the evaporation are filtered and cleaned until the radioactivity is less than one billionth the original level. In fact, Kenneth J. Schneider, research associate in the program, says:

"You could ventilate your house with the air we discharge."

In the most recent method demonstrated by Battelle, where the waste is converted into a glasslike substance, the steel containers—about eight-feet long and one foot in diameter—give off as much heat from radioactive decay as a typical home portable space heater.

Battelle is also studying methods of storing the containers once they have been filled and capped.

"We're storing them in air, under water and in vaults," Blasewitz said, "to get information on what happens."

BATTLE'S assignment is to gather data for use by the A. E. C. and private industry in evaluating the methods. It won't recommend one method over the others.

In fact, Schneider says that "no one method probably will have all the advantages. One might be best under some conditions, another the best under other circumstances."

Neither does Battelle make any direct estimates as to the cost that will be added to the price of electricity because of waste disposal. But studies elsewhere have indicated that it runs about 1 per cent of the total cost of nuclear power.

The information from Battelle's work will be needed by June 30, 1973, when private ownership of nuclear fuel for electrical generation will become mandatory.

Today's research will help avoid a critical garbage-disposal problem tomorrow as the nation's increasing need for power forces it to depend more and more on nuclear fuel.

Nation Weather Report

Here are the latest temperature readings and precipitation measurements for representative cities throughout the United States and Canada as compiled by The Weather Bureau.

Table with columns for City, Temp., Precip., and High/Low. Includes cities like Astoria, Bellingham, Everett, etc.

City Affairs

Acceptance Of Sculpture Donation Is Recommended

The City Council Finance Committee today recommended acceptance of a donation of \$6,000 toward the financing of a \$90,000 sculpture for Volunteer Park.

The sculpture will be done by Isamu Noguchi, Japanese sculptor.

The work, to weigh several tons and entitled "Black Sun," will be placed near the Art Museum.

The committee, at the request of City Comptroller Carl G. Erlandson, recommended acceptance of the initial donation of \$6,000 from the Seattle Foundation.

The foundation's total gift will be \$45,000, according to Mayor Braman's office.

The other \$45,000 will come from the National Endowment on the Arts and Humanities, a federal agency.

Noguchi, using black granite from Brazil, will do the work in his studio in Japan. The work will take about a year after a formal commission has been signed.

GARAGE APOLOGY—Don L. Johnston, director of the Seattle Center, today informed councilmen he has apologized to Richard J. Kelley, 4407 Fifth Ave. N. E., for Kelley's inability to use the Center's Mercer Street Garage November 7.

Kelley, in an unusual letter which aroused the sympathy of members of the Council Finance Committee, said he and his wife and friends had gone to the Center to attend a Masonic dance. The garage attendant, it was reported, routed Kelley's car into the garage but Kelley found no spaces available.

The party drove downtown to park and took the Monorail back to the Center, but arrived too late for the dance.

Johnston said normal procedure in the garage is to station an attendant on the roof when "the last few hundred cars" are being admitted. When there are 40 or 50 spaces left, the attendant is supposed to notify the garage cashier to turn on "Sorry, Garage Full" signs.

The Center director said that on that night communication between attendants was not established early enough to avoid overloading.

Confirmation - Reappointment by Mayor Braman of John M. Nelson as City Light Superintendent and Herbert M. Stephens, Attorney, as a member of the Civil Service Commission was recommended by the Council Judiciary and Personnel Committee.

Nelson, at the request of Chairman Tim Hill, reviewed progress on undergrounding power lines. Nelson said Seattle has had more "conversions of overhead to underground" than has any other utility in the country.

The City Light executive emphasized, however, that undergrounding is a topic of sharp controversy in residential areas where homeowners disagree on the merits of paying for the work.

Two underground proposals have been turned down by residents of the Sand Point Country Club area, Nelson said.

Lower Woodland - The Finance Committee recommended the spending of \$7,500 so construction may begin on a \$27,446 shelter house and rest room at the Lower Woodland Park Playfield.

Edward J. Johnson, parks superintendent, said the new facilities will include a "bleacher-viewing area for what we consider the most important ball-field combination in Seattle."

Park officials hope to have the building finished for next spring's athletic schedule.

Judge Defers Sentence In Drug Case

Sentencing of Jeffrey Paul Desmond, 18, who pleaded guilty of violating the Uniform Narcotic Drug Act, was deferred three years today by Superior Court Judge Howard J. Thompson.

Judge Thompson deferred sentencing on condition that Desmond pay court costs.

Deputy Prosecutor Nick Marshall said traces of marijuana were found in Desmond's pockets when he was arrested at the Seattle-Tacoma Airport March 30.

Humphrey To Go Home For Yule

WASHINGTON — (AP) — Vice President Hubert H. Humphrey will leave the capital tomorrow to fly home for the Christmas holidays.

Mrs. Humphrey left yesterday for the couple's Waverly, Minn. home.

U. W. Antarctic Researchers Find New Radio Data

By HILL WILLIAMS Science Editor, The Times Experiments by University of Washington researchers with the world's longest radio antenna, laid in ice in Antarctica, have turned up information which may improve long-range radio communication.

George Webber, 25-year-old graduate student in electrical engineering, said the work has given scientific documentation to a layer of charged particles which had only been theorized before.

WEBBER returned to the university recently after 13 months at the university's station in Antarctica. The project has been financed since 1963 by the National Science Foundation. This year's grant is \$88,000.

The layer identified in the experiments is known as the D layer of the ionosphere. The ionosphere is a belt of electrically charged particles encircling the earth. The D layer is the lowest layer of the ionosphere.

RADIO communication depends on the ionosphere, which reflects radio signals back to earth, making possible long-range communication. Signals of usual operating frequency go through the D layer.

But, Webber said, the extremely low-frequency signals used in the work are reflected by the D layer. This opens the possibility that communication can utilize the lower layer, making possible more efficient signals at lower power.

LOW FREQUENCIES require long antennas, which is why the flat ice cap at the bottom of the world was selected. The antenna is cross-shaped, with dimensions of 21 and 10 miles.

Webber and a diesel mechanic from the University of Wisconsin, Mike Bowman, wintered together at their two-man station.

"We were still friends in the spring, too," he said. "Their station is built on ice 8,000 feet thick."

TWO OTHER U. W. graduate students, Jim Hannah and Bob Willard, are now at the station, dubbed Long Wire.

Dr. Donald K. Reynolds, one of the principal investigators, is on his way to Antarctica for a month's stay. Other investigators are Dr. H. Myron Swarm and Dr. Irene Peden.

The temperature dropped to 71 degrees below zero at Long Wire once, Webber said — moderate compared to winter temperatures elsewhere on the frozen continent. Webber's home is in Tacoma.

The university is conducting three experiments for the National Science Foundation in Antarctica.

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