

R/V SIKULIAQ ICE STATION
PRE-ARRIVAL/ARRIVAL/ON STATION/DEPARTURE

Location: _____ Date: _____

Cruise Instruction: _____ Purpose: _____

Conditions: Performed for on-ice operations prior to arrival, on arrival, on station and with departure.

Pre-Arrival: (SKQ Review of On-Ice Operations Plan)

- ___ What is the desired Ice "Real Estate" & geometric shape of perimeter - Time allotment – Safety Limits & Suitability
- ___ Type of ship entry/positioning into/next to floe; sun and wind angle, expected "dirty air" sectors (stack gas trail) w.r.t wind direction.
- ___ What are the desired types of grid & sampling – Caution with establishing station and surveys so as not to disrupt surface collection sites.
- ___ What Equipment is to be used during an Ice Station – staging/de-staging sequence – weight
- ___ Sequencing recovery of deployed sampling equipment (hand-carried up gangway or crane)
- ___ Type of mooring configuration (port/stbd) Toggle(s) or whale bollard(s)
- ___ Boundary geometric shape desired and markings
- ___ Ice conditions, dynamics, floe composition. Forecasted movement. Observe fractures – propagation patterns
- ___ Arctic weather conditions – winds – seas expected – currents - visibility
- ___ Discharges to be secured. Incinerator – Grey Water – Sewage – Food wastes
- ___ Clothing and personnel safety floatation equipment requirements. Sized suits, boots, gloves, hats, goggles.
- ___ Ice Rescue & Rescue Swimmer status – rotation & manpower support requirements
- ___ Ice Rescue, Rescue Swimmer and Bear Watch equipment checked - staged
- ___ Likelihood of Polar Bears and other predators; assess / plan to reduce risk – Orient Bear Watch to wind shifts – Polar Bears like to come upwind to prey target to maintain scent tracking on approach
- ___ GAR Operational Risk Assessment(s) for activities. Experience of personnel – risk of each operation.
- ___ Crane(s), Man-basket(s), Gangway, Gear staged for deployment
- ___ Good internet heading
- ___ Lighting
- ___ Thruster if required at minimum, wash aimed away from ice station. Consult with Master

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Arrival and pre-operation for Ice Station -- Log in Deck Log when completed.

- Crew Safety Brief - (Actions in the event of an emergency)
- Prep Equipment for Ice Station; mooring equipment, gangway, auger, flags, Kovack, cordless drill, ice tester, safety line, knife, bear deterrent, UHF radio, GPS, . (Cordless drill and 2 batteries kept on V/L, warm, charging. Cold batteries do not take a charge, warm, then set on charge base)
- Ice Floe survey & selection; size, thickness, features, leads, assess suitability/stability for mooring (30 minutes)
- Bear watch commences – 360 degree perimeter. Observers/Watch: Attn to down-wind corridor
- Stability of ice moor – slipping - fractures? Thrusters interaction with ice undermines integrity – (Minimize)
- Science Safety Brief (White Board) – (Actions in the event of an emergency)
- Personnel: Exposure suits/garments, boots, gloves/mitts, hats/balaclavas/masks, harnesses, Pick-of-life, goggles/glasses

On Station Ice

- Survey transit path to on-ice sampling sites. Monitor stability of moor, anchor, and ice
- Reassess over time the perimeter and ice condition with current – wind – leads, fractures, and floe movements
- Deploy man basket with Ice Surveyor and Bear Watch/ Ice Rescue test ice, set boundaries & moor toggle(s)
- Recover man-basket – deploy palletized gear to ice – weight depending.
- Deploy gangway and set with Accom ladder bridle.
- Adjust placement & Rotation of On-Ice Bear Watch(es) & Safety person(s)
- Evaluate locations of personnel in sampling area. Track crew & science with dry-erase on window
- Baltic Room monitor & communications with Bridge of on-ice personnel-- buddy system tracking (radios)
- Bear sighting. (Danger Signal) five Short (repeat as necessary).
- Ice breakup - proceed back to vessel. (Papa signal) one Short two Longs followed by A short (repeated as necessary)
- Illuminated decks in case a bear boards the vessel at night – Weather deck doors secured.

Departure

- On-Ice personnel recovery and muster.
- Securing/recovering ice boundaries & ice anchor – Ice clean-up Leave no Trace
- Gangway & Man-basket recovered - stowed
- What is the plan and location for additional activities after getting underway near ice station (CTD?)
- Discharges re-enabled (ECR & Galley)