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New Helo Contractor Begins Busy Season

by JO2 Trevor Poulsen

Field camp "put-ins" are on schedule thanks to the town's new helicopter company. PHI began operations for the 1996-1997 summer season Oct. 15 and has already opened up seven camps.

PHI performs most of its work for the oil industry throughout the Gulf Coast region of the U.S. The Lafayette, La.-based company is one of the country's largest providers of emergency medical services and has operations in Africa, South America, Southeast Asia and, now, Antarctica.

PHI brought one Bell 212 "Huey" and three AS/350B2 "A-Stars" to McMurdo last month to fulfill a two-year contract for the United States Antarctic Program. Seven pilots and five mechanics will fly and maintain the aircraft based at the helo hangar near the town gym.

Like most PHI employees in McMurdo, lead pilot Jack Hawkins has over 20 years of experience in the helicopter business. He says the pilots should each add at least 2,000 hours of flight time to their records by the end of the season.

The beginning and end of the season are the busiest times of the year. During these periods, total daily flying time can reach 30 hours for all four helicopters, according to Hawkins.

"At first, it's going to be hurried - getting the camps put out and putting people in place to help the scientists," he said. "After that, it's going to be a little more of a relaxed schedule."

PHI transports cargo to the field camps using a net suspended below the helicopter. "All the aircraft has to do is come in, and they'll hook the net on, and it's a 15-minute flight back to camp," Hawkins explained.

The A-Stars can carry one crewmember, five passengers and 1,100 pounds of cargo for a maximum distance of 300 miles.

The Huey can carry one crew-member (two at night), nine passengers and 2,200 pounds of cargo for a maximum distance of 350 miles.

"The Huey is a good field aircraft," Hawkins said. "The systems in it are fairly simple for the most part. It's kind of ironic that this particular aircraft came from Saudi Arabia, so it has seen some extremes."

Residents Volunteer For Hormone Research

by JOC(AW) Jacqueline Kiel

Mood changes, memory loss and a decrease in concentration. These are all symptoms of living and working in high latitude areas, according to Dr. Mark A. Staudacher, an associate investigator for the Polar (T3) Syndrome Project.

The principle investigator for the study is Dr. H. Lester Reed, chief of the Department of Medicine at Madigan Army Medical Center at Ft. Lewis, Wash. His team includes physiologists, endocrinologist and psychologists. They hope to be able to find a way to counteract high-latitude symptoms.

Research conducted over the last 15 years has shown that the thyroid hormone goes into the muscles to help the muscles generate heat, which is part of the body's adaptation when living in a cold environment, Staudacher said.

"They found that the amount of thyroid hormone that is in the muscles increases and the amount of the hormone in the brain decreases," Staudacher said. "The decreased level of thyroid hormone in the brain, we think is contributing to the changes in mood, concentration and memory down here," he added.

The object of the study is to determine if adding a thyroid hormone to the body results in more hormone getting to the brain. "What we're trying to see is if we give this medicine, if it will help counteract the decreased level in the brain to give improved mood, memory and concentration," Staudacher said

Thyroid hormone is a kind of a general energy hormone. At normal latitudes, people who have been clinically diagnosed with less of the hormone tend to be sluggish and may have trouble concentrating, according to Staudacher.

The study is being conducted using 16 winter-over volunteers. Baseline research was completed on most of the subjects prior to deployment. "We had 14 people who were tested back in Port Hueneme and then two people, one civilian, one Navy, who did the initial (testing) here, Staudacher said.

Volunteers were given Thyroxine to replace the thyroid hormone. Thyroxine is a drug typically used for people with a low acting thyroid. According to Staudacher, half of the volunteers will receive pills containing the thyroid supplement and the other half will take placebos. In this doubleblind study, neither the subjects, nor the researchers know who is actually getting the hormone dose.

According to Staudacher, each volunteer is tested monthly. During the test, each volunteer rides an exercise cycle while hooked up to a metabolic measurement cart. The cart consists of a computer with a carbon dioxide (CO2) and an oxygen (O2) analyzer. It measures the amount of expired CO2 and O2 to measure metabolic capacity.

Additionally, a specially developed questionnaire will be used to evaluate mood. Also, computer-based memory test will be used.

This is the first year of research where an intervention was introduced to try to counteract the symptoms, according to Staudacher.

"We're trying to see if small amounts of thyroid hormone will improve performance for people in the high latitude geographic areas," Staudacher said. "And this potentially could have pretty far-reaching implications in the medical and operational aspects for people who live in the high latitudes," he added.

Water Plant Asks Residents To Conserve

by JO2 Trevor Poulsen

Did you know that each McMurdo resident uses an average of 60 gallons of water per day? That amounts to about 70,000 gallons for the town's daily rate of consumption.

Back in the States, water usage often exceeds this rate by four times. So, why the concern about water conservation in McMurdo?

According to Power Plant Foreman Mac McIntyre, McMurdo is able to produce 80,000 gallons of clean water every 24 hours using two reverse osmosis (RO) units. While this process is faster and causes fewer water shortages than the previous method, it's still not as much as commonly believed.

"Before, when we had the other type of water treatment, McMurdo had to ration water," McIntyre said. "Now, folks are aware of the capability of how much water we can produce and I think they have a tendency to use a little more water because they know we can keep ahead."

If residents use more water than the RO units can handle, a third unit can switch on and produce more. Three storage tanks inside the plant and two on the hill above town hold an additional 285,000 gallons.

One of the reasons why McMurdo residents should conserve water is to save fuel. According to McIntyre, the two old boilers that heat the sea water before it enters the filtration system are inefficient.

MacIntyre said he's working on a way to heat the sea water without using the boilers. "It's in the plan to run some waste heat from our (electricity) generators over into the water plant and get the free heat that we already produce anyway," he said.

Another area of concern at the water plant is lead leaching from pipes.

Last year, town officials agreed to coat the pipes with tripolyphosphate, a chemical added to the water. The twelve-month study showed no significant drop in lead levels.

Rather than replace the pipes in many of the older buildings, an alternative solution is now being tested. Plant operators are boosting the pH level which prevents lead from entering the water.

"Right now its in a test stage. Whether or not it'll be a fix, I don't know," MacIntyre said.

Although lead levels aren't at a dangerous level, McIntyre suggests that town residents let water flow for a moment before drinking from taps not recently used. This flushes any lead particulates that may have dissolved in the water.

McMurdo Station Loses Power

by Bill Haals, ASA Operations Manager

McMurdo Station was plunged into darkness on Oct. 31 after an engine malfunctioned at the McMurdo Power Plant.

Electricity went out base wide at 6:18 p.m. after the engine overheated. Power was restored to the station after approximately 18 minutes.

In order to prevent any damage to the two engines still on-line, several of McMurdo feeders were shut down causing the electrical load on the generators to lessen. This in turn caused the power outage that affected the berthing area's, Bldg. 155, several warehouses and assorted workcenters.

Antarctic Support Associates and Space Mark Inc. personnel responded to the Power Plant to ensure that power

restoration to the community was done as quickly as possible.

During normal operations, the power plant utilizes three engines/generators to keep constant power flowing to the community. If an engine shuts down due to mechanical failure, another engine then is started. Once started, this process takes a few minutes to ensure that all the electrical switchgear is ready to accept the kilowatt load.

During times of storms or severe cold weather, a fourth generator is started and left in only the run mode on standby if more demand is placed for electrical power. For normal operations this is not required.

SCIENCE PROJECT UPDATE

- by JOC(AW) Jacqueline Kiel

Possible Linkages Between Ecosystem Measures and the Demographics of a Weddell Seal Population (S-009)

Weddell seals are the subject of long-term studies because of their proximity to Antarctic support facilities. This particular project will continue long-term tagging studies, including tagging seal pups, and replacing tags on previously tagged seals. Researchers will also continue the annual population estimates.

Additionally, blood samples will be collected for DNA analysis to support future genetic work, and seal foraging ecology will be studied. Dr. Donald Siniff and his team will conduct research mainly on the annual sea ice of McMurdo Sound around Big Razorback Island. Field-team members will also conduct airborne surveys via helicopter to locate seals carrying satellite transmitter packs. The helicopter will land for transmitter pack retrieval.

McMurdo Dry Valleys: Long-Term Ecological Research (LTER)(S-042)

The McMurdo Dry Valleys are the largest ice-free area, covering approximately 4,800 square kilometers. They are unique in that they are far colder and drier than any other LTER sites. Various studies will be conducted during the summer season, including glacier mass balance, melt and energy balance, the chemistry of streams, lakes and glaciers, microbial foodwebs and soil productivity.

Dr. Robert Wharton is the principle investigator (PI), but the field team includes six subgroups, each with its own PI. They are based at the Lake Hoare camp, but will be traveling, via helicopter, to study sites elsewhere in the Dry Valleys, as well as McMurdo Station, for work that will be conducted at the Crary Science and Engineering Center.

Visits to Scott Base

by Peter Kiernan, Scott Base Services Manager (Ext. 6710)

Everyone is more than welcome to visit our shop whenever it's open. Unfortunately, access to all other areas of Scott Base, particularly the dining room and the bar, is by invitation only.

There is, however, a standing invitation for all Kiwis at McMurdo to visit the bar each Tuesday. We would love it if we could give our American friends easier access, but due to the small size of Scott Base, this is not possible.

We Kiwis are a pretty friendly bunch though and so I'm sure there will be lots of invitations given.

AROUND USAP

by JOC(AW) Jacqueline Kiel

McMurdo Station - Siple Dome field camp put-in was completed on Oct. 26. Two flights to the area carried a 10-person construction crew and six camp staff members. They are preparing the camp for researchers who are scheduled to arrive Nov. 4.

Hut Point is undergoing beautification and restoration with the removal of fuel tank D-7, an old pumphouse and the associated piping.

Fleet Operations personnel made a fifth traverse to Marble Point on Oct. 29 carrying equipment for the Cape Roberts project which will begin next year. The project is an international geological drilling project into the ocean sediments using the ice as a platform. The project was originally scheduled to begin this year, but the ice was not thick enough to support necessary equipment, so the project is being delayed a year. However, preparations for the project will continue.

The station's population has reached approximately 950 personnel and is expected to stay fairly steady for the rest of the austral summer.

South Pole - Incoming South Pole personnel arrived at McMurdo Station last week. However, bad weather at the Pole has delayed the season opening of the Pole, which was originally scheduled to open on Oct. 28.

R/V Nathaniel B. Palmer - Investigations into early spring carbon dynamics of the southern Ross Sea continue. Research includes measurement of various biomasses and their productivity, determination of nutrient concentrations, and trace metal levels. Despite difficult weather conditions, researchers believe they have collected the first data to assess the carbon dynamics during the onset of the seasonal phytoplankton bloom.

R/V Polar Duke - On Oct. 29, the ship arrived at the Copacabana field station, an adelic penguin research site on King George Island. After off-loading some cargo the ship got underway for Punta Arenas.

Palmer Station - Field team members studying Antarctic invertebrates performed a video survey dive of the underwater topography in the area around the Palmer Station Pier and Gamage Point. The work was done to locate an outcropping that may hinder the R/V L.M. Gould's ability to dock at the pier.

Christchurch- Demolition crews are separating the old senior petty officer's quarters building from its foundation in preparation for moving it. The building is one of several which will be re-used in New Zealand as youth hostels.

Antarctic Development Squadron SIX (VXE-6) personnel entertained schoolchildren from Riccarton Primary School. The students got an up-close look at the squadron's repair shops, parachute loft, safety gear and an LC-130 ski-equipped Hercules.

How About Those Smoke Detectors

by T.J. Gagnon and Mark Lane

The Firehouse wants you to be familiar with the fire detection systems in buildings so that you will be comfortable enough to activate an emergency response when necessary. There are three ways in which the firehouse is notified of a fire emergency: 911 calls, when fire pull stations are activated, and when heat detectors sense a significant change in temperature.

The smoke detectors in your room and office are our first line of defense in a fire emergency. Because smoke detectors are not connected directly to the building fire alarm system, the firehouse must be notified by phone of their activation. A common problem with smoke detectors is that they can be falsely activated by dust particles. Except for buildings 210 and 211, all smoke detectors have a manual reset button that allows you to silence the alarm. If the alarm sounds for no apparent reason, call x2555 to alert the firehouse of the situation and try to silence the detector by pushing the reset button for 5-10 seconds. If that doesn't silence the alarm, call the firehouse emergency number x911.

The fire pull stations that you see located throughout the buildings (typically near exits or doorways) are directly

tied to the firehouse and will notify us immediately in case of an emergency. Become familiar with their location both at home and at work so that you can use them to evacuate the building and initiate an emergency response.

Most facilities are equipped with temperature detectors. There are two types of temperature detectors at McMurdo Station: rate-of-rise and heat detectors. Rate-of-rise detectors are triggered by rapid changes in room temperature. Heat detectors are activated by increased room temperature beyond a specific temperature. Both of these detectors are directly tied to the firehouse and these alarms can only be silenced by the firehouse or alarm technicians. The sprinkler systems in the buildings are also activated by heat detectors and directly notify the firehouse upon activation.

All of these systems are in place to initiate a quick and effective emergency response from the firehouse. Please help keep these systems functional by knowing their location and use. Most importantly do not disable alarms by covering or hanging anything from detectors, pull station or sprinkler systems. If you have any questions about your fire alarm system please feel free to contact the firehouse at x2555.

NAVY NEWS

BUPERS Improves Toll-free Information Line- *Courtesy of BUPERS Public Affairs* WASHINGTON (NNS) -- An improved Bureau of Personnel toll-free information phone line is now in effect.

Sporting a new number--(800) 951-NAVY (800-951-6289)--the phone line reaches all detailers, not just the few groups initially accessible when the toll-free number started in June 1995. In addition, a transfer/connect feature will allow detailers to transfer a call into the Interactive Voice Response (IVR) System, and for callers in the IVR system to choose an option to connect to a detailer. Under the old number, callers would have to hang up and call again.

For personnel who call the old BUPERS toll-free line, a recording will refer callers to the new number.

After identifying themselves on the IVR by social security number and birth date, callers to the BUPERS number can access career information, advancement and selection board results, orders status, and ENCORE and VSI/SSB results.

Information available through the toll-free number is the same as that on BUPERS access, the Navy's electronic bulletin board for personnel matters.

BUPERS is pursuing additional upgrades for the toll-free number in the future, including international toll-free calling and a fax catalog, where information accessed on the automated phone system would be automatically sent to the caller's fax machine.

Person Of The Week

by JO3 Roland Ortiz

Assistant Post Officer PC1(AW) Steven Coney has left McMurdo after five consecutive summers and Winflys with Naval Support Force, Antarctica.

Coney played a important role in ensuring the on-time delivery of mail to Sailors and civilians in McMurdo. "The transit time for parcels are averaging about three weeks." he said.

"We processed and delivered over 15,000 pounds of mail last week," Coney said. "We also manifested and dispatched over 3,000 pounds to Christchurch."

Coney says his workday can be very busy with two different responsibilities. "I was also a Career Counselor for the Navy. This was a fulfilling and fun job."

Coney added that helping Sailors with their individual careers was rewarding.

Coney will report aboard the aircraft carrier U.S.S. CONSTELLATION in San Diego, Calif. in mid-January.
