Packing & Shipping Instructions

TL-MAN-0002
Version 8

June 2017

Risk Factor: 1

This document applies to the following locations:

Prepared by the Antarctic Support Contractor
for the
National Science Foundation Office of Polar Programs
# Version History

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The document library holds the most recent versions of all documents.

Approved by:

Michael Raabe

Signature
Transportation & Logistics Manager

Printed Name

Date

6/12/2017

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Purpose

This manual contains instructions for documenting, packaging, marking, and shipping materials to all United States Antarctic Program (USAP) locations and research vessels. These instructions are published to assist USAP participants in preparing and forwarding their supplies and equipment. Your actions are the first of many in a long logistics pipeline. Improper documentation, poor packaging or labeling, failure to meet the required delivery dates — whether at Port Hueneme, CA, USA; Punta Arenas, Chile; or directly to Christchurch, New Zealand — can all result in delay, which could jeopardize the accomplishment of planned work. Advanced planning is critical.

All shipping costs for processing and transport between point of origin and Port Hueneme, CA, are borne by the principal investigator's (PI) grant. The USAP contractor pays for shipping costs between Antarctica and the Continental United States (CONUS). Exceeding weight allowances that were requested and approved from the Support Information Package (SIP) require prior authorization from the National Science Foundation (NSF).

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

- Resupply vessel from Port Hueneme, CA to New Zealand, McMurdo Station, South Pole Station
- Commercial Surface (COMSUR)
- Commercial Air (COMAIR)

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

Authorities and Mandates

The prime contract NSFDACS 1219442, Deliverable F006 - Management Manuals, Standard Operating Procedures, and Preventive Maintenance Manuals expects procedural manuals of this kind to support all facilities and operations throughout the USAP. This manual meets that requirement.

Risk Factor

This manual is assigned a risk factor of 1.

Preparation and shipment of materials to Antarctica is a complex process. Failure to meet the packing and shipping requirements described in this document could result in significant cargo delays or cargo damage. Failure to meet packing and shipping requirements could also lead to 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 specific contract non-compliance. Therefore, the contents of this manual are considered in the highest risk category.

Note Risks associated with these procedures are addressed further in other sources. Refer to the Port Hueneme Operations Manual (TL-MAN-0001).
Scope
This document applies to all grantees and participants sending cargo to or from Antarctica.

Responsibilities
The Antarctic Support Contract (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 point of final destination

**USAP Cargo Supervisor**

The USAP Cargo supervisor is responsible for annually reviewing and updating this procedure and all retrograde cargo operations at McMurdo Station. The USAP Cargo supervisor may delegate specific actions, but is ultimately responsible for cargo operations and science cargo planning to support McMurdo Station. The USAP Cargo supervisor must ensure that all temperature sensitive science cargo (TSSC) is protected, including receipt and storage of TSSC, updating IBM Maximo, and protecting the transfer to the resupply vessel or transport aircraft, whether with USAP partners or other contractors. The USAP Cargo supervisor is responsible for making sure these procedures are followed throughout the McMurdo area.

**USAP Cargo Administrative Coordinator**

The USAP Cargo administrative coordinator is responsible for administrative support for the USAP Cargo office at McMurdo Station. The administrator is responsible for entering data into IBM Maximo for cargo operations at McMurdo Station, as directed by the USAP Cargo supervisor.

**Port Hueneme Operations Manager**

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

**Marine Terminal Supervisor**

The Marine Terminal supervisor is responsible for coordinating movement of cargo on marine resources and of cargo to the vessel, enabling the loading of containers, and ensuring that container placement on the vessel is accurately recorded in the IBM Maximo database.

**Marine Project Coordinator**

Within the Marine division, the Marine Project Coordinator (MPC) is responsible for following these procedures, both on board and while conducting support for the research
vessels, whether in South America or CONUS (including Port Hueneme or anywhere else the MPC may be located).

**Marine Laboratory Technician**

Each science cruise has at least one designated Marine Laboratory Technician (MLT) on board, depending on the caseload and science planning for that cruise. The MLT is available to assist grantees, 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.

**South Pole Logistics Supervisor**

The South Pole Logistics supervisor is responsible for these procedures at the South Pole Station and for planning all logistical support at the South Pole. All science cargo is coordinated in advance with the South Pole Logistics supervisor.

**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 Damco, only the Peninsula Logistics manager can approve procedures or activities supported by the Damco contractor in Punta Arenas, Chile, which is the primary support for all peninsula area activities. The Peninsula Logistics manager is responsible for making sure 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 retrograde movement of all TSSC. For further details, please refer to the *Peninsula Logistics Manual* (TL-MAN-0004) or to *Shipping Retrograde Cargo* (TL-MAN-0010).

**Damco**

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

**Grantees and Participants**

Everyone who requires sending cargo to or from Antarctica, whether back to the US or otherwise, must following the steps in this procedure.

**Port Hueneme, California**

Through contractual arrangements with the ASC, the Port Hueneme Operations manager is responsible for the receipt and movement of all USAP cargo shipments going to or returned from Antarctica. Material going to Antarctica is first processed at Port Hueneme Operations (California), where it is entered into the USAP transportation system.
The Port Hueneme Operations manager is the POC for all matters related to processing outgoing cargo, and can be reached at the contact information provided in the Feedback And Contacts section of this manual.

**Indirect Air Carrier**

Federal Aviation Administration (FAA) regulations require the Port Hueneme Operations manager to sign a *Shipper’s Security Endorsement* for all commercial air shipments. The endorsement states that the shipment does not contain any unauthorized explosives, destructive devices, or hazardous materials. The Port Hueneme Operations manager is responsible for preventing the unauthorized addition of explosives or hazardous materials to contents. The unauthorized shipment of hazardous materials via air carriers subjects the shipper to a personal liability of $50,000 and/or up to five years in jail. This penalty applies to the individual who certified the shipment for air transport along with the shipper’s employer.

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**CAUTION**

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

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Therefore, each container arriving at the Port Hueneme Operations facility is subject to inspection before it can be forwarded to Antarctica. Containers shipped with locking devices, such as padlocks, will also be inspected. Cargo will not be forwarded if the container cannot be opened. Materials found to be unacceptable for commercial air transportation will be diverted to commercial surface carriers and will take longer to reach their destination. Similar restrictions apply to retrograde shipment from Antarctica.

**Hazardous Material Shipments**

Participants are responsible for declaring all hazardous materials being shipped to Antarctica. 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 holds penalties up to $250,000 and 10 years in jail.

It is recommended that participants seek the services of professional shippers like FedEx, UPS, or DHL when shipping hazardous cargo to Port Hueneme. Using a professional shipper reduces the risk of harm to transportation personnel and helps prevent delays or refusals by ensuring that materials are properly packed, marked, labeled, and documented in accordance with domestic and international regulations.

Shipment of hazardous materials through the USAP transportation system is referenced in *Inter-Continental Shipment of Hazardous Materials via Aircraft* (TL-MAN-0017) and is supervised by the hazardous cargo supervisor in Denver, Colorado. Please contact the hazardous cargo supervisor at (720) 568-2035 or at 1 (800) 688-8606, ext. 32035. Questions concerning hazardous materials may be sent to USAP-Haz-Cargo-Questions@usap.gov.
South Bound Cargo Shipping

All USAP participants should send all shipments to Port Hueneme Operations for transport to Antarctica, as this is the most reliable method for the delivery and tracking shipments to USAP Stations and research sites. Cargo entering the USAP Cargo stream at Port Hueneme is assigned a Shipping Number in Maximo, which is used to manage the movement and staging of cargo, just as a FedEx number is used to track movement of material shipped by this mode. The Shipping Number can also be used for tracking and to identify the updated status of items in the cargo stream.

Contact Port Hueneme Operations before shipping any unique or unusual cargo, anything very large or unusually heavy, any odd-sized cargo, and any intermodal container cargo. Provide Port Hueneme Operations with shipping information so that they can prepare for receiving and trans-shipment. If any special handling is needed, Port Hueneme Operations will know the requirements that must be met. Call Port Hueneme Operations with any questions.

Address for Cargo Shipments

Use the following address and information for cargo shipments to Port Hueneme. The information should be labeled on each box. Make sure this information is clear and legible.

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

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

Example Address

The following is an example address from a fictitious project:

National Science Foundation  
c/o Antarctic Support Contract  
Naval Base Ventura County  
5020 Stethem Road  
Building 471, North End  
Port Hueneme, CA 93043  
ATTN: USAP — NPX DR3  
M. Davis  
A-404-S  
4319
Station Abbreviations and Station Project Codes

Table 1 identifies station abbreviations and Project Codes.

<table>
<thead>
<tr>
<th>Antarctic Station</th>
<th>Station Abbreviation</th>
<th>Science Station Code</th>
<th>ASC Station Code</th>
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<tbody>
<tr>
<td>McMurdo Station</td>
<td>ZCM</td>
<td>DR1</td>
<td>DW1</td>
</tr>
<tr>
<td>South Pole Station</td>
<td>NPX</td>
<td>DR3</td>
<td>DW3</td>
</tr>
<tr>
<td>Punta Arenas, Chile</td>
<td>PUQ</td>
<td>DR4</td>
<td>DW4</td>
</tr>
<tr>
<td>Palmer Station and Peninsula</td>
<td>PAL</td>
<td>DR7</td>
<td>DW7</td>
</tr>
<tr>
<td>Christchurch, New Zealand</td>
<td>CHC</td>
<td>DR9</td>
<td>DW9</td>
</tr>
<tr>
<td>RV/IB Nathanial B. Palmer</td>
<td>NBP</td>
<td>NBP</td>
<td>NBP</td>
</tr>
<tr>
<td>AR/SV Laurence M. Gould</td>
<td>LMG</td>
<td>LMG</td>
<td>LMG</td>
</tr>
</tbody>
</table>

Shipping cargo outside of the USAP to an Antarctic gateway, such as Christchurch, New Zealand, or Punta Arenas, Chile, may encounter delays in customs inspections or other unforeseen reasons that are beyond USAP control. The NSF and ASC have instituted shipping procedures in order to reduce or eliminate delays in shipping materials to Antarctic research sites.

If shipping directly to a gateway destination is unavoidable, be sure to explain it to the appropriate Science Planning and Support manager POC. Follow their direction. They will advise the sender to contact the Port Hueneme Operations manager for further instruction.

Shipping to Port Hueneme from Foreign Locations

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 the following Internet address:

- http://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 required documentation for forwarded shipments. It is recommended to make prior contact with the Port Hueneme Operations manager to facilitate processing through US Customs and shipment, onward to Antarctica.

Cargo consigned to the USAP at Port Hueneme will be re-exported from Port Hueneme, California (NBVC), which is covered by US Customs. To clear inspections by the Department of Homeland Security (DHS), make sure that Leidos or the National Science Foundation is listed as consignee for these shipments. Start Transportation Entry (T&E) shipments early enough to allow for occasional short delays, while the carrier arranges local delivery witnessed by US Customs officials.
**CAUTION** When shipping by truck from a foreign location, Port Hueneme Operations must have the driver’s name thirty (30) working days in advance to arrange clearance through the DHS for delivery to NBVC.

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

**Canada**

All shipments from Canada or from 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 YRC.

**Importing Technical Equipment to New Zealand**

Participants traveling through New Zealand planning to hand carry high-value technical equipment need to complete a New Zealand Customs Form NZCS 213.

| Note | Copies of New Zealand Customs Form NZCS 213 are available from the ASC Travel department. Be sure to have Form NZCS 213 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 Form NZCS 213 be the same person to clear the item through Customs.
  - If in possession of high-value technical equipment without Form NZCS 213, the individual (not the USAP) may be charged with import duties, fines, or the equipment 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 a *Temporary Property Hand Receipt* (BO-FRM-0001) in addition to New Zealand Customs Form NZCS 213. 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 on station by email, so that 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. |
Direct Commercial Shipping

All USAP participants should use the NSF Port Hueneme facility for cargo shipments southbound to Antarctica, as this is the most reliable method for delivery and for tracking shipments to Antarctic research sites. Shipments may be made directly overseas.

Port Hueneme Operations must be contacted before shipping anything that may be very large or unusually heavy, any odd-sized cargo, loaded intermodal containers, and any unique or extremely valuable cargo. If intending to send a large volume of cargo, contact Port Hueneme Operations before commencement of shipment. Port Hueneme has several options and expert services to offer in USAP support. Be aware that they may need advance notice for support of special cargo. They may be able contact special carriers in your area.

Contacting Port Hueneme Operations before directly shipping cargo will help them locate and track the cargo during shipment. This also helps them prepare for receiving the cargo, in case any special handling is needed. It also helps process items that may need transshipment onward to the final destination.

In some situations, it may be more practical for cargo originating outside the United States to be shipped directly to New Zealand or South America. In these cases, please consult with Port Hueneme Operations for advice and to coordinate delivery.

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Note: Neither the NSF nor ASC is responsible for commercial shipments sent directly to these destinations.

Recent changes in Transportation Security Administration (TSA) security policy may affect direct cargo shipments. Please consult the TSA website to determine if additional information or measures are required to ship cargo outside of the USAP supply chain. For more information, please refer to the Air Cargo Security Changes letter issued by the TSA, which is available at the following Internet address:


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

FOR FURTHER SHIPMENT TO ANTARCTICA
<Name>
<Station abbreviation>
<Station code>
<Grantee>
<Event number> or <Project code>
<ROS>
<Box of number-of-boxes> (e.g., “Box 1 of 4”)

Preparing material for direct commercial shipping is the same as preparing for shipment in the USAP supply chain; refer to other sections in this manual.

Be sure to notify the USAP representatives at the destination that materials have been shipped to the addresses listed below. Ensure that the commercial invoice is included with the Bill of Lading, which outlines specific contents and dollar values. The appropriate paperwork must be received prior to the arrival of the cargo. The following information must be identified on all correspondence:
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- Master Airway Bill Number (MAWB) (if applicable)
- Flight number
- Departure dates
- Bill of Lading numbers (COMSUR)
- Number of boxes
- Contents of each box
- Commercial value in US$

It is strongly recommended that the shipper confirm receipt of all communications with the transportation terminals listed below.

New Zealand

For shipments to New Zealand, please email CHC-CourierNotifications@usap.gov for advice and assistance. Forward the original paperwork for shipments to New Zealand to:

- Email: CHC-CourierNotifications@usap.gov
- Fax: +64-3-358-1479

Send to the attention of the Terminal Operations Manager.

Please ensure that a commercial invoice is included with the Bill of Lading, which outlines specific contents and dollar values. The appropriate paperwork must be received prior to the arrival of the cargo. The following information must be identified on all correspondence:

- Master Airway Bill (MAWB) number (if applicable)
- Flight number
- Departure dates
- Bill of Lading numbers (COMSUR)
- Number of boxes
- Contents of each box
- Commercial value in US$

**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  
c/o PAE (New Zealand) Limited  
Gate 1, Orchard Road North  
Christchurch International Airport  
Christchurch, New Zealand  
Tel: +64-3-358-8139  
FAX: +64-3-358-1479

**Note** All direct shipments must be sent Duty Delivery Paid (DDP).
Chile

For surface shipments, a copy of the Bill of Lading is required to be emailed to Damco Chile, at PA-PuntaArenasAll@usap.gov, with a copy forwarded sent to Palmer.Logistics@usap.gov.

Please ensure that a commercial invoice, which outlines specific contents and dollar values, is included with the Bill of Lading. The appropriate paperwork must be received prior to the arrival of the cargo. The following information must be identified on all correspondence:

- Master Airway Bill (MAWB) number (if applicable)
- Flight number
- Departure dates
- Bill of Lading numbers (COMSUR)
- Number of boxes
- Contents of each box
- Commercial value in US$

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

Master R/V NATHANIEL B PALMER or R/V LAURENCE M. GOULD or PALMER STATION
c/o Damco Chile SA
Avenida Bernardo O'Higgins NBR. 1385
Muelle Arturo Prat
Punta Arenas, Chile

Preparing Cargo for Shipment

During the shipping process, equipment and material will receive treatment characteristic of stevedoring operations. Delicate or sensitive equipment must be packed well and protected by means of the packaging used. Grantees and their packing agents should not only give consideration for providing additional packing, but should also consider the type of materials utilized for shock-absorbent packing.

Contact Port Hueneme Operations before shipping any unique or unusual cargo, anything very large or unusually heavy, any odd-sized cargo, and any intermodal container cargo. Provide them with the shipping information so that they can prepare for receiving and transshipment. If any special handling is needed, Port Hueneme Operations will know the requirements that must be met. Call first with any questions.

Packing Material

Avoid using materials that are not easily degradable. That includes most plastics, especially polystyrene cushioning materials (common packing peanuts).

CAUTION Polystyrene packing peanuts are banned under the Antarctic Conservation Act. Do not use polystyrene packing material.
Do not use polystyrene, polyurethane foam, or silicone sponge. 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. Some cargo shipments have been delayed on entry to both New Zealand and Chile due to the condition of the packing crates, when the outside material failed inspection. Wooden packaging material (WPM), such as pallets, crates, and boxes are often reused to return material to the United States, which has some of the strictest requirements.

**Wood Packing and Lumber 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 of any kind — sometimes with quarantine restrictions. All shipments of lumber must be accompanied by a certificate from the manufacturer stating the extent and level of any treatment process.

Inspections are conducted by the Ministry for Primary Industries (MPI) to prevent accidentally introducing any insects or fungi that could damage New Zealand forests and timber industry. These inspections include all wooden and plywood packing cases, 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 an MPI inspector. Grantees and their shipping agents should ensure all packing material conforms to the following New Zealand regulations:

1. Wood packaging must comply with the import requirements.
2. MPI will risk profile the whole shipment and select a subset for inspection.
3. Any untreated or uncertified wood packaging found will be refused entry, treated as required, or destroyed — regardless of whether pests are found.
4. A notice of non-compliance will be issued for any untreated or uncertified wood packaging.
5. 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 on the standard, please refer to the MPI website at the following Internet address:

- [http://www.mpi.govt.nz](http://www.mpi.govt.nz)

**Wood Packing Material, Chile**

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

**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 in order to be returned to the United States, as repackaging material or recycled material — all material in retrograde movement from Antarctica.

Wooden packaging material (WPM) 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. Effective 16 September 2005, the same requirements apply to regulate WPM arriving in the US. Refer also to WPM guidelines published by USDA Animal and Plant Health Inspection Service (APHIS) at the following Internet address:


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, March 2002 (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.

**Packing Containers**

As often as possible, pack reusable containers with hinged, clamped, or screw-fastened tops — most especially if items are to be returned or reused in retrograde.

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 station. Use sturdy material that is well fastened, securely braced, and reinforced. All boxes and containers should be secured with steel banding or cord strap. The number of straps depends on the size of the box, but it is recommended to use at least two straps per box.

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**CAUTION** All participants must be aware of the very rough conditions that may be encountered by material during transport.

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.
Conditions

Insulated containers may be appropriate if they will eventually be used for retrograde material that must be kept 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 to Palmer Station on vessels.

Primary shipment to Antarctica is on board ocean-going 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.

Weight and Volume

Crates weighing over 100 pounds must be palletized for safer cargo handling. Consider also the total volume of the box, and do not pack anything over 125 cubic feet (5x5x5 feet). Crates larger and heavier may restrict handling and cause materials to be delayed.

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

Any air cargo longer than 125 inches (10 ½ feet, or 3.2 m) must be sent via cargo carrier. Sometimes, mail or air cargo can be expedited on passenger aircraft. The following sizes can only be flown by cargo carriers:

- Longer than 125” (10 ½ feet, or 3.2 m)
- Wider than 96” (8 ft. or 2.4 m)
- More than 64” (5 ¼ ft. or 1.6 m) high

Marking and Labeling

Mark all boxes and crates in a distinctive and obvious manner. Using a stencil or a permanent marker, 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 re-used from previous seasons in Antarctica or other locations, remove any old labels, barcodes, and markings to prevent delays or misdirection.

Required Documentation

Provide the Port Hueneme Operations manager with a copy of the shipping information by email (PH-CargoOps@usap.gov) or fax. Send a Bill of Lading or an Air Waybill, and make sure that the information is clear and concise. Indicate the following:

- Delivering carrier
- Shipment number
- Piece count
• Date departed
• Scheduled delivery date
• Total weight
•Special handling instructions

A detailed packing list should be created and emailed to PH-CargoOps@usap.gov. Be sure to do the following:

1. Describe the contents, especially any hazardous materials.
2. List the event number.
3. Use the Antarctic station abbreviation.
4. Indicate the required on-site (ROS) date and any temperature requirements or special handling needed.

Due to compliance regulations, the level of detail for the packing list has been increased. Information on the contents must include a detailed description of item, manufacturer part number, manufacturer and country of origin, US dollar amount (US$) per item, and the total cost for all items. Please be as specific as possible to prevent any problems. This information is required for each item shipped within each box/crate/pallet/tote/etc. to be used by USAP personnel to create the proforma invoice required by US Customs for export.

In the event that information is missing from the packing list, cargo may be delayed until the information is obtained. There are specific templates to be used depending on shipping situations. The templates are as follows:

• **USAP Southbound Cargo Packing List** (TL-FRM-0004)
  — This template is to be used by all USAP participants to ship southbound cargo to Antarctica.

• **USAP Northbound Cargo Retrograde Packing List** (TL-FRM-0005)
  — This template is to be used by all science groups and contractors to ship northbound or retrograde cargo from Antarctica not traveling on the annual resupply vessel. The only other instance that the **USAP Northbound Cargo Retrograde Packing List** is not completed is if the final destination of the cargo is New Zealand.

| Note | “Scientific Equipment, Office Supplies, Lab Supplies” are no longer an acceptable description for a packing list, and will result in delays clearing Customs. |

In addition, forward the electronic copies of the detailed packing lists in Microsoft Excel that were attached to each box that outline the contents of each package.

**Special Handling**

Some items require specific treatment. We must prevent some contents from freezing and other contents that must not thaw. Boxes will need to be kept upright or protected from energy sources.
Special handling instructions must be marked outside the box. Appropriate and bold labels or stencils should provide cargo handlers with instructions. Common examples include the following:

- Fragile
- Do Not X-Ray
- Keep Dry
- Keep Frozen
- Do Not Freeze

**Do Not Freeze**

Some cargo cannot tolerate freezing. Some materials become very brittle when they get cold. Certain cargo cannot tolerate constriction or shrinkage that occurs at freezing temperatures. Some food stuffs will spoil if allowed to freeze. Some computer equipment or digital components can be damaged by freezing due to the extreme temperatures in Antarctica. Batteries and some chemicals can be rendered useless if subjected to these extreme temperatures.

The size restrictions on Do Not Freeze (DNF) cargo are as follows:

48" x 45" x 40" (L x W x H) 122 cm x 114 cm x 102 cm

This is roughly the size of a standard, tri-wall container used in the USAP Airlift. Larger DNF items may be shipped through the USAP Transportation system, but only with significant business justification or science need provided in writing in advance. With that, further arrangements need to be made with the Port Hueneme Operations manager.

In addition to size restrictions, the 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.

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**Note**

DNF cargo may be inspected at any point in the USAP Transportation system. Items will be segregated at the start of the logistics train in Port Hueneme to prevent repacking items once on the Ice.

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After the DNF cargo is processed through Port Hueneme Operations, follow the procedures in the following sections to ensure that cargo is not damaged by freezing temperatures.

**Marking**

For ready identification and continuity throughout the USAP Transportation system, mark temperature restricted items as DO NOT FREEZE (DNF).

Mark the box used for shipping DNF cargo by making a square field in black, with distinct white letters to say DO NOT FREEZE; or use appropriate DNF stickers. Mark DNF on all four sides — not on top or bottom.

Include all other cargo markings and required documentation.
Southbound COMAIR

For 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 NZ, cargo is palletized and transported via the USAP Airlift. At McMurdo Station, DNF cargo is placed in a temperature-controlled warehouse environment until delivered to the grantee or appropriate work center.

For 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, NZ, cargo is palletized and transported via the USAP Airlift through McMurdo Station. DNF cargo is placed in a temperature-controlled warehouse environment until manifested on a flight to South Pole Station. On arrival at the South Pole, DNF cargo is also kept in a temperature-controlled environment until turned over to the grantee or ASC work center.

Peninsula Logistics

For Peninsula Logistics, DNF cargo is shipped to Damco 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 break bulk cargo on the research and support vessel.

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

Southbound COMSUR

Port Hueneme Operations loads all science-related DNF cargo in an intermodal container, and manifests the container for surface vessel to Christchurch, New Zealand. Cargo is off-loaded from the ocean vessels in Port Lyttelton, New Zealand. On delivery to the Air Cargo Yard in Christchurch, DNF cargo is unloaded from the container, palletized, and transported to McMurdo Station via USAP airlift. On arrival at McMurdo Station, DNF cargo is placed in a temperature-controlled warehouse environment until delivered to the grantee or work center.

South Pole Station

For South Pole Station, DNF cargo is turned over to the freight forwarder for commercial shipping to New Zealand. Ocean vessels are off-loaded in Lyttelton, New Zealand and trucked about 20 km (12 miles) 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 environment until manifested on a flight to South Pole Station. On arrival at the South Pole, DNF cargo is quickly moved to a temperature-controlled environment until turnover to the grantee or ASC work center.

Peninsula Logistics

For Peninsula Logistics, DNF cargo is shipped to Damco 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 break bulk cargo on the research and support vessel.

**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 while being transported on the resupply vessel. 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 the resupply vessel is loaded, reports are generated by the Marine Terminal supervisor to ensure that all DNF cargo has been identified. Cargo disposition is determined based on the following criteria, and distributed to the resupply vessel off-load team for full situational awareness.

Criteria for determining DNF cargo disposition:

1. Size and scope of cargo.
2. DNF storage capacity on station.
3. Number of refrigerated container power plug-ins on the resupply vessel, or stated insufficient number of plug-ins to support DNF refrigerated containers.
4. 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 off-loaded 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 grantee or work center.

**Intermodal Shipping Containers**

Intermodal cargo transportation includes shipping freight in containers that can be moved between different modes of transportation (e.g., rail, ship, truck) without any handling of the freight itself between modes. For instance, container shipments can move from an ocean vessel to the USAP Airlift without being unloaded and repacked. Intermodal shipping reduces cargo handling, improves security, reduces damages or loss, and allows freight to be transported faster. The International Organization for Standardization (ISO) maintains container requirements, which were first based upon original Department of Defense (DOD) standards.

There are instances when science equipment received at Port Hueneme Operations is loaded into intermodal shipping containers for transshipment to Antarctica. There are many different kinds (closed and open) and brands of intermodal shipping containers; all must be ISO certified.

When using preloaded, intermodal containers, grantees must notify the Port Hueneme Operations manager in advance to receive specific instructions.

For instance, if the container includes DNF cargo for the project, the shipper is required to use a refrigerated container. If a powered refrigerated container is not available, DNF cargo must be shipped separately. DNF cargo might be transshipped via COMAIR or COMSUR, as determined by the Port Hueneme Operations manager.
Port Hueneme Operations visually verifies the contents of each container for seaworthiness, to include the proper blocking and bracing of cargo for transport. This inspection is documented and reported to the grantee and to ASC management. In addition, hazardous materials must be shipped separately, and must include a safety data sheet (SDS) with the packing list.

To accurately detail requirements for certifying an intermodal container for seaward transportation to Antarctica, the following are the current MILSPEC certification guidelines:

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

## Cargo Damage, Insurance, and Customs Inspections

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

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

**Note** Claims for lost or damaged shipments will be considered if the ASC contractor is found to be grossly negligent during handling and shipping.

All participants are highly recommended to obtain their own insurance. It is also highly encouraged to use some type of rough handling indicator on delicate, high value equipment being shipped within the USAP transportation network. The brand used by the USAP can be found at the following internet address:

- [http://www.uline.com/BL_1053/Shockwatch](http://www.uline.com/BL_1053/Shockwatch)

## Reporting Damage or Loss

Cargo damage must be reported as soon as found. Make reports directly to the T&L work center on station (e.g., USAP Cargo at McMurdo Station, South Pole Logistics, or Peninsula Logistics). For vessels, report immediately to the Marine Projects Coordinator (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 that is not available as scheduled, should also be reported in an email.

**Note** Refer to *Cargo Disposition Reporting Procedure* (TL-SOP-0004) for more complete details.

Each report of damage or loss is investigated to determine the extent of damage, the cause of damage and, if possible, the 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.

**Insurance and Customs**

Participants are responsible for insuring their own 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.*

**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 — the blue-book value.

Provide the actual market value on Customs forms for Chile and New Zealand. This is the same value reported when using *Cargo Disposition Report* (TL-FRM-0035). It is the shipper’s responsibility to accurately describe contents and declare value.

**Note** Refer to *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 retrograde return of equipment. When US Customs identifies incoming shipments of highly technical equipment, they may specify a need for an import license. While the actual incidence is low in the USAP, proper identification and declaration is very important.

**Import/Export Licensing**

Participants are responsible for compliance with all relevant US and foreign government export and import authorities and for obtaining any required export or import permits, licenses, or other authorizations. Please refer to the cognizant agency or agencies to confirm whether cargo requires a 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 ([www.bis.doc.gov](http://www.bis.doc.gov))
- US Department of State ([www.pmdtc.state.gov](http://www.pmdtc.state.gov))
- Nuclear Regulatory Commission ([www.nrc.gov](http://www.nrc.gov))
- Bureau of Alcohol, Tobacco, Firearms, and Explosives ([www.atf.gov](http://www.atf.gov))
- US Food and Drug Administration ([www.fda.gov](http://www.fda.gov))
- US Fish and Wildlife Service ([www.fws.gov/international](http://www.fws.gov/international))
- US Department of Agriculture (www.usda.gov)
- USDA Animal and Plant Health Inspection Service (www.aphis.usda.gov)

**Padlocks**

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

**Shipping Dates**

Pre-shipment planning is essential to timely material delivery in Antarctica. Advanced planning can help to reduce USAP transportation costs, while improving the probability of on-time delivery.

**Note**  Allow an additional 15 days lead time for hazardous or outsized materials in order to make each required delivery date (RDD).

Please note that the material cut-off schedule changes as the vessel schedules are adjusted. Before shipping materials to Port Hueneme, please confirm the required material cut-off dates with the appropriate Science Planning Support Manager or other POC.

Cargo en route might be checked through Port Hueneme Operations.

**Required Delivery Date, Peninsula Area**

The RDD for shipments bound for the Antarctic Peninsula area includes Palmer Station, field camps, and vessel operations.

Cut-off dates to meet the Peninsula area cruise schedule for the RV/IB *Nathaniel B. Palmer* (NBP) or the ARSV *Laurence M. Gould* (LMG) are located at the following address:


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 the NSF before shipping.

Oversized 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. Oversized cargo must arrive in Port Hueneme on time for COMSUR transportation, based on published cut-off schedules. This is necessary to afford adequate planning and transportation for Damco delivery, in case there is no opportunity to fly the oversized cargo even part of the way. Any item that is Cargo Aircraft Only (CAO) or oversized will be trucked from Santiago, Chile to Punta Arenas, which will take a minimum of 14 days.
Required Delivery Date, Continental Area

Schedule a ROS date, whether McMurdo Station, South Pole Station, Palmer Station, and on board the vessels. The ROS date determines when the RDD must be met in Port Hueneme, CA to arrive in Antarctica on time.

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

Table 2 shows the ROS dates and RDD for cargo shipments during the 2017-2018 field season. Cargo that does not arrive within these prescribed guidelines may require COMAIR shipment. Shipping COMAIR is expensive and requires NSF approval.

**Table 2: RDD Continental Area**

<table>
<thead>
<tr>
<th>RDD to Port Hueneme</th>
<th>ROS date</th>
<th>ROS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 July 2017</td>
<td>26 August 2017</td>
<td>7238</td>
</tr>
<tr>
<td>23 August 2017</td>
<td>16 September 2017</td>
<td>7259</td>
</tr>
<tr>
<td>30 August 2017</td>
<td>14 October 2017</td>
<td>7287</td>
</tr>
<tr>
<td>6 September 2017</td>
<td>21 October 2017</td>
<td>7294</td>
</tr>
<tr>
<td>13 September 2017</td>
<td>28 October 2017</td>
<td>7301</td>
</tr>
<tr>
<td>20 September 2017</td>
<td>4 November 2017</td>
<td>7308</td>
</tr>
<tr>
<td>27 September 2017</td>
<td>11 November 2017</td>
<td>7315</td>
</tr>
<tr>
<td>4 October 2017</td>
<td>18 November 2017</td>
<td>7322</td>
</tr>
<tr>
<td>11 October 2017</td>
<td>25 November 2017</td>
<td>7329</td>
</tr>
<tr>
<td>18 October 2017</td>
<td>2 December 2017</td>
<td>7336</td>
</tr>
<tr>
<td>25 October 2017</td>
<td>9 December 2017</td>
<td>7343</td>
</tr>
<tr>
<td>1 November 2017</td>
<td>16 December 2017</td>
<td>7350</td>
</tr>
<tr>
<td>8 November 2017</td>
<td>23 December 2017</td>
<td>7357</td>
</tr>
<tr>
<td>15 November 2017</td>
<td>30 December 2017</td>
<td>7364</td>
</tr>
<tr>
<td>22 November 2017</td>
<td>6 January 2018</td>
<td>8006</td>
</tr>
<tr>
<td>29 November 2017</td>
<td>13 January 2018</td>
<td>8013</td>
</tr>
<tr>
<td>6 December 2017</td>
<td>20 January 2018</td>
<td>8020</td>
</tr>
<tr>
<td>13 December 2017</td>
<td>27 January 2018</td>
<td>8027</td>
</tr>
<tr>
<td>20 December 2017</td>
<td>3 February 2018</td>
<td>8034</td>
</tr>
<tr>
<td>27 December 2017</td>
<td>10 February 2018</td>
<td>8041</td>
</tr>
<tr>
<td>3 January 2018</td>
<td>17 February 2018</td>
<td>8048</td>
</tr>
<tr>
<td>10 January 2018</td>
<td>24 February 2018</td>
<td>8055</td>
</tr>
</tbody>
</table>

COMAIR Shipping

COMAIR cargo shipments may require up to 21 days to process from Port Hueneme to McMurdo Station. Remember to allow for processing time as much as shipping time. Going to the South Pole Station may need up to 45 days. Hazardous and oversize cargo needs more time for inspection and clearance, sometimes up to 60 days.
COMSUR Shipping

COMSUR shipping is cargo on an ocean vessel other than the regular USAP container vessel to McMurdo Station each year. Oversized material that is late but still required may be sent via COMSUR. Cargo and supplies going to the Peninsula Area and Palmer Station may be sent COMSUR at any time during the calendar year. It travels to Punta Arenas, Chile and is transferred to one of the research vessels for final transport to Palmer Station.

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

Table 3 shows shipping times from Port Hueneme to various USAP destinations frequented. To ensure that oversized cargo arrives on time, plan ahead and schedule for COMSUR; however, any cargo can be subjected to unforeseen delays, including labor strikes, holidays in foreign countries, and Customs clearance.

In general, allow for at least as many days listed in Table 3 for shipping.

<table>
<thead>
<tr>
<th>Destination</th>
<th>Approximate time</th>
</tr>
</thead>
<tbody>
<tr>
<td>McMurdo Station</td>
<td>35 days</td>
</tr>
<tr>
<td>South Pole Station</td>
<td>50 days</td>
</tr>
<tr>
<td>Hazardous material to New Zealand (en route to McMurdo Station, South Pole, and Research Vessels)</td>
<td>65 days</td>
</tr>
<tr>
<td>Research Vessels (to New Zealand)</td>
<td>50 days</td>
</tr>
<tr>
<td>Southern ports (Chile) and Palmer Station</td>
<td>90 days</td>
</tr>
<tr>
<td>Hazardous material to Southern ports (Chile) and Palmer Station</td>
<td>105 days (3 ½ months)</td>
</tr>
</tbody>
</table>

Baggage

Frequently confused, “baggage” is distinctly different from “cargo.”

The NSF does not authorize reimbursement for excess baggage costs. Participants are responsible for all commercial airline baggage costs. ASC Travel suggests shipping excess baggage via the USAP transportation system. Contact ASC Travel directly for any oversize or overweight items that must be sent through USAP Transportation. Refer to the *USAP Participant Guide* (NSF 06-52).

**Note** Participants who self-ticket are not eligible for excess baggage allowances.

Regardless of the baggage allowance on regular commercial airlines, standard checked baggage on flights from Christchurch to Antarctica is 39 kg (85 lbs.) of personal luggage or 50 kgs (110 lbs.) for winter-over personnel. The total includes luggage, personal equipment, and extreme cold weather (ECW) gear issued.

**Note** Wear or carry boots, bibs, parka, goggles, and gloves on all flights to and from Antarctica as well as throughout the continent.
Any baggage or personal luggage over the limits here must be approved by the NSF. Weight limits are strictly enforced from Christchurch to McMurdo Station, and are enforced even more diligently on flights to the South Pole Station. Any additional baggage must be requested in advance and authorized by the NSF.

**Hazardous Material**

Hazardous materials and restricted substances are strictly forbidden in baggage. Many chemicals used by USAP grantees are hazardous material for commercial transportation, and may not be carried in checked baggage or carry-on luggage.

Military flights are no exception. Typically, if an item can be carried on a commercial airline in the US, it can be carried on the flight to Antarctica.

**Feedback and Contacts**

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

The following are the POCs for issues concerning Logistics:

- Transportation and Logistics manager
- USAP Logistics manager
- Port Hueneme Operations manager
- Antarctic Terminal Operations (ATO) manager
- USAP Cargo supervisor
- Hazardous Cargo supervisor
- Peninsula Logistics manager
- Leidos Office of International Trade Compliance

We wish you the best in your Antarctic research.

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

**Port Hueneme**

Freight contact address:

National Science Foundation  
c/o Antarctic Support Contract  
Naval Base Ventura County  
5020 Stethem Road  
Building 471, North End  
Port Hueneme, CA 93043
Correspondence address:

National Science Foundation
c/o Antarctic Support Contract
Post Office Box 338
Port Hueneme, California 93041

Port Hueneme telephone contacts:

- Direct: (805) 985-6851
- Toll free: (800) 688-8606; x33615, x33619, and x33601
- Fax: (805) 984-5432
- Email: PH-CargoOps@usap.gov

US Customs

U.S. Customs Office
Treasury Department
2100 K Street, N.W.
Washington, D.C., 20037

US Freight Carriers

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

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABF Freight systems, Inc.</td>
<td>(800) 610-5544</td>
</tr>
<tr>
<td>Con-way Freight</td>
<td>(800) 755-2728</td>
</tr>
<tr>
<td>FedEx Express</td>
<td>(800) 463-3339</td>
</tr>
<tr>
<td>FedEx Freight</td>
<td>(866) 393-4585</td>
</tr>
<tr>
<td>Old Dominion</td>
<td>(800) 610-6500</td>
</tr>
<tr>
<td>UPS Freight</td>
<td>(800) 333-7400</td>
</tr>
<tr>
<td>UPS Domestic</td>
<td>(800) 742-5877</td>
</tr>
<tr>
<td>YRC (Yellow-Roadway Corp.)</td>
<td>(800) 775-2728</td>
</tr>
</tbody>
</table>

Use the following information to contact Damco regarding the USAP transportation system:

- Email: asc.lax@damco.com
- Phone: 973.610.0826

New Zealand

National Science Foundation
c/o PAE (New Zealand) Limited
Gate 1, Orchard Road North
Packing & Shipping Instructions

Christchurch International Airport
Christchurch, New Zealand

Phone: +64-3-358-8139
Fax: +64-3-358-1479

Chile

Master R/V NATHANIEL B PALMER, Master R/V LAURENCE M. GOULD or
PALMER STATION
c/o Damco Chile SA
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References

Supporting Documents
Refer to the following documents when completing these instructions:

- Antarctic Conservation Act (www.nsf.gov/od/opp/antarct/aca/aca.jsp)
- Certificate of Registration of Foreign Manufactured Item (US Customs form 4455)
- Transportation Entry and Manifest of Goods Subject to CBP Inspection and Permit (U.S. Customs form 7512; http://forms.cbp.gov/pdf/CBP_Form_7512.pdf)
- Declaration for Free Entry of Unaccompanied Articles (U.S. Customs form 3299; www.cbp.gov/xp/cgov/toolbox/forms/)
- New Zealand Customs (Form NZCS 213; www.customs.govt.nz)
- Ministry for Primary Industries (www.biosecurity.govt.nz)
- USAP Participant Guide (NSF 06-52)

Standards and Guidelines

- Transportation (US Code of Federal Regulations (CFR), Title 49)
- Government Property (FAR Part 44)
- GAO Standards for Internal Control in the Federal Government
- Standard Practice for Military Packaging (MIL-STD-2073-1D)
- Management’s Responsibility for Internal Control (OMB A-123)
- International Traffic in Arms Regulations (22 CFR §120-130)
- Export Administration Regulations (15 CFR §730-774)
- Food and Drug Administration (21 CFR §1-1299)
- Drug Enforcement Agency (21 CFR §1300-1399)
Related Internal Documents

- *Temporary Property Hand Receipt* (BO-FRM-0001)
- *Cargo Disposition Reporting Procedure* (TL-SOP-0004)
- *Cargo Disposition Report* (TL-FRM-0035)
- *Peninsula Logistics Manual* (TL-MAN-0004)
- *Shipping Retrograde Cargo* (TL-MAN-0010)
- *Port Hueneme Operations Manual* (TL-MAN-0001)
- *USAP Southbound Cargo Packing List* (TL-FRM-0004)
- *USAP Northbound Cargo Retrograde Packing List* (TL-FRM-0005)
- *Peninsula Logistics Schedule* (TL-FRM-0100)
- *Inter-Continental Shipment of Hazardous Materials via Aircraft* (TL-MAN-0017)

Records

Table 5 describes the records that result from the processes described in this manual.

<table>
<thead>
<tr>
<th>Record ID (&amp; Owner)</th>
<th>Format &amp; Location</th>
<th>Protection &amp; Retrieval</th>
<th>Retention &amp; Disposition</th>
</tr>
</thead>
</table>

Appendices

This document contains the following appendices:

- Appendix 1: Methods for Shipping Cargo
- Appendix 2: Transportation Costs and Planning
- Appendix 3: Vessel Required Delivery Dates

Glossary

Refer also to the list of approved terms posted to the Intranet:


AFMAN

Air Force Joint Manual

APHIS

Animal and Plant Health Inspection Service of the US Department of Agriculture
AR/SV
Antarctic Research and Supply Vessel

ASC
Antarctic Support Contract

ATO
Antarctic Terminal Operations

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 http://www.cites.org/

COMAIR
Commercial Air
Material or supplies transported via commercial aircraft, rather than USAP subcontractor (ANG, Kenn Bork Air Ltd., etc.). This is the most expensive shipping method for the USAP. Please avoid whenever possible. Advance authorization from the NSF is required for all COMAIR shipments.

COMSUR
Commercial Surface
Cargo transported by a commercial shipping line, usually an ocean-going vessel.

Continental Site
Any USAP site throughout the Antarctic continent. Typically, transit occurs through Christchurch, NZ, to McMurdo Station; from there, transit occurs to the South Pole Station or Inland field camps.

CONUS
Continental United States

COTR
Contract Officer Technical Representative

Damco
The logistics support agent contracted by ASC.

DDP
Duty Delivery Paid

DHS
Department of Homeland Security
DNF
Do Not Freeze

DOD
Department of Defense

ECW
Extreme Cold Weather Gear
Issued for deployment.

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

IPPC
International Plant Protection Convention

ISO
International Organization for Standardization

ISPM
International Standards for Phytosanitary Measures

KC
Keep Chilled

KF
Keep Frozen

LMG
AR/SV Laurence M. Gould

MPI
Ministry for Primary Industries, in New Zealand

Mainbody
Large movement
The period of majority transport to Antarctica for season opening. The same movement occurs in retrograde at station closing.

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.

MPC
Marine Project Coordinator

MPI
Ministry for Primary Industries
MLT  
Marine Laboratory Technician

NBP  
RV/IB Nathaniel B. Palmer

NBVC  
Naval Base Ventura County  
Located at Port Hueneme, California.

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

Oversized Cargo
  Oversized 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 100cm L, 100cm W, 100cm H, with total weight over 125 Kg.
  **Continental:** Cargo that is more than 124” L, 96” W, 62” H. No specific weight limit. However, very 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, Chile

RDD  
Required Delivery Date  
The deadline for cargo intended to arrive at Port Hueneme in order to be further shipped via USAP resources. Please refer to the Required Delivery Dates to Port Hueneme section in this document to determine the date which cargo needs to be received in 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 prior to departure of the vessel arrives at Punta Arenas or in some cases when the material must be carried via alternate means.

RV/IB
Research Vessel, Ice Breaker

SAAM
Special Assignment Airlift Mission

SDS
Safety Data Sheet

Shipping Number
A field in IBM 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

T&E
Transportation Entry
A shipping form: *U.S. Customs Transportation Entry form 7512.*

T&L
Transportation and Logistics Division of ASC

TSSC
Temperature Sensitive Science Cargo
Material which 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

WinFly
Winter Fly-in
Deploying essential personnel and supplies to McMurdo Station before Mainbody. Arriving in late August, these people serve as an advance party for the start of each season.

WPM
Wooden Packaging Material

ZCM
National Weather Service airfield designator for McMurdo Station
Appendix 1: Methods for Shipping Cargo

Unless otherwise directed by the NSF, ASC will determine the mode of transport based on when the cargo is received and what is available at the time. To meet the Port Hueneme cargo cut-off dates, consider the shipping mode and transit time.

Resupply Vessel

The USAP charters one container ship each year to move cargo between Port Hueneme, CA and McMurdo Station. That often includes a stop at Port Lyttelton, New Zealand. Often referred to as “The Vessel,” it leaves from Port Hueneme, CA and arrives at McMurdo Station in February. Considering all methods of transport to Antarctica, the annual resupply vessel is most cost effective.

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

Commercial Shipping

Commercial surface shipping (COMSUR) moves cargo via ocean going surface vessel. Cargo that arrives at Port Hueneme by the RDD is containerized and shipped COMSUR to New Zealand or Chile. This is a primary and cost-effective transportation mode. 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 RDD must be flown by commercial air (COMAIR), if that is the only way to meet the ROS date. Shipping COMAIR is costly, and not recommended. Also, it requires prior approval from the NSF.

USAP Airlift

Special Assignment Airlift Mission (SAAM) flights are USAF cargo planes chartered by the USAP to transport oversized or perishable cargo, like helicopters and liquid helium. SAAM flights typically start at the beginning of the austral summer. Special coordination is required for all SAAM flights, and they are expensive. Do not plan to send cargo by SAAM; there is no guarantee a SAAM flight will be available.
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

<table>
<thead>
<tr>
<th>Transport Mode</th>
<th>TO:</th>
<th>Transit Time</th>
<th>Cost</th>
<th>Lead Time</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMSUR</td>
<td>Container ship.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Break-bulk cargo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>too large for</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>containers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christchurch,</td>
<td>25 Days</td>
<td>US$ 1.13 per pound</td>
<td>45 days</td>
<td>Due in Port Hueneme 35 days before ROS date.</td>
</tr>
<tr>
<td></td>
<td>New Zealand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Punta Arenas,</td>
<td>55 Days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMAIR</td>
<td>Commercial airline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cargo moved by</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>freight handler or</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>as freight on</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>regular flights.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christchurch,</td>
<td>2 to 6 days</td>
<td>US$ 5.05 per pound</td>
<td>7 to 10 days</td>
<td>Due Port Hueneme 7 to 10 days before CHCH.</td>
</tr>
<tr>
<td></td>
<td>New Zealand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Punta Arenas,</td>
<td>27 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resupply Vessel</td>
<td>Chartered vessel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>moving from Port</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hueneme, CA to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lyttelton, NZ, to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>McMurdo Sta.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>South Pole cargo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>moved later from</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>McMurdo Sta.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(airlift or overland)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Port Lyttelton,</td>
<td>17 days</td>
<td>US$ 0.45 per pound</td>
<td>ALL DUE</td>
<td>Port Hueneme 1 December</td>
</tr>
<tr>
<td></td>
<td>New Zealand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>McMurdo Station</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>South Pole Station</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Movement to South Pole by air or land, next season.
<table>
<thead>
<tr>
<th>Transport Mode</th>
<th>TO:</th>
<th>Transit Time</th>
<th>Cost</th>
<th>Lead Time</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vessel offloads cargo at McMurdo; loads retrograde and recycle for return trip.</td>
<td>Retrograde to Port Lyttelton</td>
<td>6 to 10 days, depending on reload.</td>
<td>US$ 0.30 per pound</td>
<td>ALL DUE McMurdo Station 31 January</td>
<td>Most cost effective return shipment. Most assured for temperature controlled samples. Most secure for containers and bulk samples on return.</td>
</tr>
<tr>
<td></td>
<td>Retrograde to Port Hueneme</td>
<td>17 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USAP Airlift</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract airlift NZ to McMurdo, then to South Pole and deep field camps.</td>
<td>McMURDO Station</td>
<td>6 – 8 hours, depending on aircraft.</td>
<td>N/A</td>
<td>7 Days</td>
<td>Move passengers (PAX) and cargo between CHC and McMurdo Station.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Due in CHCH 7 to 10 days before ROS date McMurdo</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>South Pole Station</td>
<td>3 to 4 hours, depending on weather.</td>
<td></td>
<td>10 Days</td>
<td>Move PAX and cargo between McMurdo Station and South Pole Station.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Due in CHCH 10 to 14 days before ROS at South Pole</td>
<td></td>
</tr>
<tr>
<td>Retrograde and Redeployment</td>
<td>Christchurch, New Zealand</td>
<td>6 – 8 hours, depending on aircraft.</td>
<td></td>
<td>7 Days</td>
<td>Move PAX and cargo back to NZ at end of season.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Due in McMurdo 7 to 10 days before flight to CHCH</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3:  Vessel Required Delivery Dates

Please refer to the RDD for Port Hueneme to determine the date when cargo must be received at Port Hueneme for on-time delivery via COMSUR. Refer to the Table 7 and Table 8 for resupply vessel RDDs to McMurdo Station. All science projects must have cargo to Port Hueneme NLT than 1 December.

**Table 7: Vessel Delivery Dates and Priority for McMurdo Station**

<table>
<thead>
<tr>
<th>RDD Pt. Hueneme</th>
<th>Required On Site</th>
<th>ROS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Requisitions</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
<tr>
<td>Mission Critical</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
<tr>
<td>Mission Essential</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
<tr>
<td>Mission Important</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
<tr>
<td>MCM VSL Project Requests</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
</tbody>
</table>

**Table 8: Vessel Delivery Dates and Priority for South Pole Station**

<table>
<thead>
<tr>
<th>RDD Pt. Hueneme</th>
<th>Required On Site</th>
<th>ROS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Requisitions</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
<tr>
<td>Mission Critical</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
<tr>
<td>Mission Essential</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
<tr>
<td>Mission Important</td>
<td>30 November 2017</td>
<td>27 January 2018</td>
</tr>
</tbody>
</table>