Aircraft Parking Ramps and Refueling Pit Procedures (McMurdo Station)

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Active Divisions/Departments
McMurdo Area Directorate

Raytheon Polar Services Company
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Purpose

The procedure provides standardized guidance for the survey and setup of aircraft parking locations on the ramps and fuel pit areas at the Annual Sea Ice Runway, Williams Field Skiway, and Pegasus White Ice Runway. This SOP also supplements guidance from the *USAP Airfield Operations Manual* and OP-M-500, *Airfield Management*, located at www.mcmurdo.usap.gov and on the Master List.

Scope/Applicability

This procedure will assure that the proper steps are taken by the USAP airfield manager and surveyors to survey and mark the ramps and refueling pits used to support USAP aircraft operations at the Annual Sea Ice Runway, Williams Field Skiways, and Pegasus White Ice Runway.

Responsibilities

The USAP airfield manager is responsible for assuring the ramps and refuel pit parking areas are set up in accordance with this SOP as guidance.

The surveyor shall assure all aircraft ramps and refueling pits located on the Annual Sea Ice Runway, Williams Field Skiways and Pegasus White Ice Runway are surveyed and marked in accordance with this procedure. Deviations require approval of the USAP airfield manager.

Discussion

Annual Sea Ice Runway Aircraft Parking Ramp and Refueling Pits (C-17)

Park all aircraft in the refueling pits with the wingtip no closer then 50 feet from the pump house or nearest obstruction in the refueling pits. During C-17 aircraft operations at the Annual Sea Ice Runway, when more then one C-17 aircraft is on the ground, the minimum distance between each

aircraft's wingtips is 75 feet unless otherwise specified by the survey team. Approval for non-scheduled airlift of more than one C-17 aircraft on the Annual Sea Ice ramp requires a minimum 2-4 hours prior notice to the USAP airfield manager and USAP surveyor. The Terminal Operations manager in Christchurch must submit a written request to the USAP airfield manager and McMurdo Station Antarctic Terminal Operations (ATO) manager. The approval must be granted prior to takeoff of the unscheduled aircraft from Christchurch. This is necessary to assure that:

- sea-ice conditions can support the additional weight,
- logistics can support the increased cargo volume, and
- the ramp is not saturated with other aircraft that would prevent C-17 aircraft parking.

When two C-17 aircraft or combinations of aircraft are on the Annual Sea Ice Runway, park both aircraft on refueling pit one (also referred to as razor back parking) if winds are less then 20 knots. Any aircraft parked on refueling pit two cannot be refueled until the aircraft on pit one has left the parking area. When winds are greater than 20 knots, park all C-17 or combinations on pit three (also referred to as McMurdo Parking). Whenever possible, park the quick-turn aircraft on pit one and the longer duration aircraft on pit 2.

Note Prevailing winds and aircrew dictate C-17 aircraft parking on the ramp

Engine-Running Off-Load

Approval requests for C-17 engine-running off-loads at the Annual Sea Ice Runway must be sent by the Christchurch Terminal Operations manager to the USAP airfield manager and McMurdo Station ATO manager two to four hour prior to takeoff from Christchurch. This is necessary to assure that the proper personnel are available to conduct the off-load safely. Aircraft engine-running off-loads shall be performed on pit one at the Annual Sea Ice Runway or as directed by the USAP airfield manager.

Pegasus White Ice Runway Aircraft Parking Ramps

C-17 parking locations are available on Ramps 1 and 2. The Pegasus White Ice Runway is restricted to a single C-17 aircraft on ground because of clear-zone restrictions on Ramps 1 and 2. Helicopters, C-130s and smaller aircraft shall always park on Ramp 2, outside of the clear zone.

When an inbound C-17 or larger aircraft is one hour prior to the point of safe return (PSR) for landing at Pegasus White Ice Runway, the airfield is closed to other traffic except for an emergency or weather divert. See airfield restrictions and other information published in the USAP *Airfield Operations Manual* and OP-M-500, *Airfield Management.*

Engine-Running Off-loads

Because of potential damage to the ramp surface from soot and dirt, engine-running off-loads by any aircraft at Pegasus White Ice Runway during the months of December and January are not allowed except for C-17 aircraft. Engine-running off-loads during WinFly at Pegasus White Ice Runway require prior written approval from the USAP airfield manager and McMurdo Station ATO manager to assure ability to assure that the proper personnel are available to conduct engine-running off-loads safely.

Aircraft Marshalling and Follow-Me Vehicles

All aircraft except Twin Otters shall be marshaled and wingtip walkers used while taxiing into and out of all aircraft parking locations, including the refueling pits, on all airfields.

Except at Pegasus White Ice Runway, all C-17 and transient aircraft not assigned to McMurdo Station will be provided with a "Follow Me" vehicle to guide them to the parking spots on the refueling pits or ramp parking. At the Pegasus White Ice Runway, only a marshaller and wingtip walkers are used and a "Follow Me" vehicle is not required unless requested by the aircrew.

McMurdo Station Aerospace Ground Equipment (AGE) is responsible for marshalling at the Annual Sea Ice Runway until relieved by 139th Expeditionary Airlift Squadron (EAS) Maintenance. Likewise, the Fire Department provides "Follow Me" vehicles at the Annual Sea Ice Runway until relieved by 139th EAS Maintenance.

Cargo/AGE Staging Areas

Stage all cargo in the designated cargo staging areas as depicted on the surveyors' airfield diagrams. Cargo shall not be staged within the flagged areas of the ramps. Always position AGE equipment on the ready line near the ramps.

Annual Sea Ice Runway and Williams Field Skiway Ramps and Refueling Pits (LC-130 and Twin Otter)

The aircraft-parking ramps at the Annual Sea Ice Runway and Williams Field Skiways shall be surveyed and flagged in accordance with the airfield diagrams.

Park all aircraft in the refueling pits so that the wingtip is no closer then 50 feet from the pump house or nearest obstruction in the refueling pits. The minimum distance between parked LC-130s shall be no less then 50 feet between wingtips to allow for placement of the power carts between the aircraft on the designated parking ramps.

In the open snow in front of the front row of LC-130 aircraft parking spaces, two sets of flags shall be placed (one in front of the other) to reference the centerline of each parking spot. Another flag shall be placed midway between each pair of parking spots to mark the power cart locations. The interior taxi lanes between the LC-130 parking areas shall be a minimum 200 feet wide to provide safe taxi clearance when aircraft are arriving at, or departing from, the aircraft parking spots.

The refueling pits at Annual Sea Ice Runway and Williams Field are set up with four parking spots to refuel four LC-130 aircraft. When all four pits are being used for refueling, loaders or sleds are not authorized in the refueling pits. Loaders or sleds shall not operate between parked aircraft on the pits unless the aircraft are separated by one empty fuel pit parking spot.

As an example, if a loader or sled was working the aircraft on spot 1, spot 2 would not be available for refueling, but spots 3 and 4 would be available. If loaders or sleds were working the aircraft on spots 1 and 3, spots 2 and 4 would not be usable for refueling since each loading operation requires an entire empty spot for maneuvering the loader and sleds. Optimum spacing between nose and tail of aircraft in the refueling pits is 200 feet.

The USAP AOM allows loaders and sled in the refueling pits. However, this does not mean all loading or unloading takes place in the refueling pits. Loading or unloading should take place while the aircraft is in the normal parking location on the ramp. Twin Otters shall park and refuel in the designated locations as depicted on the airfield diagrams for the Annual Sea Ice Runway and Williams Field. Twin Otters will only be refueled on the refuel pits when LC-130 aircraft are not scheduled in the pits.

Jet Assisted Takeoff Operations (JATO)

This section supplements information contained in the USAP *Airfield Operations Manual* for JATO at the Annual Sea Ice Runway and Williams Field Skiway. All agencies shall use this policy to assure coordination takes place and that JATO loading or unloading of LC-130 aircraft is accomplished with 350-foot clear zones, as required by the Air Force.

The primary loading and unloading site for JATO support to LC-130 aircraft is located on the ramp, as depicted on the airfield diagram. The alternate location is the inactive runway (normally the crosswind runway at Williams Field). Skier Maintenance shall assure the 350-foot circle of safety is not comprised.

At the Annual Sea Ice Runway, if an LC-130 aircraft is loading or unloading JATO on the JATO loading area, other aircraft taxiing to the refuel pits must make a right turn out of C-130 parking spots 1 through 6. If an LC-130 is leaving the refueling pits while an aircraft is loading or unloading JATO on the ramp, then the same route back out toward the runway applies.

At Williams Field, taxiing aircraft must turn left to avoid JATO loading and unloading activity.

Alternate loading or unloading of JATO can also be accomplished on the inactive runway, which is normally the crosswind runway at Williams Field. If the crosswind runway is used, the LC-130 aircraft taxis from the ramp to the departure end of the crosswind runway, stops and shuts down on the runway for loading or unloading. Loading or unloading of JATO on the main runway, when inactive, shall take place at the primary departure end of runway. The primary JATO area on the ramp area should not be used when C-17 aircraft are inbound, since the required clear area would block access to the fuel pits.

WARNING Personnel loading or unloading JATO on the runways require control tower approval before operating vehicles on the taxiway and/or runway. Prior to entering the taxiway, personnel shall call the tower (on Channel 6) and request approval to enter the taxiway and runway and follow the LC-130 aircraft to the JATO loading or unloading area. Personnel shall always monitor Channel 6 while on the runway. Before returning to the ramp, personnel must again request approval from the tower prior to leaving the JATO area.

Airfield Diagrams

The following airfield diagrams are available through the survey team:

1. Annual Sea Ice Runway airfield layout (subject to changes annually)
2. Annual Sea Ice Runway Razorback C-17 parking diagram
3. Annual Sea Ice Runway McMurdo C17 parking diagram.
4. Annual Sea Ice Runway LC-130/C-130-Twin Otter parking diagram
5. Williams Field Skiway town site
6. Williams Field Skiway LC-130 and Twin Otter parking diagram
7. Williams Field Skiway airfield layout
8. Pegasus White Ice Runway town site
9. Pegasus White Ice Runway airfield layout
10. Ice Deflection diagram C-17

References

USAP Air Operations Manual

OP-M-500 - *Airfield Management*

OP-DMS-511 - *Airfield Terms and Definitions*

Records

None.

Attachments, Appendices

None.

DRUM OR TRACKING SHEET

FUEL TYPE: _____ **F DRUMS NEEDED:** _____

DATE DUE: _____ **PE OF PALLET:** _____

LABEL FOR: _____ _____

LOCATION: _____

		DATE DONE
CONTROLLER	Called Cargo for aviation pallets, plywood & cargo straps	
FUELIE	**DRUMS TAKEN FROM SUPPLY** **NOT drums pulled from milvans at Heliport, Mogas sump, runway** # of Drums Pulled: _____ Pulled from: ☐ Milvan ☐ Drum Yard If pulled from, milvan #: _____	
FUELIE	**DRUMS TAKEN FROM FUELS MILVANS** **Drums pulled from our milvans at Heliport, Mogas sump & runway** # of Drums Pulled: _____ Pulled from Milvan # _____ Milvan located at: _____ # of Drums left in Milvan: _____	
FUELIE	Mogas meter reading: _____	
FUELIE	**AN-8 DRUMS FILLED AT HELIPORT** **Heliport meter reading** Beginning _____ Ending _____	
FUELIE	Date Drums filled	
FUELIE	Drums filled by:	
CONTROLLER	Call made to have drums picked up to: ☐ Cargo ☐ Fleet Ops Person spoke with: _____ Date called: _____ Time called: _____	
CARGO/FLEET OPS	Drums picked up?	
CONTROLLER	Send confirming email to Science Support	
CONTROLLER	Send email to Science Cargo to get Haz Certification	
CONTROLLER	Send email to Central Supply to have drums issued	
CONTROLLER	Record in control Log Book	
CONTROLLER	Record in Drums Spreadsheet	