

## Native Center Aids Burned Out Family

Jake Murphy family at Alakanuk near the mouth of the Yukon River has begun to receive emergency clothing and blankets to replace those the seven-member household lost when their home burned to the ground on September 9.

Willie Willoya of the Fairbanks Native Welcome Center notified Tundra Times this week that the center was sending 80 pounds of clothing and blankets for the Murphy family.

Willoya said that the Alaska Airlines has consented to fly the clothing donations to Unalakleet as a courtesy of the airline. It was thought that bush planes would relay the clothing to Alakanuk from Unalakleet.

Mrs. Bonnie Ericsson, who replaced Mrs. Betty Ragland as Tundra Times office manager,

has also collected her surplus clothing to be sent to the Murphy family. Betty Ragland and her husband Bill left for Nashville, Tenn. this week.

Alakanuk village council President Elias Joseph through Tundra Times last week appealed for assistance for the burned out Jake Murphy family. He asked for clothing sizes, man-38, wife-16; kids-sizes 5 to 14.

Elias Joseph also asked for cooking utensils and a wood-burning cook stove. Joseph also said that Jake Murphy also lost all of his guns, except a shotgun that he uses for hunting.

"As winter is soon approaching, the Murphys would greatly appreciate any help your paper can give them..." said Elias Joseph last week.

## Engineer Legislator Needed: Silides

George Silides, a Registered Professional Civil Engineer and Republican candidate for the Alaska House of Representatives speaking Friday to the American Society of Civil Engineers said that, "Engineering practise in Alaska is varied, interesting and demanding of greater general knowledge and involvement than in other states where large numbers of specialists can be immediately consulted, and for this reason General Engineering in Alaska stands unique."

"You gentlemen", Silides told the Society, "share that uniqueness, and the obvious progress of Alaska during the past two decades is a tribute to your uniqueness and dedication."

Silides continued to say, "that there is no single group outside this professional cadre that is so deeply and personally involved with the environmental welfare of the public. The bulk of this new state's budget is dedicated to such capital improvements which we either directly or indirectly influence, whether in their origins or when we are called upon to design and guide them to successful conclusions."

"It is no mere coincidence," Silides pointed out, "that the Chairman of the House Finance Committee for the past four years was a Professional Engineer. With Harold Strandberg gone, there is not now another Engineer or Architect in the House to advise on these matters of vital interest."

"Because we are a young State, we are a building State and most of the funds involved derive from the legislative process. Almost without exception all projects originate as a political issue or soon acquire political overtones. Since the successful completion of these projects eventually evolves to us, we are vitally concerned with the makeup and participation in effective legislation and allocation of funds."

"Recent events have shown a definite need for progressive engineering membership in the Legislature."

Silides concluded and urged the members of the Engineering Society to join him in a greater direct involvement in legislative affairs so that the State of Alaska could derive the maximum benefit from the various significant skills of the Engineers living within the state and dedicated to its welfare.

## University Devises New Time Machine

COLLEGE—A common question for scientists—how old is it?—has taken uncommon meaning for oceanographers at the University of Alaska's Institute of Marine Science (IMS).

For them, an answer of 23,450 years, give or take 250, is by no means unusual.

The institute's new time machine is a carbon-14 dating system that measures the amount of a radioactive carbon isotope—carbon-14—present in a sample, permitting a mathematical age derivation.

Dr. Williams S. Reeburgh, operator of the IMS time machine, explained how carbon dating works.

"Cosmic ray bombardment of the atmosphere produces an unstable isotope of carbon, carbon-14, which loses half its radioactivity in about 5500 years."

This carbon isotope, he said, is cycled through the atmosphere and is absorbed by all living things.

"When people, or trees, or shelled creatures die," he said, "they cease absorbing carbon-14, and the radioactive clock starts."

Radiocarbon dating was developed by a University of Chicago scientist, Dr. Willard F. Libby, for which he received a 1956 Nobel Prize.

Since then, Libby's technique has found widespread application in many fields. Noteworthy among them is archaeology, in which accurate dating made possible by the unstable isotope of common carbon has brought that science into a new era.

UA's new system is a modification of the original carbon-14 time machines.

Instead of measuring the amount of radioactive carbon present in carbon dioxide gas generated by burning the original sample, UA's process goes

several steps farther.

The original sample is burned in pure oxygen, resulting in carbon dioxide gas as in the original dating process. The gas is then converted to benzene, a petroleum refining by-product.

The benzene, containing the carbon-14 of the original sample, is placed in a scintillation counter which measures the quantity of isotope present.

Once the amount of carbon-14 present is known, the age can be easily computed.

Reeburgh points out two advantages of the benzene carbon-14 dating system. "First of all, by concentrating the carbon before measuring we gain sensitivity."

His second selling-point for the new UA time machine is cost. "Our dating equipment cost about \$15,000," he said, "whereas conventional systems cost on the order of ten times as much."

Oceanographic applications for the new dating system are numerous. "We'll begin by dating sediment samples," Reeburgh explains. "From there we plan to use other isotopes such as tritium—an isotope of hydrogen with a half-life of 12 years—to trace water movements, as well as continuing dating other types of samples with carbon-14."

The IMS time machine has yet to date its first sample. "We're still receiving equipment and have to run known samples to standardize our operating procedures before we tackle any unknowns," he said.

UA researchers expect their time machine to be operational this fall. "Once we get going," Reeburgh said, "we will be able to date samples for archaeologists, geologists, and other university researchers interested in dating materials."

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