U.S. Department of Homeland Security

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From: Captain of the Port, Western Alaska
To: Distribution

SUBJ: 2008/09 OPERATING PROCEDURES FOR ICE CONDITIONS IN COOK INLET

The Coast Guard has reissued the special operating procedures for vessels transiting Cook Inlet during winter ice conditions. These "Special Operating Procedures" will be implemented through Navigation Safety Advisories issued by the Captain of the Port, Western Alaska (COTP). The purpose of these procedures is to aid in the mitigation of inherent risks to life, property, and the environment encountered by vessels operating in Cook Inlet during the winter when ice is present. While the measures outlined under these Operating Procedures subsection *Procedures for All Vessels Transiting Cook Inlet* will remain in effect throughout the ice season, additional precautionary measures for extreme conditions are detailed in two phases. These phases will be implemented and removed as circumstances or industry input warrant. Phase One covers Upper Cook Inlet and Phase Two covers Lower Cook Inlet. These areas are geographically separated at 60 degrees, 45 minutes North Latitude (East & West Forelands). The distinct separations within the inlet are in place to provide timely, accurate assessments of ice conditions in both Upper and Lower Cook Inlet. The presence and severity of ice conditions in Cook Inlet will be based upon current and forecast severe sub-zero temperatures, information provided by the National Oceanic and Atmospheric Administration (NOAA), Southwest Alaska Pilots Association (SWAPA), aerial observation, and the Cook Inlet marine operators. These special operating procedures have been developed in cooperation with the U. S. Coast Guard and Cook Inlet marine operators and represent a culmination of best practices based on the combined experience of operating in Cook Inlet over many years.

Vessel masters are ultimately responsible for the safe operation of their vessel at all times. Adherence to appropriate risk mitigation measures in accordance with these jointly developed guidelines demonstrates forehandedness on the part of the master, and is in keeping with prudent seamanship. However, it is the master's responsibility to take all necessary steps to effectively mitigate risks in circumstances where these operating procedures may fall short.

Additionally, if ice conditions preclude safe operation of vessels at the berths in Nikiski, Drift River, Port Mackenzie, or the Port of Anchorage, the COTP may terminate cargo operations, or close the terminal or port until conditions improve.

PROCEDURES FOR ALL VESSELS TRANSITING COOK INLET DURING ICE OPERATING CONDITIONS:

1. The vessel master should ensure proper operation of all machinery and systems in ice-filled waters and ambient air temperatures to -40 degrees F. This includes, but may not be limited to emergency fire pumps, generators and mooring winches.

2. The vessel master should maintain adequate draft to keep the vessel's sea suction and propeller well below the ice to prevent ice from sliding under the vessel. If it is necessary for a non tank vessel to deviate from the ship's normal ballast procedures, i.e. place water ballast in a cargo hold to meet these requirements, approval from the vessel's classification society must be obtained prior to transiting Cook Inlet.

3. The vessel master should ensure the crews have adequate personal protection suitable for cold weather during deck operations.

4. When transiting Cook Inlet, vessels should not force ice at any time. If, in the opinion of the vessel master and/or pilot, the vessel is forcing ice, the transit shall be aborted. For these purposes, "forcing ice" is defined as making way through ice substantial enough to significantly slow the speed of the vessel or when the vessel slows to 50% or less of the speed being made before entering the ice.

5. The Coast Guard will observe participation with these procedures and will carefully evaluate vessel movements within Cook Inlet based on an assessment of ice conditions collected from ice over-flights, reviews of National Weather Service reports and observations made by marine pilots and other operators. While these operating procedures for ice conditions in Cook Inlet are implemented the vessel master should ensure the following is completed, respectively:

Tug and Barge: All tows transiting Cook Inlet with barges that hold a Certificate of Inspection should file a voyage plan with the COTP via the following email address: Sector.Anchorage@uscg.mil. Typically, the voyage plan should include an assessment of the ice conditions based on information collected from ice over-flights, review of National Weather Service reports and observations made by marine pilots and other operators. The plans should advise the COTP of intentions to contract with an additional tug to lead the tow through the ice pack, if necessary.

Self-Propelled Vessel: All self-propelled vessels transiting Cook Inlet for the first time while these procedures are in effect may be subject to examination in advance of arriving at the pilot station in Kachemak Bay. Vessel operators or their agents should contact the COTP at least 24 hours in advance of the vessel's arrival to the pilot station to determine if they will be asked to accommodate an examination. This examination is in addition to any other Coast Guard inspections and/or examinations that may be applicable to a particular vessel.

Vessels with Internal Combustion Engines:

a. If fitted with a heat exchanger, the raw water should be kept at a sufficient temperature to prevent the accumulation of ice or slush ice within the system. This could be achieved by delivering a heated medium to both the primary and secondary sea chests that raises the temperature to prevent icing. When these procedures are in effect, the medium should be continuously supplied to both sea chests from the time the vessel passes Anchor Point inbound until the time the vessel passes Anchor Point outbound. Only lines or hoses designed for intended service should be in use.

b. Starting and control air tanks should remain peaked.

c. All vessels propelled by gas turbines should maintain the auxiliary gas turbine ready for immediate use and engagement in the event of main gas turbine failure.

6. All vessels/tows should be moored in such a fashion that "worst case" ice conditions to be expected may be immediately mitigated. Typically, this will be with the bow facing the flood tide to stem the force of ice during the stronger flood tide.

7. If ice builds-up between a moored vessel/barge and the pier, the vessel/barge should be pulled away from the berth prior to max current to flush away ice that has accumulated.

8. If you have any questions concerning this matter, please contact Waterways Management at our Anchorage office at (907) 271-6700 or the Marine Safety Detachment Supervisor in Kenai at (907) 283-3292.

SELF-PROPELLED VESSEL OPERATIONS

PHASE ONE/UPPER COOK INLET: These procedures are for vessels in Upper Cook Inlet defined as north of the East and West Forelands: 60 degrees, 45 minutes North Latitude.

WHILE MOORED AT FACILITIES IN UPPER COOK INLET:

1. Engines and propulsion systems should be on immediate standby so that they can be used to relieve strain on mooring lines and/or place the vessel underway as necessary. A sufficient number of additional mooring lines should be immediately available.

2. While these guidelines are in effect, steam should be continuously delivered to both the primary and secondary sea chests.

3. Vessels should maintain underway watches in engineering spaces and on the bridge, including a pilot, when ice conditions threaten a vessel's mooring arrangement.

PHASE TWO/LOWER COOK INLET: These procedures are for vessels in Lower Cook Inlet defined as south of the East and West Forelands: 60 degrees, 45 minutes North Latitude.

1. When phase two Special Operating Procedures are in effect and the flood current is forecast to be **4 knots or greater** and the vessel is encountering ice conditions **alongside the KPL dock** the following actions should be taken:

   a. All transfer operations discontinued.

   b. Transfer hoses made ready for immediate disconnect.

   c. Vessels should be continuously manned (to include a pilot) in a fashion that would allow the most expeditious means of mitigating ice conditions by relieving strain on mooring lines and/or getting the vessel underway, as necessary.

   d. Engines and propulsion systems placed in a status that will allow the most expeditious means of mitigating ice conditions by relieving strain on mooring lines and/or getting the vessel underway, as necessary.

e. A designated vessel should be positioned up current of the moored vessel as an ice scout. The ice scout should only work under the direction of the moored vessel's navigational watch. The ice scout should be positioned in the best location so that current ice conditions can be relayed to the moored vessel in a timely manner, allowing vessel response to expedite prudent risk mitigation.

2. When phase two Special Operating Procedures are in effect and the flood current is forecast to be **5 knots or greater** and the vessel is encountering ice conditions while **alongside the ConocoPhillips** dock the following actions should be taken:

a. All transfer operations discontinued.

b. Transfer hoses disconnected.

c. Vessels continuously manned (to include a pilot) in a fashion that would allow the most expeditious means of mitigating ice conditions by relieving strain on mooring lines and/or getting the vessel underway, as necessary.

d. Engines and propulsion systems placed in a status that will allow the most expeditious means of mitigating ice conditions by relieving strain on mooring lines and/or getting the vessel underway, as necessary.

e. A designated vessel should be positioned up current of the moored vessel as an ice scout. The ice scout should work only under the direction of the moored vessel's navigational watch. The ice scout should be positioned in the best location so that current ice conditions can be relayed to the moored vessel in a timely manner, allowing vessel response to expedite prudent risk mitigation.

3. The vessel Master, Pilot, or Person in Charge (PIC) shall make a decision to discontinue transfer operations, disconnect hoses, and get the vessel underway at any time that circumstances warrant.

4. To receive the 2008-2009 forecasted currents corrected for the Nikiski docks and published by SWAPA, visit the USCG Sector Anchorage COTP website at: http://homeport.uscg.mil/anchorage or call the SWAPA office in Homer at 907-235-8783.

BARGE OPERATIONS

PHASE ONE/UPPER COOK INLET: These procedures are for tugs/barges in Upper Cook Inlet defined as north of the East and West Forelands: 60 degrees, 45 minutes North Latitude.

No specific additional recommended measures for Tug/Barge Operations. Mariners are to exercise extreme caution.

PHASE TWO/LOWER COOK INLET: These procedures are for tugs/barges in Lower Cook Inlet defined as south of the East and West Forelands: 60 degrees, 45 minutes North Latitude.

Nikiski Tug/Barge Operating Procedures:

1. When phase two Special Operating Procedures are in effect, in addition to filing a voyage plan with the COTP the following actions will be taken:

   a. An "assist" tug will assist the barge and attending tug into the facility.

   b. When the flood current is forecast to be **2.0 knots or greater** and the tow is encountering ice conditions, an assist tug in addition to the attending tug should stand by the barge while at berth.

   c. Both the attending tug and "assist" tug main engines should remain running and ready for immediate operation.

   d. When an "assist" tug is present but no ice is present at the dock, the "assist" tug should act as an ice scout up-current of the barge. The ice scout should work only under the direction of the moored tug's navigational watch. The ice scout should be positioned in the best location so that current ice conditions can be relayed to the attending tug in a timely manner, allowing tow response to expedite prudent risk mitigation. The assist tug will re-position alongside the moored tow anytime ice becomes a threat.

   e. When the current is forecast to be **4 knots or greater** and the vessel is encountering ice conditions, all transfer operations should be discontinued, and transfer hoses should be made ready for immediate disconnect.

   f. The facility Person-in-Charge, Towing Vessel Operator, Tug Captain or Barge Tankerman may determine it prudent to suspend transfer operations and disconnect hoses during maximum flood currents, since the ice flow is heavier on the flood tide at the Nikiski docks.

FACILITIES

1. Facility operators should follow their own ice procedures when deemed necessary.

Sincerely,

H. M. HAMILTON
Captain, U.S. Coast Guard
Captain of the Port, Western Alaska