MANUAL

PACKING AND SHIPPING INSTRUCTIONS

TL-MAN-0002

Version 18

September 2025

Risk Factor 1

Locations ☒ CHC ☒ DEN ☒ FLD ☒ MCM ☒ PAL ☒ PTH ☒ PUQ ☒ SPS

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Access the controlled version of this document on the USAP Master List.

Approved by:

Pete Cruser — *Signature*

Pete Cruser — *Print Name*

09/26/2025 — *Date*

Transportation and Logistics Manager

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1 PURPOSE

This manual described essential procedures for packaging, marking, labeling, and documenting all United States Antarctic Program (USAP) shipments.

Logistics channels to and from Antarctica are some of the longest and most complex in the world. The remoteness of the location, limited transportation modes, customs inspections through several countries, frequency of delivery, and volume limitations all contribute to difficulties in planning and meeting on-time delivery of materials. These challenges require a comprehensive approach to logistics planning that considers all the variables involved in transporting materials to and from Antarctica, from selecting transportation modes to contingency planning for unexpected events.

To meet these challenges, USAP employs a range of strategies and best practices, including close collaboration with logistics providers and customs agencies and detailed documentation and tracking systems. Effective planning is critical to success. USAP provides various resources and tools to support this, including guidelines, checklists, and access to logistics experts.

By following the procedures outlined in this manual and leveraging the resources and tools available, you can help ensure that materials are transported to and from Antarctica safely, efficiently, and on time.

The following are the typical methods for shipping to Antarctica, in order of most cost efficient:

- Resupply vessel from Port Hueneme, California, to New Zealand and McMurdo Station (VESSEL)
- Commercial Surface (COMSUR)
- Commercial Air (COMAIR)

NOTE Refer to *USAP Transportation Costs and Planning Factors* for additional planning information.

2 AUTHORITIES AND MANDATES

This document addresses the following items from the Antarctic Support Contract's (ASC's) Performance Work Statement, which state that all National Science Foundation (NSF)-funded projects must be managed in an organized, efficient manner according to industry standards:

> 1.5.2.1-3. The Contractor shall operate the new enterprise tool for GFE electronic tracking and control system for personnel and cargo movement and inventory control system upon its implementation by the program. (SOO C.6.5.1c)
>
> 1.5.2.1-4. The Contractor shall operate an enterprise computer-based cargo and passenger tracking system that provides in-transit visibility (ITV) for personnel, materials, and equipment throughout the supply chain and transportation networks. (SOO C.6.5.1c; C.6.5.1d)

1.5.2.1-5. The Contractor shall provide an ITV capability that links ASC Program Headquarters with NSF, New Zealand, Chile, the Antarctic stations, Port Hueneme, and other USAP support organizations. (SOO C.6.5.1c)

1.5.2.1.01-13. The Contractor shall monitor, track and control the entire cargo operation, from order placement to arrival at final destination in Antarctica. (SOO C.6.5.1c; C.6.5.1h)

1.5.2.1.01-14. The Contractor shall monitor, track and control the entire cargo operation from the point of departure to arrival at final destination in Antarctica. (SOO C.6.5.1c; C.6.5.1h)

1.5.2.1.01-17. The Contractor shall provide a fully integrated supply chain that includes both cargo movement networks (air, land, and sea), and personnel movement networks (air, land, and sea) and an electronic tracking and control system that provides in-transit visibility (ITV) for personnel, materials, and equipment throughout the supply chain and transportation networks. (SOO C.6.5.1c, C.6.5.1d)

1.5.2.1.01-18. The Contractor shall manage cargo staging and loading and unloading for aircraft and ships at all supply chain network nodes. (SOO C.6.5.1h)

1.5.2.1.01-29. The Contractor shall comply with rules and regulations governing transportation to the requisite ports and airfields as enforced by the Federal and State's Departments of Transportation and the Federal Aviation Administration throughout the USAP. (SOO C.6.5.2b)

1.5.2.1.01-38. The Contractor shall track movement of cargo to, from, and within the continent. (SOO C.6.5.1e)

1.5.2.1.01-39. The contractor shall provide shipping services to include packaging, crating, marking, labeling, staging, load planning, manifest documentation, loading and in-transit visibility of equipment and materials moving through the supply chain aboard military and commercial modes of transportation. (SOO C.6.5.1c; C.6.5.1d)

1.5.2.1.01-40. The Contractor shall receive and transport all the materials and capital equipment identified for acquisition within the individual Research Support Plans (RSPs). (SOO C.6.5.1c; C.6.5.1d; C.6.5.1h)

1.5.2.1.01-41. The Contractor shall manage the use of all USAP sea containers, and coordinate the shipment and protection of cargo with special requirements (frozen food, science samples, science equipment, etc.). (SOO C.6.5.1c; S C.6.5.1h)

1.5.2.1.01-43. The Contractor shall document the contents of all cargo prepared for shipment. (SOO C.6.5.1c; C.6.5.1h)

1.5.2.1.01-44. The Contractor shall ensure that hazardous/dangerous cargo is properly documented, packaged and shipped according to all applicable government and military regulations. (SOO C.6.5.1c; C.6.5.1h)

1.5.2.1.01-45. The Contractor shall ensure that hazardous/dangerous cargo is controlled according to national and international regulations. (SOO C.6.5.1c; C.6.5.1h)

1.5.2.1.01-51. The Contractor shall provide grantees with logistical assistance prior to, during, and after their field deployment. (SOO C.6.5.1g)

1.5.2.1.02-3. The Contractor shall develop specifications, solicit providers and coordinate the procurement of all required materials including consumables, equipment, foodstuffs, construction materials, tools and scientific instruments, and their movement to required destinations. The Contractor shall provide and operate in accordance with a DCMA approved Procurement System and established corporate purchasing policy, procedures and processes. The Contractor shall utilize COTS application(s) to facilitate the procurement process and provide ready access to procurement status and performance information. (SOO C.6.5.1f)

1.5.2.1.02-4. The Contractor shall assist in the determination of specifications and delivery requirements with grantees and arrange domestic transportation and packaging for science samples (e.g. special containers, customs clearance, hazardous material documentation, etc.). (SOO C.6.5.1f)

1.5.3.1-1. The Contractor shall provide a fully integrated supply chain that includes both cargo movement networks (air, land, and sea), and personnel movement networks (air, land, and sea) and an electronic tracking and control system that provides in-transit visibility (ITV) for personnel, materials, and equipment throughout the supply chain and transportation networks. (SOO C.6.5.1c, C.6.5.1d)

1.5.3.1-2. The Contractor shall plan, schedule, and coordinate the use of USAP aircraft and vessels for the most efficient and cost effective movement of personnel, equipment and material through the supply chain.

1.5.3.1-3. The Contractor shall utilize COTS applications to support deployment and travel planning, shipping distribution network optimization; container loading optimization and ITV TAV tracking and status of people and products moving through the supply chain. (SOO C.6.5.1e)

1.5.3.1.02-1. The Contractor shall provide deployment services to include travel (in accordance with the Federal Travel Regulation and OPP direction for all deployment travel) extreme cold weather clothing, and other required gear to participants traveling to USAP sites. The Contractor shall provide an electronic travel planning application distributed across the enterprise to facilitate travel planning, ticketing, and cost effectiveness. (SOO C.6.5.1c; C.6.5.1g)

1.5.3.1.02-4. The Contractor shall act as the primary interface for information dissemination to USAP participants regarding transportation of participants and cargo for all deployment and redeployment activities. (SOO C.6.5.1g)

1.5.3.1.02-6. The Contractor shall provide all instruction and information necessary to ensure that USAP participants complete the deployment process. (SOO C.6.5.1g)

1.5.6.1.01-6. The Contractor shall ensure that cargo is prepared for shipment, staged and forwarded as close to schedule as flying conditions allow. (SOO C.6.5.1c; C.6.5.1h)

1.5.6.1.06-1. The Contractor shall assist with the planning for and handling of all hazardous materials transported into and out of Antarctica by USAP. (SOO C.6.5.1e)

1.5.6.1.06-2. The Contractor shall be responsible for the onward transportation (usually to an academic institution) of science samples returned from Antarctica. (SOO C.6.5.1c; C.6.5.1h) The Contractor shall be responsible for certifying hazardous and dangerous items for air shipment. (SOO C.6.5.1c; C.6.5.1d; C.6.5.1h)

1.5.6.1.09-2. The Contractor shall assist with the planning for and handling of all hazardous materials transported into and out of Antarctica by USAP. (SOO C.6.5.1e)

1.5.6.1.09-3. The Contractor shall be responsible for certifying hazardous and dangerous items for air shipment. (SOO C.6.5.1c; C.6.5.1d; C.6.5.1h)

1.5.6.1.09-19. The Contractor shall ensure that cargo is prepared for shipment, staged and forwarded as close to schedule as flying conditions allow. (SOO C.6.5.1c; C.6.5.1h)

1.5.6.1.09-22. The Contractor shall be responsible for filling marine transportation vans. (SOO C.6.5.1c; C.6.5.1h)

1.5.6.1.09-26. The Contractor shall be responsible for staging of cargo to be transshipped from the Antarctic the following season. (SOO C.6.5.1c; C.6.5.1h)

1.5.6.1.09-28. The Contractor shall prepare, document, stage, and on-load all retrograde cargo from the Antarctic Station. (SOO C.6.5.1c; C.6.5.1h)

3 RISK FACTOR

This manual is assigned a risk factor of 1.

The preparation and shipment of materials to Antarctica is a complex process. Failure to meet this document's packing and shipping requirements could result in significant cargo delays or damage. Failure to meet packing and shipping requirements could also lead to United States (US) or foreign regulatory violations that affect research and station operations or budgets.

While shippers are responsible for meeting shipping requirements, failure to provide logistic support would be a specific contract non-compliance. Therefore, the content of this manual is in the highest risk category.

NOTE Other resources address the risks associated with these procedures. Refer to the *Port Hueneme Operations Manual* (TL-MAN-0001).

4 APPLICABILITY

This document applies to all USAP participants sending cargo to or from Antarctica.

5 RESPONSIBILITIES

ASC provides for all USAP cargo services as needed, which may include the following:

- Direct support on station
- Leased facilities as a transportation hub
- Subcontracted freight forwarders to the point of final destination

5.1 USAP Cargo Supervisor

The USAP cargo supervisor is responsible for annually reviewing and updating this procedure. The USAP cargo supervisor may delegate specific actions but is responsible for science cargo operations and planning to support McMurdo Station. The USAP cargo supervisor must protect all temperature-sensitive science cargo (TSSC), including receipt and storage of TSSC, updating Maximo, and safeguarding the transfer to the resupply vessel or transport aircraft, whether with USAP partners or other contractors.

5.2 Port Hueneme Operations Manager

The Port Hueneme operations manager is responsible for helping to define these procedures, following these procedures, providing input, and refining their practice. While specific to that work center, activities at Port Hueneme Naval Base Ventura County (NBVC) must also meet the requirements explained here.

5.3 Designated T&L Staff

Transportation & Logistics (T&L) staff members (designated by the T&L Manager) coordinate cargo movement on marine resources and cargo to the vessel and ensure that container placement on the resupply vessel is accurately recorded in the Maximo database.

5.4 Marine Project Coordinator

The marine project coordinator (MPC) is responsible for following these procedures, both onboard and while supporting research vessel operations, whether in South America or CONUS (including Port Hueneme or anywhere else the MPC may be located).

5.5 Marine Laboratory Technician

Each science cruise has at least one designated marine laboratory technician (MLT) onboard, depending on the caseload and science planning for that cruise. The MLT is available to assist USAP participants and may be able to answer questions about cargo movement. The MLT is also responsible for stowing TSSC in retrograde from Palmer Station to port.

5.6 South Pole Station Logistics Supervisor

The South Pole logistics supervisor is responsible for these procedures at the South Pole Station and planning all South Pole's logistical support. All science cargo is coordinated in advance with the South Pole Logistics supervisor. The South Pole logistics supervisor is responsible for ensuring the procedures in this document are followed for the South Pole area.

5.7 Peninsula Logistics Manager

The Peninsula logistics manager is responsible for reviewing these procedures for continuity of service. As the contract officer technical representative (COTR) for Maersk, only the Peninsula logistics manager can approve procedures or activities supported by the Maersk contractor in Punta Arenas, Chile, which is the primary support for all Peninsula area activities. The Peninsula logistics manager is responsible for ensuring these procedures are followed throughout the Peninsula area, Palmer Station, and research vessels. The Peninsula Logistics manager is also responsible for completing the processes described in this document. As the point of contact (POC) for science sample shipments from Palmer Station and the Peninsula area, the Peninsula logistics manager oversees the retrograde movement of all TSSC. For further details, please refer to the *Peninsula Logistics Manual* (TL-MAN-0004) or *Shipping Retrograde Cargo* (TL-MAN-0010).

5.8 Maersk

Continuing logistical support in South America is subcontracted through Maersk Chile, which must meet the standards set in this procedure. Refer also to the *Peninsula Logistics Manual* (TL-MAN-0004) for more details on Peninsula operations.

5.9 USAP Participants

Everyone who sends cargo to or from Antarctica must follow the steps in this procedure.

6 BEFORE DEPLOYMENT

The operational notice for each science event outlines the support requirements approved by NSF for the project's duration. The annual requirements for shipping are specified in each support information package (SIP) for the science event. Make sure to review the operational notice before completing the SIP. While ASC technical events (T-Event) and NSF technical support events do not have operational notices, they must submit a SIP to outline their annual support requirements.

The Principal Investigator (PI) for each grant is responsible for all shipping costs between the origin and Port Hueneme, CA. The USAP contractor pays shipping costs between Antarctica and the Continental United States (CONUS).

CAUTION Exceeding the cargo weight allowances from the Operational Notice requires authorization from the ASC senior leadership team.

The ASC internal Support Information Package (iSIP) is required to call out shipping requirements for ASC work centers (R-Event). Equipment, supplies, and science samples are shipped as cargo unless other arrangements are made in advance.

7 PREPARING CARGO FOR SHIPMENT

This section provides information on restricted items, and guidelines for packaging, marking, labeling, and documentation.

7.1 Shipper's Security Endorsement

Each container arriving at the Port Hueneme Operations facility, even those with locking devices, is subject to inspection. If a shipment cannot be inspected, it will not be forwarded. Materials found unacceptable for COMAIR transportation will be diverted to COMSUR carriers, which may take longer to reach their destination. Similar restrictions apply to retrograde shipments from Antarctica.

CAUTION All cargo is subject to inspection before entering the USAP transportation system. Finding undeclared hazardous materials will delay or prevent shipment.

7.2 Hazardous Materials

Participants are responsible for declaring all hazardous materials shipped to Antarctica, and all shipments must comply with domestic and international regulations governing packing, marking, labeling, and documenting hazardous materials. Failure to identify hazardous material violates United States law and carries a penalty of up to $250,000 and ten years in jail.

To ensure compliance and safety, participants must use professional shippers such as Federal Express (FedEx), United Parcel Service (UPS), or Dalsey Hillblom Lynn (DHL) when shipping hazardous cargo to Port Hueneme. This reduces the risk of harm to transportation personnel and helps prevent delays or refusals.

The Hazardous Cargo supervisor coordinates the shipment of hazardous materials through the USAP transportation system, which is referenced in Intercontinental Shipment of Dangerous Goods (TL-MAN-0017). For any questions or concerns about hazardous materials, please contact USAP-Haz-Cargo-Questions@usap.gov

7.3 Containers

Pack reusable containers with hinged, clamped, or screw-fastened tops. Containers should be made to withstand hard contact, sharp corners, crushing weight, and shock sustained by rough handling in transit, in the warehouse, aboard ship, and on the station. Use sturdy material that is well fastened, securely braced, and reinforced.

CAUTION All participants must be aware of the very rough conditions during transport to Antarctica.

Some plastic containers may not be suitable for use in extreme cold, where they become brittle and may crack or break. In short, consider the environmental conditions of Antarctica when choosing a container.

7.3.1 ENVIRONMENTAL CONDITIONS

Insulated containers may be appropriate if they will eventually be used for retrograde material required to keep frozen (KF) or keep chilled (KC).

Material is often exposed to excessive moisture and temperature extremes during storage and transportation. It is also common for condensation to build up inside boxes during shipment, especially retrograde cargo from South Pole Station to McMurdo Station or Palmer Station on vessels.

Primary shipment to Antarctica is aboard oceangoing vessels that are subject to ocean conditions in transit, which cannot be predicted. Therefore, it is necessary to pack for extremely rough handling and various weather conditions.

7.3.2 WEIGHT AND VOLUME

Crates weighing over 100 pounds (lb) must be palletized for safer cargo handling. Consider also the total volume of the box, and do not pack anything over 125 cubic feet (5 × 5 × 5 feet [ft]). Crates larger and heavier may restrict handling and cause materials to be delayed.

Small boxes may also pose a problem. They are challenging to account for in a cargo cache or the cargo hold of a ship. Avoid boxes smaller than 12 inches (in) on a side. Many small boxes can be packed together and then shipped more readily.

Oversize limitation applies to any package exceeding the following sizes:

- Longer than 125 in (10.5 ft, or 3.2 meters [m])
- Wider than 96 in (8 ft or 2.4 m)
- Higher than 64 in (5.25 ft or 1.6 m)

7.4 Packing Material

Proper packaging can help ensure a shipment arrives at its destination safely and on time. Containers must withstand contact with the sharp corners of other containers, crushing weights, and shocks sustained while in transit, in the warehouse, aboard ship, and at the stations. Use extra padding around the contents of the containers to cushion them against impact. Pack securely and fill any voids or extra space. It cannot be emphasized enough the need to pack for extremely rough handling and exposure to various weather conditions.

Avoid using materials that are not easily degradable. That includes most plastics, especially polystyrene cushioning materials (standard packing peanuts), or a silicone sponge.

CAUTION Polystyrene packing peanuts are banned under the *Antarctic Conservation Act*. Do not use polystyrene packing material.

Suitable alternatives are bubble wrap, shredded paper, corrugated cardboard, burlap, and packing tissue. Paper products are more easily recycled and, therefore, are more suitable for shipping material to Antarctica. Shipments can be delayed on entry to both New Zealand and Chile due to the condition of the packaging. Wooden packaging material (WPM), such as pallets, crates, and boxes, is often reused to return material to the United States, which has some of the strictest requirements.

7.4.1 WOOD PACKING MATERIAL, NEW ZEALAND

The New Zealand government has strict controls and diligent inspections for importing any wood products. They require clearance for imported timber and forest products, sometimes with quarantine restrictions. A certificate must accompany all shipments of lumber from the manufacturer stating the extent and level of any treatment process.

The Ministry for Primary Industries (MPI) conducts inspections to prevent accidentally introducing insects or fungi that could damage New Zealand forests and timber industry.

These inspections include all wooden and plywood packing materials, including crates, pallets, wood packing blocks, and dunnage. All wood products must be free of bark and visible signs of insects, worms, or fungi.

Wood products that cannot be verified as being free of contaminants will be stopped at the port of entry and dealt with as directed by a MPI inspector. USAP participants and their shipping agents should ensure all packing material conforms to the following New Zealand regulations:

Wood packaging must comply with the import requirements.

MPI will risk profile the whole shipment and select a subset for inspection.

Any untreated or uncertified wood packaging found will be refused entry, treated as required, or destroyed — regardless of whether pests are found.

A notice of non-compliance will be issued for any untreated or uncertified wood packaging.

Information from these non-compliances will feedback into the risk profiling system — meaning that importers who develop a history of non-compliance will be selected for inspection more frequently, further delaying cargo. For more information, see https://www.mpi.govt.nz/import/forest-products/wood-packaging/.

7.4.2 WOOD PACKING MATERIAL, CHILE

The government of Chile has strict controls on importing wood products.

USAP participants should be sure that all wooden crates used for shipping through Chile to Palmer Station and the Antarctic Peninsula area are in good condition without stains or signs of fungi. An agriculture stamp indicating the wood is free of contamination will help expedite clearance through Customs.

7.4.3 WOOD PACKING MATERIAL, UNITED STATES

The following regulations have been put in place by the US Department of Agriculture (USDA) on all wood packing materials entering the United States. Please be aware that wood packaging materials used to ship cargo to Antarctic field sites must comply with these regulations to be returned to the United States, as repackaging material or recycled material — all material in retrograde movement from Antarctica.

Wooden packaging material like pallets, crates, and boxes entering the US must be treated or fumigated with methyl bromide and marked with the International Plant Protection Convention (IPPC) logo. The same requirements apply to regulate wood packing material arriving in the US. For more information, see https://www.aphis.usda.gov/aphis/ourfocus/planthealth/import-information/wood-packaging-material. Wood packing materials destined for the US must comply with this statement:

> The wood packaging materials used in this shipment comply with the International Standards for Phytosanitary Measures, Publication 15, 2018 (ISPM 15). The material used consists of

processed wood material and solid sawn wood subjected to the approved heat treatment. Those packages that use heat-treated wood have been certified as being compliant with ISPM 15 and the Internal National Plant Protection Convention (IPPC) and are so marked by an approved and inspected agent (Number US-4522) of the American Lumber Standard Committee.

7.5 Marking and Labeling

Mark all boxes and crates distinctively and visibly. Use a stencil or a permanent marker to make the markings bold and clear. Use consecutive numbers for more than one box in the same shipment; for example, “Box 1 of 4.” Make sure the marking is impervious to water and weather. If boxes or crates are reused from previous seasons in Antarctica or other locations, completely remove any old labels, barcodes, and markings to prevent delays or misdirection.

7.5.1 SPECIAL HANDLING INSTRUCTIONS

All applicable special handling instructions must be marked on the outside of the container. Appropriate and bold labels or stencils provide cargo handlers with instructions. Common examples include but are not limited to the following:

- Do Not Freeze
- Do Not X-ray
- Fragile
- Keep Dry
- Keep Upright
- Do Not Expose to Magnetic Field

7.5.2 DO NOT FREEZE

Some cargo cannot tolerate the extreme temperatures in Antarctica. Heated storage is limited in Antarctica so there are some restrictions.

The size restrictions on Do Not Freeze (DNF) cargo are as follows (L × W × H):

- 48 × 45 × 40 in (122 × 114 × 102 centimeters [cm])

This is roughly the size of a standard, tri-wall container used in the USAP airlift. More oversize DNF items may be shipped through the USAP transportation system, but only with significant business or science justification in writing in advance.

In addition to size restrictions, NSF has mandated that under no circumstances shall DNF cargo be mixed in the same box with non-DNF cargo. Heated storage is very limited in Antarctica, and mixing cargo may result in DNF material being stored outside. While that would not be a problem in Port Hueneme, it would be a significant failure at the South Pole.

7.6 Vehicles, Machinery, and Parts via New Zealand

The transshipment of used vehicles, machinery, or parts through New Zealand is subject to strict biosecurity requirements. Anyone shipping such cargo through New Zealand must review and comply with the requirements detailed in the *Import Health Standard: Vehicles, Machinery and Parts* located at https://www.mpi.govt.nz/dmsdocument/30224/direct.

7.7 Importing Technical Equipment to New Zealand

Participants traveling through New Zealand planning to hand-carry high-value technical equipment must complete a New Zealand Customs Form. For more information, see https://www.customs.govt.nz.

NOTE Copies of the New Zealand Customs Form are available from the ASC Travel Department. Be sure to have the form completed before departure.

Make special note of the following related to the New Zealand Customs Form:

- The form is non-transferable. New Zealand requires the individual whose name appears on the form to be the same person to clear the item through Customs.
  - If possessing high-value technical equipment without customs forms, the individual (not USAP) may be charged with import duties, fines, or the material may be seized.
- The individual deploying with the equipment is not required to accompany its return, as long as the form accompanies the goods.
- Employees and contractors who carry equipment from ASC Denver also need an approved *Hand-Carry Authorization Form* (TL-FRM-0053) and New Zealand Customs Form. These are also non-transferable.
  - Return the equipment with the hand receipt to ASC Denver.
  - If the equipment will stay in Antarctica, notify property management by email so they can transfer the equipment to station inventory.
  - Route the hand receipt to Property Admin for attachment to property records.

NOTE Laptop computers are *generally* exempt from this classification. Check with the ASC Travel department for information on individual deployments.

8 SHIPPING TO PORT HUENEME

The NSF and ASC have instituted shipping procedures to reduce or eliminate delays in shipping materials to Antarctic research sites.

8.1 Required Documentation and Notification

The *USAP Proforma/Invoice* (TL-FRM-0005) is required for all commercial shipments and used by customs authorities for import control, valuation, and duty determination. Participants must accurately describe the contents of each package and include the manufacturer, part number, country of origin, weight, export control/schedule B, and value.

Provide the *USAP Proforma/Invoice* (TL-FRM-0005), a bill of lading, or an air waybill to Port Hueneme Operations at PH-CargoOps@usap.gov. Include the following information in the body of the email:

- Delivering carrier
- Carrier Tracking Number
- Commercial Invoice
- Departure Dates
- Shipments Project Code & End Destination (e.g., McMurdo or South Pole)
- Number of Containers
- Special Handling Instructions

Shipments will be delayed if the above information is missing or incomplete.

NOTE Specificity is required when filling in details, as "Scientific Equipment, Office Supplies, Lab Supplies" are not acceptable descriptions for a packing list and will result in delays clearing Customs.

Contact Port Hueneme Operations before shipping any oversize, unusual, heavy, and intermodal container cargo.

8.2 Address for Cargo Shipments

Use the following address and information for cargo shipments to Port Hueneme. Mark each container with the following information clearly and legibly.

National Science Foundation
c/o Antarctic Support Contract
5020 Stethem Road
Building 471, North End, NBVC
Port Hueneme, CA 93043
ATTN: USAP <station abbreviation>
<Station code>
<Principal Investigator>
<Event number> or <Project code>
<ROS>

NOTE Information in angled brackets (< >) in the above address will be specific to the project or deployment.

8.2.1 STATION ABBREVIATIONS AND STATION PROJECT CODES

Table 1 identifies station abbreviations and project codes.

TABLE 1 Station Abbreviations and Station Project Codes

Antarctic Station	Station Abbreviation	Science Events Station Code	ASC Work Center Station Code
McMurdo Station	MCM	DR1	DW1
South Pole Station	NPX	DR3	DW3
Punta Arenas, Chile	PUQ	DR4	DW4
Palmer Station and Peninsula	PAL	DR7	DW7
Christchurch, New Zealand	CHC	DR9	DW9

8.2.2 EXAMPLE ADDRESS LABEL

National Science Foundation
c/o Antarctic Support Contract
5020 Stethem Road
Building 471, North End, NBVC
Port Hueneme, CA 93043
ATTN: USAP — MCM
DR1
R. Amundsen
A-404-M
4307

MCM

9 SHIPPING DATES AND TIMELINES

Advanced planning can help to reduce USAP transportation costs and ensure timely delivery to Antarctica. Note that the material cutoff schedule changes as the vessel schedules are adjusted. Please confirm the required material cutoff dates with the USAP cargo supervisor, South Pole logistics supervisor, or Peninsula logistics manager before shipping materials to Port Hueneme.

9.1 Commercial Air

COMAIR shipments average a 21-day processing and transit time from Port Hueneme to McMurdo Station. South Pole Station average 28 days. Hazardous materials and oversize items could require 60 days or more.

Cargo not within certain size limits or designated as cargo aircraft only (CAO) will move by truck from Auckland to Christchurch, adding four to five days to the transit time.

9.2 Commercial Surface

COMSUR shipping is cargo on a commercial vessel other than the regular USAP contracted resupply vessel to McMurdo Station. Oversize material that is late but still required may be sent via COMSUR. Participants may send cargo and supplies to the Peninsula Area and Palmer Station COMSUR anytime during the calendar year. It travels to Punta Arenas, Chile, and is transferred to a vessel for final transport to Palmer Station.

NOTE When shipping to the Peninsula Area, consult the schedule posted in the *Peninsula Logistics Schedule* (TL-FRM-0100).

Table 2 shows shipping times from Port Hueneme to various USAP destinations frequented. To ensure that oversize cargo arrives on time, plan and schedule for COMSUR; however, any cargo can be subject to delays, including labor strikes, holidays in foreign countries, and Customs clearance.

TABLE 2 General Shipping Times

Destination	Approximate Days in Transit
McMurdo Station	45
South Pole Station	60
Hazardous material and Oversize cargo to New Zealand (en route to McMurdo Station, South Pole Station, and research vessels)	60+
Research vessels (to New Zealand)	81
Southern ports (Chile) and Palmer Station	113
Hazardous material to Southern ports (Chile) and Palmer Station	120

9.3 Required Delivery Date – Peninsula Area

The required delivery date (RDD) for shipments bound for the Antarctic Peninsula area includes Palmer Station, field camps, and vessel operations. Cutoff dates to meet the Peninsula area cruise schedule for research vessels are located at https://masterlist.denver.usap.gov/MasterList/TL-FRM-0100.xlsx.

Meeting the RDD noted at these sites allows materials to be shipped by the preferred, most cost-effective means available. Materials that cannot meet the RDD will need to be sent via COMAIR. Shipping COMAIR is the most expensive method, and requires approval from NSF and ASC approval before shipping.

Oversize cargo shipments destined for Peninsula sites will be delayed a minimum of 14 days or more by the lack of scheduled cargo aircraft to Punta Arenas, labor strikes, special events, or national holidays in other countries. Oversize cargo must arrive in Port Hueneme

on time for COMSUR transportation based on published cutoff schedules. This is necessary to afford adequate planning and transportation for Maersk delivery in case there is no opportunity to fly the oversize cargo even part of the way. Any CAO or oversize items will be trucked from Santiago, Chile, to Punta Arenas, which will take a minimum of 14 days.

9.4 Required Delivery Date – Continental Area

The required on site (ROS) date determines when the material is required at Port Hueneme in order to arrive in Antarctica in time for the project.

NOTE Cargo may not meet its prescribed ROS date if the RDD is not met.

Table 3 shows the ROS dates and RDD for cargo shipments during the 2025–2026 Summer season. Cargo not arriving within these prescribed guidelines may require COMAIR shipment and NSF and ASC approval.

TABLE 3 RDD Continental Area

McMurdo ROS Date	McMurdo Julian ROS Date	Required Delivery Date to Port Hueneme
October 4, 2025	5277	August 20, 2025
October 11, 2025	5284	August 27, 2025
October 18, 2025	5291	September 3, 2025
October 25, 2025	5298	September 10, 2025
November 1, 2025	5305	September 17, 2025
November 8, 2025	5312	September 24, 2025
November 15, 2025	5319	October 1, 2025
November 22, 2025	5326	October 8, 2025
November 29, 2025	5333	October 15, 2025
December 6, 2025	5340	October 22, 2025
December 13, 2025	5347	October 29, 2025
December 20, 2025	5354	November 5, 2025
December 27, 2025	5361	Blackout Period
January 3, 2026	6003	Blackout Period
January 10, 2026	6010	Blackout Period
January 17, 2026	6017	Blackout Period
January 24, 2026	6024	December 10, 2025
January 31, 2026	6031	December 17, 2025
January 31, 2026	6031	December 17, 2025

McMurdo ROS Date	McMurdo Julian ROS Date	Required Delivery Date to Port Hueneme
February 7, 2026	6038	December 24, 2025
February 14, 2026	6045	December 31, 2025
February 21, 2026	6052	January 7, 2026
February 28, 2026	6059	January 14, 2026

10 INTERMODAL TRANSPORTATION

Intermodal transportation is a standard freight shipping method that incorporates two or more means of transportation without handling freight between modes. This method reduces cargo handling, damages, or loss while improving security. The International Organization for Standardization (ISO) maintains container requirements, first based on the original Department of Defense (DoD) standards.

USAP participants loading intermodal shipping containers must notify the Port Hueneme Operations manager to receive specific instructions. If the container includes Do Not Freeze (DNF) cargo for the project, the shipper must use a refrigerated container. Participants must ship DNF cargo separately via COMAIR or COMSUR if a powered refrigerated container is unavailable.

Port Hueneme Operations visually verifies each container's contents for seaworthiness, including the proper blocking and bracing of cargo for transport. This inspection is documented and reported to the participant and ASC management. In addition, hazardous materials must be shipped separately and include a safety data sheet (SDS) with the packing list.

The following military specification (MILSPEC) certification guidelines describe the requirements for certifying an intermodal container for maritime transportation to Antarctica.

- *Standard Practice for Military Packaging* (MIL-STD-2073-1D) (https://assets.milpac.com/resources/documents/MIL-STD-2073-1E-CN2.pdf)

10.1 Fumigation Requirements for New Zealand and Australia

Due to the possible infestation and protection from the brown marmorated stink bug, all COMSUR shipments must be fumigated 120 hours before departure from California. This requirement applies to all cargo shipped between 1 September and 30 April each year.

Two fumigants are used: methyl bromide, which leaves no residue, and sulfuryl fluoride, which is often requested if the shipment contains delicate electronic equipment. If shipping food, please pack these articles separately to avoid contamination from the fumigants.

11 SHIPPING TO PORT HUENEME FROM FOREIGN COUNTRIES

Equipment shipped from a foreign country, then through the US to Antarctica, enters the US as imported material. When entering the United States, complete US Customs *Transportation Entry and Manifest of Goods Subject to CBP Inspection and Permit* (CBP Form 7512; February 2012). The form is available online at https://www.cbp.gov/newsroom/publications/forms.

Other forms may be required. When shipping foreign goods through the US, use a recognized customs broker to prepare the documentation for forwarded shipments. Contact the Port Hueneme Operations manager to facilitate processing through US Customs and shipment to Antarctica.

CAUTION When shipping by truck from a foreign location, Port Hueneme Operations must have the driver's name 30 working days in advance to arrange clearance through DHS for delivery to NBVC.

All cargo shipments from foreign countries to Port Hueneme, California, must be shipped prepaid from the point of origin. All transportation charges must be prepaid, including surface or air cargo in the US, freight-forwarding fees, and brokerage commissions.

11.1 Canada

All shipments from Canada or Canadian vendors should be shipped by air to Port Hueneme. Try to use standard US shippers, such as FedEx or UPS. If cargo moving to or from Canada is shipped by truck, we strongly recommend using FedEx, UPS, or Yellow Roadway Corporation (YRC).

12 DIRECT COMMERCIAL SHIPPING

It may be more practical for vendors to ship directly to Port Hueneme, New Zealand, or Chile. Port Hueneme has several options and services to offer in USAP support. Providing advanced notice also helps them prepare for receiving the cargo if any special handling is needed.

NOTE Neither NSF nor ASC is responsible for commercial shipments sent directly to these destinations.

12.1 Direct Shipments to New Zealand Using FedEx or DHL

Shipments must arrive at the Christchurch cargo yard 10 days before the intended ROS date. You must forward the original paperwork for shipments to New Zealand:

Email: CHC-CourierNotifications@usap.gov
Tel: +64-3-358-8139

FAX: +64-3-358-1479
Attention: Terminal Operations Manager

- **Ensure a copy of your commercial invoice detailing the contents and the dollar values of your consignment is included with all paperwork. CHC Terminal Operations must receive this information** before the arrival of the cargo. Include the following information in all correspondence:
- FedEx or DHL Tracking Number
- Commercial Invoice
- Departure Dates
- Shipments Project Code & End Destination (e.g., McMurdo or South Pole)
- Number of Containers
- Special Handling Instructions

NOTE Some companies, such as Federal Express in New Zealand, do not operate 24 hours a day and are closed on weekends, which may affect how quickly items can be delivered to our Christchurch cargo operation.

Use the following address for shipping directly to New Zealand:

National Science Foundation
United States Antarctic Program
c/o PAE (New Zealand) Limited
Gate 1, 45 Orchard Road North
Christchurch International Airport
Christchurch, New Zealand

Email CHC-CourierNotifications@usap.gov for advice and assistance if needed.

NOTE All direct shipments must be sent duty delivery paid (DDP).

12.2 Direct Shipments to Chile

For shipments to Chile, send the following information for all shipments to the Peninsula Logistics Manager at Palmer.Logistics@usap.gov and Maersk at PA-PuntaArenasAll@usap.gov before the cargo arrives.

- Commercial invoice
- Master Airway Bill (MAWB) number (if applicable)
- Flight number
- Bill of lading (BOL) number (if applicable)
- Departure dates

- Number of boxes
- Contents of each box
- Commercial value in US$

Use this address for shipping directly to Punta Arenas, Chile:

Maersk Logistics & Services Chile SPA
c/o US Antarctic Program
RUT 96.662.540-6
Deposito Franco Antarctico
Avenida Bernardo O'Higgins #1385
Muelle Arturo Prat
Punta Arenas, Chile

To avoid Customs delays, put these instructions below the address:

FOR FURTHER SHIPMENT TO ANTARCTICA
<Name>
<Station abbreviation>
<Station code>
<Participant>
<Event number> or <Project code>
<ROS>
<Box of number-of-boxes> (e.g., "Box 1 of 4") Do Not Freeze

13 BAGGAGE ALLOWANCES

Participants will travel from their airport of departure to Christchurch, New Zealand, or Punta Arenas, Chile, on commercial carriers. Reviewing the airline's baggage limitations and fees before departure is essential. Commercial airline baggage allowances are typically two bags, 23 kilograms (kg) (50 lb) each, plus a carry-on.

The program does not reimburse costs for excess baggage. Notify the Christchurch Travel Office when planning to carry excess baggage.

All participants have the same luggage weight allowance when flying from New Zealand to McMurdo Station in summer and winter. A maximum of 39 kg (85 lb) for luggage plus 7 kg (15 lb) for carry-on is allowed for this leg of the journey.

NOTE The extreme cold weather (ECW) clothing issued to personnel in Christchurch weighs about 10 kg (22 lb). There is a requirement to wear certain items on the flight. The rest of the issued clothing (about 3 kg [7 lb]) is considered checked baggage.

13.1 Hazardous Material

Participants may not carry hazardous materials in checked baggage or carry-on luggage. Military flights are no exception. For any questions, contact the hazardous cargo supervisor at USAP-Haz-Cargo-Questions@usap.gov.

14 CARGO DAMAGE, INSURANCE, AND CUSTOMS INSPECTIONS

Neither NSF nor ASC shall be responsible for lost or damaged scientific equipment and general cargo in the following categories:

- Shipped between the point of origin and Antarctica
- Shipped between Antarctica and the destination
- While in Antarctica
- While being transported via USAP transportation (research vessel, annual resupply vessel, or aircraft)

If the ASC contractor is found to be grossly negligent during handling and shipping, claims for lost or damaged shipments will be considered.

ASC encourages participants to obtain insurance for their shipments. It is also highly encouraged to use shock watches, tiltmeters, or other rough handling indicators on delicate, high-value equipment being shipped within the USAP transportation system. Participants can find the brand used by USAP at https://www.uline.com/BL_1053/Shockwatch.

14.1 Reporting Damage or Loss

Cargo damage must be reported as soon as found. Make reports directly to the T&L work center (e.g., USAP Cargo at McMurdo Station, South Pole Logistics, or Peninsula Logistics). For vessels, report immediately to the MPC. For retrograde cargo, report damage or loss to the Port Hueneme Operations manager or Port Hueneme Cargo supervisor via email at PH-CargoOps@usap.gov.

Collect digital images whenever possible. On vessels, the MPC often has a digital camera for use. Send an email with attached digital pictures to the USAP cargo supervisor on station or MPC on vessels. Material or cargo that never arrives (loss) or is not available as scheduled should also be reported in an email.

Each damage report is investigated to determine the extent of damage, cause, and location where the damage occurred. Completed reports are forwarded to the T&L manager. The objective is to identify the nature and frequency of occurrences so that process and performance may be adjusted (as required) to prevent future damage.

14.2 Insurance and Customs

Participants are responsible for insuring their shipments. The insured value should be as high as the current replacement value of the material. Except for military transport, items may be insured at any point during transit. It is solely the shipper's responsibility to accurately describe the contents and declare the value of shipments. *The Antarctic Support Contract cannot and will not make this declaration.*

14.2.1 CUSTOMS VALUE

The insured value is not the same as the Customs value. The declared Customs value should be the actual market value; that is, the value of the item in its present condition and current age (e.g., the Blue-Book value).

Provide the actual market value on Customs forms for Chile and New Zealand. It is the shipper's responsibility to accurately describe contents and declare the value.

NOTE See *Shipping Retrograde Cargo* (TL-MAN-0010) for more complete details.

The US Customs Office will scrutinize high-dollar value shipments more closely than less expensive cargo. When the cargo value reaches a certain dollar threshold, Customs personnel give the shipment more attention and ask more questions. That takes more time, so using the replacement cost (typically more expensive), rather than the current market value, may delay clearing Customs. The same is true for the retrograde of equipment. When US Customs identifies incoming shipments of highly technical equipment, they may specify a need for an import license. While the incidence is low in USAP, proper identification and declaration are crucial.

14.2.2 IMPORT/EXPORT LICENSING

Participants are responsible for compliance with all relevant US and foreign government export and import authorities and obtaining any required export or import permits, licenses, or other authorizations. Please refer to the cognizant agency or agencies to confirm whether cargo requires special authorization for exportation to or importation from Antarctica. Relevant US government agencies may include, but are not limited to, the following:

- US Department of Commerce (https://www.bis.doc.gov)
- US Department of State (https://www.pmddtc.state.gov)
- Nuclear Regulatory Commission (https://www.nrc.gov)
- Bureau of Alcohol, Tobacco, Firearms, and Explosives (https://www.atf.gov)
- US Food and Drug Administration (https://www.fda.gov)
- US Drug Enforcement Administration (https://www.justice.gov/dea)
- US Fish and Wildlife Service (https://www.fws.gov/international)

- US Department of Agriculture (https://www.usda.gov)
- USDA Animal and Plant Health Inspection Service (https://www.aphis.usda.gov/aphis/home/)

14.2.3 PADLOCKS

Some shippers send cargo to Antarctica in locked containers. US and foreign Customs agents can and do cut off padlocks to inspect the contents. Serialized seals are recommended instead of padlocks.

15 DNF CARGO HANDLING PROCEDURES

15.1 Southbound COMAIR

15.1.1 MCMURDO STATION

DNF cargo is turned over to the freight forwarder for commercial flights to New Zealand. On arrival at the Air Cargo Yard in Christchurch, New Zealand, cargo is palletized and transported via the USAP airlift. At McMurdo Station, DNF cargo is placed in a temperature-controlled warehouse until delivered to the participant or ASC work center.

15.1.2 SOUTH POLE STATION

DNF cargo is turned over to the freight forwarder for commercial flights to New Zealand. On arrival at the Air Cargo Yard in Christchurch, New Zealand, cargo is palletized and transported via the USAP airlift to McMurdo Station. DNF cargo is placed in a temperature-controlled warehouse until manifested on a flight to South Pole Station. On arrival at the South Pole Station, DNF cargo is kept in a temperature-controlled area until turned over to the participant or ASC work center.

15.1.3 PENINSULA LOGISTICS

DNF cargo is shipped to Maersk in Punta Arenas, Chile. On arrival, it is stored in a temperature-controlled warehouse environment until containerized for transport to Palmer Station, or until loaded as breakbulk cargo on a research and support vessel.

NOTE All DNF cargo for the Peninsula area is loaded on a vessel and stored in temperature-controlled areas on a lower deck.

15.2 Southbound COMSUR

Port Hueneme Operations loads all science-related DNF cargo in intermodal shipping containers and manifests them for a surface vessel to Christchurch, New Zealand, or Punta Arenas, Chile.

15.2.1 MCMURDO STATION

Ocean vessels are offloaded in Lyttelton, New Zealand, and trucked to Christchurch International Airport. DNF cargo is palletized at the Air Cargo Yard and transported via the USAP airlift to McMurdo Station. On arrival at McMurdo Station, DNF cargo is placed in a temperature-controlled warehouse until delivered to the participant or ASC work center.

15.2.2 SOUTH POLE STATION

Ocean vessels are offloaded in Lyttelton, New Zealand, and trucked to Christchurch International Airport. DNF cargo is palletized at the Air Cargo Yard and transported via the USAP airlift to McMurdo Station. There, DNF cargo is placed in a temperature-controlled warehouse until manifested on a flight to South Pole Station. On arrival at the South Pole, DNF cargo is moved to a temperature-controlled area until turnover to the participant or ASC work center.

15.2.3 PENINSULA LOGISTICS

For Peninsula Logistics, DNF cargo is shipped to Maersk in Punta Arenas, Chile. On arrival, it is stored in a temperature-controlled warehouse until containerized for transport to Palmer Station, or until loaded as breakbulk cargo on a research and support vessel.

15.3 Resupply Vessel

Port Hueneme Operations loads all science-related DNF cargo into refrigerated containers set at +4°C (+39.2°F) to ensure temperature control in transit. If refrigerated containers are not available, DNF cargo is offloaded in Lyttelton, New Zealand, and trucked 12 miles to Christchurch for airlift to McMurdo Station.

After loading the resupply vessel, reports are generated by Port Hueneme Operations staff to ensure that all DNF cargo is identified. Cargo disposition is determined based on the following criteria and distributed to the resupply vessel offload team for situational awareness.

Criteria for determining DNF cargo disposition:

1. Size and scope of cargo.
2. DNF storage capacity on the station.
3. The number of refrigerated container power plug-ins on the resupply vessel or stated an insufficient number of plug-ins to support DNF refrigerated containers.
4. The refrigerated container capacity at McMurdo Station.

Should one or more criteria restrict the transport of DNF cargo on the resupply vessel to McMurdo Station, that cargo is offloaded in Lyttelton, New Zealand, and transported to McMurdo Station via USAP airlift. Upon arrival at McMurdo Station, DNF cargo is placed in a

temperature-controlled environment until ready to be received by the participant or work center.

16 FEEDBACK AND CONTACTS

To better serve participants, we encourage feedback about our transportation system. Positive feedback tells us what satisfies our customers and meets their needs. Constructive feedback highlights problem areas that may provide improvement opportunities and improve participant support. We ask for both.

The following are the POCs for issues concerning Logistics:

- Transportation and Logistics Manager: DEN-Manager-Transportation-Logistics@usap.gov
- Port Hueneme Cargo Operations: PH-CargoOps@usap.gov
- Antarctic Terminal Operations (ATO) manager: DEN-ATO-Manager@usap.gov
- USAP Cargo Supervisor: DEN-USAP-Cargo-Supervisor@usap.gov
- Hazardous Cargo Supervisor: DEN-Hazardous-Cargo-Supervisor@usap.gov
- Peninsula Logistics Manager: DEN-Palmer-Logistics-Manager@usap.gov

NOTE These are contacts for shipping cargo and equipment. For postal mailing addresses, refer to the *USAP Participant Guide* (NSF 06-52).

16.1 Port Hueneme

Freight contact and correspondence address:

National Science Foundation
c/o Antarctic Support Contract
5020 Stethem Road
Building 471, North End, NBVC
Port Hueneme, CA 93043

Port Hueneme telephone contacts:

Direct: 805-985-6851
Toll free: 800-688-8606; x33615, x33619, and x33603
Fax: 805-984-5432
Email: PH-CargoOps@usap.gov

16.2 US Freight Carriers

Table 4 lists the contact numbers for freight forwarders in the USAP transportation system.

TABLE 4 Freight Carrier Contact Numbers

Carrier	Phone
FedEx Express	800-463-3339
FedEx Freight	866-393-4585
YRC Freight	800-610-6500
UPS Freight	800-333-7400
UPS Domestic	800-742-5877
XPO	800-775-2728
Landstar	800-434-1791

Use the following to contact Maersk regarding the USAP transportation system:

Email: Asc.lax@Maersk.com
Phone: 346-268-8147

16.3 New Zealand

National Science Foundation
United States Antarctic Program
c/o PAE (New Zealand) Limited
Gate 1, 45 Orchard Road North
Christchurch International Airport
Christchurch, New Zealand
Phone: +64-3-358-8139
Fax: +64-3-358-1479

16.4 Chile

PALMER STATION
DEPOSITO FRANCO ANTARCTICO c/o Maersk Chile SA
Avenida Bernardo O'Higgins NBR. 1385
Muelle Arturo Prat
Punta Arenas, Chile
Tel: +1 720-568-2870

17 REFERENCES

17.1 Internal Documents

Hand-Carry Authorization Form (TL-FRM-0053)

Intercontinental Shipment of Dangerous Goods (TL-MAN-0017)

Peninsula Logistics Manual (TL-MAN-0004)

Peninsula Logistics Schedule (TL-FRM-0100)

Port Hueneme Operations Manual (TL-MAN-0001)

Shipping Retrograde Cargo (TL-MAN-0010)

USAP Proforma/Invoice (TL-FRM-0005)

17.2 External Supporting Documents

Refer to the following documents when completing these instructions.

Antarctic Conservation Act (https://www.nsf.gov/od/opp/antarct/aca/aca.jsp)

Certificate of Registration of Foreign Manufactured Item (US Customs form 4455)

Declaration for Free Entry of Unaccompanied Articles (US Customs form 3299 https://www.cbp.gov/xp/cgov/toolbox/forms/)

Import Health Standard: Vehicles, Machinery and Parts (https://www.mpi.gov.nz/dmsdocument/30224/direct)

Management Manuals, Standard Operating Procedures, and Preventive Maintenance Manuals (ASC contract deliverable NSFDACS 1219442, F006)

Ministry for Primary Industries (https://www.mpi.govt.nz/biosecurity/)

New Zealand Customs (Form NZCS 213 (https://www.customs.govt.nz/)

Transportation Entry and Manifest of Goods Subject to CBP Inspection and Permit (US Customs form 7512 (https://www.cbp.gov/newsroom/publications/forms?title=7512)

Uline (https://www.uline.com/BL_1053/Shockwatch)

USAP Participant Guide (NSF 06-52)

17.3 External Standards and Guidelines

American Lumber Standard Committee (Agent: Number US-4522)

Drug Enforcement Agency (21 C.F.R. §§ 1300–1399)

Export Administration Regulations (15 C.F.R. §§ 730–774)

Food and Drug Administration (21 C.F.R. §§ 1–1299)

GAO Standards for Internal Control in the Federal Government

Government Property (FAR Part 44)

Internal National Plant Protection Convention (IPPC)

International Standards for Phytosanitary Measures (Publication 15, March 2002 [ISPM 15])

Container requirements (International Organization for Standardization [ISO])

International Traffic in Arms Regulations (22 C.F.R. §§ 120–130)

Management's Responsibility for Internal Control (OMB A-123)

Standard Practice for Military Packaging (MIL-STD-2073-1D)

Transportation (49 C.F.R.)

Wood Packaging Material (WPM) guidelines (United States Department of Agriculture Animal and Plant Health Inspection Service [APHIS]) (https://www.aphis.usda.gov/aphis/home/)

18 RECORDS

TABLE 5 Records

Record ID (& Owner)	Format & Location	Protection & Retrieval	Retention & Disposition
USAP Proforma/Invoice (TL-FRM-0005) (USAP cargo supervisor)	Hardcopy kept at ASC Denver.	Attached to shipping record in Maximo. Retrieved per request to USAP cargo supervisor.	Electronic copy on USAP Cargo drive 5 years.

APPENDIX 1 METHODS FOR SHIPPING CARGO

Unless otherwise directed by the NSF, ASC will determine the mode of transport based on the date received and date required on site. Consider the shipping mode and transit time to meet the Port Hueneme cargo cutoff dates.

Resupply Vessel

USAP charters one container ship each year to move cargo between Port Hueneme, California, and McMurdo Station. That often includes a stop at Port Lyttelton, New Zealand. The resupply vessel departs from Port Hueneme and arrives at McMurdo Station in late January or early February. Considering all methods of transport to Antarctica, the annual resupply vessel is the most cost effective.

The resupply vessel returns with retrograde cargo to Port Hueneme for offload in mid-March. The onward shipment of scientific materials and samples is a priority over general cargo. Shipping via the resupply vessel should be the first option for cost and efficiency to support temperature-sensitive cargo.

Commercial Shipping

COMSUR shipping moves cargo via oceangoing surface vessel. Cargo that arrives at Port Hueneme by the RDD is containerized and shipped COMSUR to New Zealand or Chile. COMSUR is the primary and most cost-effective transportation mode after resupply vessel. For Punta Arenas, Chile, and New Zealand, COMSUR shipments depart at regular intervals throughout the year.

Cargo that cannot arrive at Port Hueneme by the COMSUR RDD must be flown by COMAIR if that is the only way to meet the ROS date. Shipping COMAIR is costly and not recommended. Also, planning to COMAIR requires prior approval from NSF and ASC.

USAP Airlift

Special Assignment Airlift Mission (SAAM) flights are United States Air Force (USAF) cargo planes chartered by USAP to transport cargo and participants. SAAM flights typically start at the beginning of the Austral summer.

APPENDIX 2 TRANSPORTATION COSTS AND PLANNING

Acquisition planning schedules provide timelines for moving cargo to Antarctica. Plan ahead and use the lowest cost options as shown in table 6. Contact the Port Hueneme operations manager with any questions about lead times for special handling.

TABLE 6 Costs and Planning

Transport Mode	To	Transit Time	Cost	Lead Time	Advantage
COMSUR (Commercial Surface)	Christchurch	51 days	**US$0.97** per lb	Due in Port Hueneme 80 days before ROS date	Cheaper than other modes but pricier than resupply vessel
	Punta Arenas	55 days		Due in Port Hueneme 97 days before ROS date	Schedule based on vessel cutoff dates, but oversize cargo can delay in Santiago, Chile, up to 14 days
COMAIR (Commercial Air)	Christchurch	11 days	**US$12.04** per lb	Due in Port Hueneme 21 days before due at McMurdo	Costliest shipping but quickest delivery Provides goods on short notice, but oversize items sometimes go through Chicago and can take weeks as air freight
	Punta Arenas	27 days		Due to Port Hueneme 30 days	
Resupply Vessel	Port Lyttelton	20 days	**US$0.45** per lb	ALL DUE in Port Hueneme on 27 November	Most cost-effective shipment Move containers and bulk cargo at same time Move outsize and overweight cargo at no added cost
	McMurdo Station South Pole Station	5–6 days (31 days to McMurdo) Movement to South Pole by air at end of summer season or by land during next season			
Vessel offloads cargo at McMurdo; loads	Retrograde to Port Lyttelton	10 days, depending on reload	**US$0.45** per lb	ALL DUE in McMurdo Station on 31 January	Most cost-effective return shipment

Transport Mode	To	Transit Time	Cost	Lead Time	Advantage
retrograde and recycle for return trip	Retrograde to Port Hueneme	31 days			Most reliable for temperature-sensitive samples Most secure for containers and bulk samples on return
USAP Airlift Contract airlift NZ to McMurdo, then to South Pole and deep field camps	McMurdo Station	6–8 hours, depending on aircraft	N/A USAP subcontract	**7 days** Due in CHC 7 days before ROS date at McMurdo	Move passengers (PAX) and cargo between CHC and McMurdo Station
	South Pole Station	3–4 hours, depending on weather		**10 days** Due in CHC 10–14 days before ROS at South Pole	Move PAX and cargo between McMurdo Station and South Pole Station
Retrograde and Redeployment	Christchurch	6–8 hours, depending on aircraft		**7 days** Due in McMurdo 7–10 days before flight to CHC	Move PAX and cargo back to NZ at end of the season

APPENDIX 3 VESSEL REQUIRED DELIVERY DATES

See table 7 for resupply vessel RDDs to McMurdo Station and the South Pole. All science projects must have cargo to Port Hueneme before 30 November 2024.

TABLE 7 Vessel Required Delivery Dates and Priority for McMurdo Station and South Pole

MCM/SP – Vessel	RDD Port Hueneme	Required on Site	ROS
Life/Health/Safety	November 14, 2025	January 31, 2026	6121
Critical	November 14, 2025	January 31, 2026	6122
Essential	November 14, 2025	January 31, 2026	6123
Non-critical/Standard Resupply	November 14, 2025	January 31, 2026	6124

19 GLOSSARY

Also see the ASC Glossary at https://den.usap.gov/empresources/sctnglossary.cfm.

AFMAN	Air Force Joint Manual
APHIS	Animal and Plant Health Inspection Service A division of the US Department of Agriculture
ASC	Antarctic Support Contract
ATO	Antarctic Terminal Operations
BOL	Bill of Lading
CAO	Cargo Aircraft Only
Cargo Resupply Vessel	A chartered vessel hired to move cargo between Port Hueneme and McMurdo Station. It generally includes a port call at Port Lyttelton, New Zealand. Often referred to as "the Vessel," it is the most cost efficient transport for moving material to McMurdo Station. That cargo is often moved on to inland camps and the South Pole Station.
CHC	Christchurch, New Zealand
Chilean Territory	Generally, the area around the country of Chile May also refer to the area between 50° and 90° East latitude.
CITES	Convention on the International Trade in Endangered Species See https://www.cites.org.
COMAIR	Commercial Air Cargo transported by commercial aircraft (United, Air New Zealand, etc.).
COMSUR	Commercial Surface Cargo transported by commercial vessel.
Continental Site	Any USAP site throughout the Antarctic continent Typically, transit occurs through Christchurch, NZ, to McMurdo Station; transit occurs to the South Pole Station or Inland field camps.
CONUS	Continental United States
COTR	Contract Officer Technical Representative
COTS	Commercial off-the-shelf
DCMA	Defense Contract Management Agency
DDP	Duty Delivery Paid
DHL	Dalsey Hillblom Lynn
DHS	Department of Homeland Security
DNF	Do Not Freeze
DOD	Department of Defense
ECW	Extreme Cold Weather

Eutectic Ice	The solid formed when a mixture of 76% water and 23% salt (by weight) is frozen. It melts at -21°C (-5°F), with about three times the refrigerant effect of dry ice.
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
FedEx	Federal Express
GFE	Government Furnished Equipment
IPPC	International Plant Protection Convention
iSIP	Internal Support Information Package
ISO	International Organization for Standardization
ISPM	International Standards for Phytosanitary Measures
ITV	In-Transit Visibility
KC	Keep Chilled
KF	Keep Frozen
MPI	Ministry for Primary Industries New Zealand agency.
Maersk	The logistics support agent contracted by ASC.
Mainbody	Refers to the large movements of people and cargo at the beginning and end of the austral summer
MAWB	Master Airway Bill
Maximo	Maximo manages USAP inventory and asset information, to include: purchase requisitioning and purchase order tracking; receipt of inventory at USAP operating locations; support of in-transit visibility of cargo; and work order data to include preventive maintenance, emergency work order, and service requests.
MCM	McMurdo Station
MILSPEC	Military Specification
MPC	Marine Project Coordinator
MPI	Ministry for Primary Industries
MLT	Marine Laboratory Technician
NBVC	Naval Base Ventura County Located at Port Hueneme, California
NLT	No Later Than
NPX	National Weather Service airfield designator for South Pole Station
NRC	Nuclear Regulatory Commission
NSF	National Science Foundation
OMB	Office of Management and Budget
OPP	Office of Polar Programs

Oversize Cargo	Oversize cargo is cargo that cannot be flown on passenger aircraft or that which exceeds the capabilities of the aircraft available for the proposed route. Peninsula: Cargo that is more than 43 in (100 cm) long × 43 in (100 cm) wide × 43 in (100 cm) high, with a total weight of more than 125 kg. Continental: Cargo that is more than 124 in long, 96 in wide, 62 in high. No specific weight limit. Oversize and heavy items may be moved overland from Auckland to Christchurch without an expedite fee.
PAL	National Weather Service designator for Palmer Station
PAX	Passengers
Peninsula Site	Any USAP site along the Antarctic Peninsula Many vessel operations, Palmer Station, and surrounding field sites fall into this category.
PI	Principal Investigator
POC	Point of Contact The individual or office used to centralize input and exercise control over a project. For most events, this will be the science planning manager.
PUQ	Punta Arenas
RDD	Required Delivery Date The deadline for cargo intended to arrive at Port Hueneme for further shipped via USAP resources. Please refer to the Required Delivery Date section in this document to determine the cargo deadline to Port Hueneme.
ROS	Required on Site Date when an item is required at the location, where it will be used, whether on station, vessel, or field camp. Computing this date migrates to cargo scheduling, bar codes, flight manifests and on to the destination. Cargo tracking uses the first Saturday following the requested date. Cargo is manifested to reach its site by that Saturday. That date is then converted into a four-digit number representing the year and Julian date. For Peninsula operations, this is generally understood to be the date 12 days before a vessel arrives at Punta Arenas or in some cases when the material must be carried via alternate means.
SAAM	Special Assignment Airlift Mission
SDS	Safety Data Sheet
Shipping Number	A field in Maximo that indicates a shipping code (an automated bar code) for shipping and receiving cargo and supplies through Port Hueneme and cargo staging areas, CONUS and on station.
SIP	Support Information Package
SOO	Statement of Objectives
T&E	Transportation Entry Shipping form: US Customs Transportation Entry form 7512
T&L	Transportation & Logistics ASC department.
TSSC	Temperature-sensitive Science Cargo

	Material that must be kept frozen, chilled, or prevented from freezing. For shipping: Keep Frozen = -80°C to -20°C (-112°F to -4°F) Keep Chilled = +4°C to +10°C (+39°F to +50°F)
TSA	Transportation Security Administration
UN	United Nations
UPS	United Parcel Service
USAF	United States Air Force
USAP	United States Antarctic Program
USAP Airlift	This term refers to the scheduled movement of cargo and passengers (PAX) from Christchurch, NZ, to McMurdo Station via aircraft certified to operate in Antarctica.
USDA	United States Department of Agriculture
YRC	Yellow Roadway Corporation
WPM	Wooden Packaging Material