

HACCP Plan

| HACCP Step 1 - Activity Description | |
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| Facility: Alaska Maritime National Wildlife Refuge | Site: Refuge Islands |
| Project Coordinator: Steve Ebbert | Project Description: Camp supply |
| Site Manager: Gregory Siekaniec | |
| Address: 95 Sterling Hwy #101 Homer, AK 99603 | |
| Phone: 907-235-6546 | |

| Project Description (Who, What, Where, When, How & Why) |
|---|
| <p>The M/V <i>Tiglax</i> hauls equipment, supplies, and people throughout the refuge in support of field camps and other on-shore operations primarily during the months of May through September. Equipment and supplies are typically delivered to headquarters in Homer or Adak, Alaska, or stored there, and then loaded on to the refuge vessel for transport to camps on refuge islands. Other ports where gear is loaded onto the ship include the Pribilof Islands, Sand Point, Dutch Harbor, and Shemya as examples.</p> |

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HACCP Step 2 - Potential Hazard Identification

Vertebrates:

Commensal rodents

Invertebrates:

arthropods

Plants:

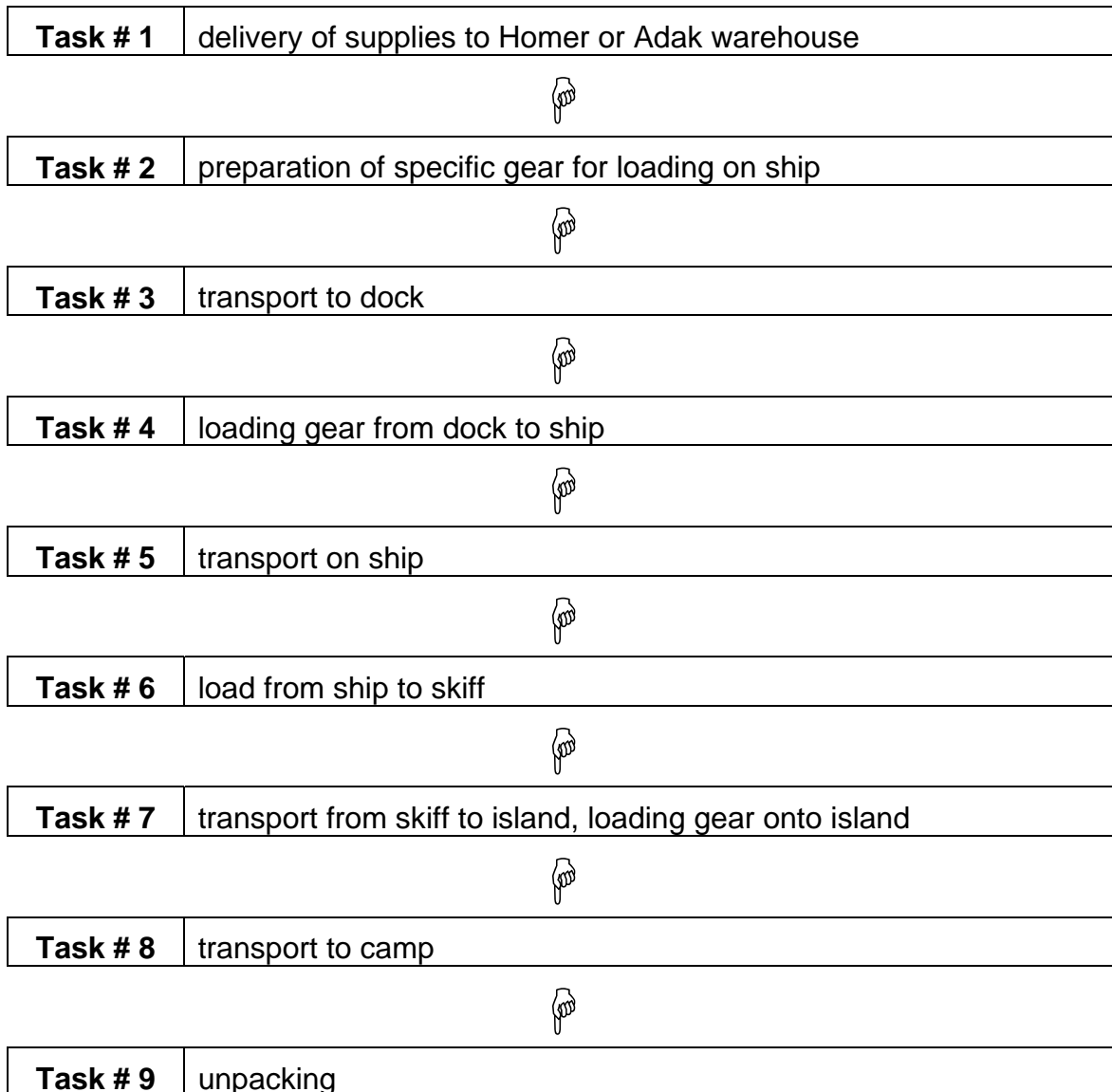
invasive plants

Other Biologics:

Others:

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HACCP Step 3 - Flow Diagram



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HACCP Step 4 - Hazard Analysis

| Task | Hazard | Probable? | Justification | Control Measures | CCP? |
|--|-------------------------------|-----------|--|--|------|
| delivery of supplies to Homer or Adak warehouse | Vertebrate: Commensal rodents | Yes | bulk of items delivered is food from locations where commensal rodents may occur | inspect incoming gear | Yes |
| | Invertebrate: arthropods | Yes | Possibility of contamination of freight from originating location. | inspect upon delivery | Yes |
| | Plant: invasive plants | Yes | Unknown risk of contamination from originating location | inspect gear upon arrival | No |
| preparation of specific gear for loading on ship | Vertebrate: Commensal rodents | No | Unlikely gear stored outdoors would harbor commensal rodents | | No |
| | Invertebrate: arthropods | Yes | Gear stored outside may harbor insects, larvae and egg cases. | Pressure wash with hot soapy water and disinfectant prior to staging gear. | Yes |
| | Plant: invasive plants | Yes | Seeds may collect on gear. | Pressure wash with hot soapy water and disinfectant prior to staging. | Yes |
| transport to dock | Vertebrate: Commensal | No | Vehicle is moving | | No |

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|--------------------------------|-------------------------------|-----|--|---|-----|
| | rodents | | | | |
| | Invertebrate: arthropods | No | Vehicle is moving | | No |
| | Plant: invasive plants | No | Vehicle is moving | | No |
| loading gear from dock to ship | Vertebrate: Commensal rodents | Yes | Some ports harbor commensal rodents. | Gear not staged on dock prior to loading. | No |
| | Invertebrate: arthropods | No | Gear is containerized and loaded directly from vehicle or trailer onto ship. | | No |
| | Plant: invasive plants | No | Gear is containerized and loaded fr vehicle directly to ship. | | No |
| transport on ship | Vertebrate: Commensal rodents | Yes | If present on ship already, may infest gear. | Rodent prevention methods on ship. | Yes |
| | Invertebrate: arthropods | No | Arthropods may be present on ship, and infest gear. | | No |
| | Plant: invasive plants | No | Plant seeds may blow onto ship while near other islands. | | No |
| load from ship to skiff | Vertebrate: Commensal rodents | Yes | Gear may become infested while on ship. | Inspect gear. | No |

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|--|-------------------------------|-----|---|---------------|----|
| | Invertebrate: arthropods | Yes | Gear may become infested while on ship. | Inspect gear. | No |
| | Plant: invasive plants | Yes | Gear may become infested while on ship. | Inspect gear. | No |
| transport from skiff to island, loading gear onto island | Vertebrate: Commensal rodents | No | No source. | | No |
| | Invertebrate: arthropods | No | No source. | | No |
| | Plant: invasive plants | No | No source. | | No |
| transport to camp | Vertebrate: Commensal rodents | No | | | No |
| | Invertebrate: arthropods | No | No source. | | No |
| | Plant: invasive plants | No | No source. | | No |
| unpacking | Vertebrate: Commensal rodents | No | No source. | | No |
| | Invertebrate: arthropods | No | No source. | | No |
| | Plant: invasive plants | No | No source. | | No |

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HACCP Step 5 - HACCP Plan

Critical Control Point #1:

Task # 1: delivery of supplies to Homer or Adak warehouse

Significant Hazards:

Vertebrate: Commensal rodents

Control Measures:

inspect incoming gear

Limits for Control Measures:

Inspect all sides of outside of container.

Monitoring: What?

Boxes and containers

Monitoring: How?

Search for rodent chewing, feces, other sign.

Monitoring: Frequency?

Upon unloading from transport vehicle (truck) into warehouse.

Monitoring: Who?

Campers.

Evaluation & Corrective Actions:

Inspect later.

Supporting Documentation: Schedule of delivery and notification of project leader.

Critical Control Point #2:

Task # 1: delivery of supplies to Homer or Adak warehouse

Significant Hazards:

Invertebrate: arthropods

Control Measures:

inspect upon delivery

Limits for Control Measures:

Inspect all sides of outside of container.

Monitoring: What?

Boxes and containers

Monitoring: How?

Search for rodent chewing, feces, other sign.

Monitoring: Frequency?

Upon unloading from transport vehicle (truck) into warehouse.

Monitoring: Who?

Campers.

Evaluation & Corrective Actions:

Inspect later.

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Supporting Documentation: Schedule of delivery and notification of project leader.

Critical Control Point #3:

Task # 2: preparation of specific gear for loading on ship

Significant Hazards:

Invertebrate: arthropods

Control Measures:

Pressure wash with hot soapy water and disinfectant prior to staging gear.

Limits for Control Measures:

Pressure wash all gear surfaces with 100°F soapy water with recommended disinfectant.

Monitoring: What?

temperature of water, wetness of surface

Monitoring: How?

Thermometer, visually

Monitoring: Frequency?

prior to applying water

Monitoring: Who?

Project leader

Evaluation & Corrective Actions:

hose water scrub.

Supporting Documentation: checklist

Critical Control Point #4:

Task # 2: preparation of specific gear for loading on ship

Significant Hazards:

Plant: invasive plants

Control Measures:

Pressure wash with hot soapy water and disinfectant prior to staging.

Limits for Control Measures:

Pressure wash all gear surfaces with 100°F soapy water with recommended disinfectant.

Monitoring: What?

temperature of water, wetness of surface

Monitoring: How?

Thermometer, visually

Monitoring: Frequency?

prior to applying water

Monitoring: Who?

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|---|---------------------------------|
| Project leader | |
| Evaluation & Corrective Actions: hose water scrub. | |
| Supporting Documentation: checklist | |
| | |
| Critical Control Point #5: Task # 5: transport on ship | |
| Significant Hazards: Vertebrate: Commensal rodents | |
| Control Measures: Rodent prevention methods on ship. | |
| Limits for Control Measures: Bait stations loaded with fresh bait during season. | |
| Monitoring: What? Bait stations | |
| Monitoring: How? Visual inspection, application of bait. | |
| Monitoring: Frequency? Prior to loading of ship, throughout season as stations become accessible. | |
| Monitoring: Who? Captain | |
| Evaluation & Corrective Actions: Load stations as soon as possible during cruise. | |
| Supporting Documentation: checklist | |
| | |
| Facility: Alaska Maritime National Wildlife Refuge | Activity: Camp supply |
| Address: 95 Sterling Hwy #101 Homer, AK 99603 | |
| Signature: | Date: |

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HACCP Checklist:

Camp supply

Facility Alaska Maritime National Wildlife Refuge
Site Refuge Islands
Coordinator Jeff Williams
Manager Gregory Siekaniec
Address 95 Sterling Hwy #101, Homer, AK 99603

- Task # 1: delivery of supplies to Homer or Adak warehouse**
CRITICAL CONTROL POINT
 - Hazards were contained
Hazards: Vertebrate: Commensal rodents
 - Control measures were implemented
Control Measures: inspect incoming gear
 - Control limits were maintained
Control Limits: Inspect all sides of outside of container.
 - Corrective actions were (performed if necessary)
Corrective Actions: Inspect later.

 - Hazards were contained
Hazards: Invertebrate: arthropods
 - Control measures were implemented
Control Measures: inspect upon delivery
 - Control limits were maintained
Control Limits: Inspect all sides of outside of container.
 - Corrective actions were (performed if necessary)
Corrective Actions: Inspect later.
-
- Task # 2: preparation of specific gear for loading on ship**
CRITICAL CONTROL POINT
 - Hazards were contained
Hazards: Invertebrate: arthropods
 - Control measures were implemented
Control Measures: Pressure wash with hot soapy water and disinfectant prior to staging gear.

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- Control limits were maintained
Control Limits: Pressure wash all gear surfaces with 100°F soapy water with recommended disinfectant.
- Corrective actions were (performed if necessary)
Corrective Actions: hose water scrub.

- Hazards were contained
Hazards: Plant: invasive plants
- Control measures were implemented
Control Measures: Pressure wash with hot soapy water and disinfectant prior to staging.
- Control limits were maintained
Control Limits: Pressure wash all gear surfaces with 100°F soapy water with recommended disinfectant.
- Corrective actions were (performed if necessary)
Corrective Actions: hose water scrub.

- Task # 3: transport to dock**

- Task # 4: loading gear from dock to ship**

- Task # 5: transport on ship**
CRITICAL CONTROL POINT
 - Hazards were contained
Hazards: Vertebrate: Commensal rodents
 - Control measures were implemented
Control Measures: Rodent prevention methods on ship.
 - Control limits were maintained
Control Limits: Bait stations loaded with fresh bait during season.
 - Corrective actions were (performed if necessary)
Corrective Actions: Load stations as soon as possible during cruise.

- Task # 6: load from ship to skiff**

- Task # 7: transport from skiff to island, loading gear onto island**

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- Task # 8: transport to camp**

- Task # 9: unpacking:** This is also an important control point to inspect container contents for sign of rodents, arthropods and plants.