Enabling Scientific Research in Antarctica

Christchurch, New Zealand Serves as Logistics Gateway to Antarctica

PAE (New Zealand) provides operations and logistics support in Christchurch for cargo and personnel en route to Antarctica.

PAE (New Zealand) partners with PAE (both under subcontract to Leidos) for the unique Antarctic Support Contract. Although different in scope and customer from many of the typical PAE NZ projects, this contract leverages the convenient Christchurch location to streamline services and logistics required for the United States Antarctic Program (USAP), which is managed by the U.S. National Science Foundation (NSF).

“Christchurch serves as the gateway for logistics support for two of the three U.S. scientific research stations in Antarctica: the McMurdo and Amundsen Scott South Pole stations,” said PAE Chief Executive for Asia Pacific Philip Orchard. (Palmer, the third U.S. research station located on the Antarctic Peninsula, is closer to Chile and supported through a local agent in Punta Arenas.)

Transporting Everything from Bananas to Bolts

“We handle a range of cargo,” said Contract Manager Kerry Chuck. “We transport everything from fresh produce, to parts for heavy machinery, to scientific equipment.” Cargo takes one of five routes, transiting or originating in Christchurch on its way to Antarctica.

Military Airlift. U.S. Air Force aircraft is used to transport programmatic cargo when deploying to Christchurch.

Commercial Air. This method is used for high priority cargo, such as science equipment and expedited parts for broken machinery.

Cargo Vessel. Once a year, a cargo ship travels from Port Hueneme, California, to Christchurch and then on to McMurdo, transporting bulk items such as machinery. It also transports waste from McMurdo on its return.

Locally Procured. Although fresh items locally procured in New Zealand are fairly diverse, this is the most popular method for fresh produce during the austral summer season (October through February).

Balancing Priorities and Tight Time Frames

PAE NZ coordinates approximately 120 flights a year to Antarctica. The exact number depends on the condition of the airfield in Antarctica and whether it can accommodate wheeled aircraft. If unfavorable surface conditions on the airfield prevent wheeled aircraft from landing, there may be up to 145 flights a year (since the ski-equipped Hercules has to complete more flights to transport the payload equivalent of a wheeled C17).

Above: PAE NZ prepares personnel for their time on the ice by issuing extreme cold weather gear. The extreme cold weather warehouse has approximately 60,000 items in stock.

Next Page: Contract Manager Kerry Chuck and Medical Coordinator Leeann Stringer pose with Buzz Aldrin after he was medically evacuated from Antarctica in December 2016. PAE NZ coordinated with the Christchurch hospital to have an ambulance available for Buzz and to ensure his privacy during his stay.
Since payload is dependent on weather conditions, PAE NZ has to manage the airlift priorities. “It takes a significant amount of planning,” said Kerry. “We have people and material that need to get to the ice within certain timeframes.”

Christchurch Operations Much Like Military Base Operations
PAE NZ also coordinates the travel logistics of approximately 3,000 scientists, contractors, military personnel and other national program participants, traveling to and from Antarctica via Christchurch.

“Beginning with a greeting at the Christchurch airport, to accommodation, to food, to receiving extreme cold weather gear, to boarding the C17 or LC-130 bound for Antarctica, PAE NZ is there to prepare people for their time on the ice,” said Kerry.

Kerry equates the PAE NZ operations in Christchurch to those of a small military base. “Our small departments include terminal operations, clothing distribution center, facilities maintenance, procurement, travel services, information technology and communications, medical, air post office, aviation supply warehouse and airfield ground equipment. They keep everything in motion.”

BY THE NUMBERS
2016/2017 Summer Season for USAP

PEOPLE MOVED
North and south for U.S. program participants

ROOM NIGHTS BOOKED

SHUTTLE TRIPS TRAVELED
Transportation from hotel to office for clothing issue and flight

FLIGHT MEALS BOUGHT
Christchurch to McMurdo, snack lunches

CLOTHING ITEMS HANDLED
Red parkas, gloves, boots, overalls, hats, pants, etc.

MAIL MOVED

PERMANENT STAFF

PAE NZ Customer Service Accommodation Coordinator Janice Sloan greets PAE Load Planner Melanie Miller at the Christchurch airport.

A quad tractor parked in the Christchurch Air Cargo Yard awaits transportation to Antarctica. PAE NZ will transport it via a C17 plane or by the annual supply vessel, depending on when it needs to reach Antarctica.

Multinational Harmony Advances Science on the Ice
Antarctic operations in Christchurch are multinational. The U.S. Air Force, Royal New Zealand Airforce, aircraft from the Australian Antarctic Division, and South African Air contracted to the Italian Antarctica program all use Christchurch as a transit point.

“The comradery we have with the other nations is amazing,” said Kerry. “We are all working in harmony for a unified cause: scientific research on the ice. Antarctica is in our blood, and it makes me feel really good about what I am doing.”

The comradery extends beyond sharing Christchurch as a logistics hub. The United States has quid pro quo agreements with New Zealand, Australia and Italy, so in addition to the needs of the United States, PAE NZ supports transportation of people and cargo for those countries as well. Once at McMurdo, people and material are further transported to their end destination. New Zealand’s Scott Base is 2 miles from McMurdo, and Casey Station (Australia) and Mario Zucchelli Station (Italy) are a 3-hour flight and 45-minute flight, respectively, in a LC-130.

Teamwork Drives Success
“The amazing team we have is behind the success of our operation in Christchurch,” said Philip. “With their experience and commitment to delivering successful outcomes, the PAE NZ team consistently goes beyond the call of duty. This is evident in the great feedback we receive from those who pass through Christchurch as part of the program as well as more formally in the high award fee scores we receive every year from our customer.”

Antarctica is in our blood.
— Contract Manager Kerry Chuck