

Port of Savannah Industry Guidelines for Minimum Under-Keel Clearances

PRECEPT

This minimum under-keel clearance guideline was developed and implemented in conjunction with the Savannah Maritime Association (SMA) to clarify under-keel clearance expectations for the Port of Savannah. These guidelines are to be reviewed bi-annually by the signatory body to address any necessary changes and ensure all parties are following these guidelines as agreed upon. The bi-annual review shall be coordinated and held with the regularly scheduled October SMA meeting taking place in even number years with a goal of publishing any necessary changes by the end of that year.

BACKGROUND

Providing safe, efficient operations and preventing maritime casualties are common goals of the Port of Savannah's waterways users. On 16 October 1996 a meeting was held with representatives of the Port of Savannah and the Port of Brunswick for a "Port User's Workgroup." Representatives attended the meeting from the port, maritime industry professionals, along with representatives from federal agencies responsible for safe and efficient vessel transits and facility operations. The workgroup discussed current under-keel and safe transit guidelines for the Ports of Savannah and Brunswick. The workgroup subsequently undertook an effort to collectively establish a safe and efficient operating guideline for the port of Savannah that included the under-keel clearance requirements for single-skin tank vessels and all other deep draft vessels calling to the Port of Savannah. Cooperative partnerships between Savannah's port, industry and government agencies are proactively working to implement proven guidelines and operating controls that will prevent economic and environmental loss as well as injuries caused by maritime casualties without imposing overly restrictive government regulation and controls. During meetings in November 2008, the guidelines were restated and agreed upon as representative of the maritime industry best practices for the port of Savannah.

PURPOSE

The purpose of these guidelines is to proactively prevent maritime accidents and casualties. Additionally, it will remove ambiguity and inconsistency in the procedures necessary to reduce the likelihood of vessels over 1600 gross tons grounding during transit or while at an assigned berth within the Port of Savannah. This document states the applicable under-keel guidelines, operational communication responsibilities, assessment methods and controls necessary to meet these objectives. These are minimum guidelines and are not intended to be limiting for pilots, operators or owners that choose to require a higher degree of safety for their operations. Additionally this guidance does not amend or supersede applicable under keel clearance requirements for single bottom tank ships and barges detailed in 33 CFR 157.455.

APPLICABILITY

- (a) These guidelines are applicable to all vessels in excess of 1600 gross tons.
- (b) Nothing in these guidelines shall be interpreted as limiting the pilot, vessel master, or facility operator from taking additional actions necessary to increase the level of care that ensures a vessel's safe transit and mooring.

DEFINITIONS

- (a) A "sounding" is a subsurface depth measured using criteria and procedures contained in the U.S. Army Corps of Engineers (USACE) Hydrographic Surveying Manual, EM 1110-2-1005, series.
- (b) "Bottom" refers to a weight bearing surface which prevents or inhibits a vessel from making way, the depth of which is determined by the sounding technique defined above.
- (c) "Deep draft vessel" means any vessel over 1600 gross tons.
- (d) "Tidal lift" is the advantageous use of fluctuations in the tide level for maintaining safe under-keel clearances.
- (e) "Transit" refers to vessel movements that occur within the established navigation channel between the channel boundary at the facility and the sea buoy, going in either direction.
- (f) "Maneuvering" refers to any non-transit vessel movements, which occur outside the established navigation channel, or movements that occur between the time the vessel enters and departs the port.
- (g) "Facility" refers to any waterfront terminal where a deep draft vessel can moor.
- (h) "Controlling depth" is the actual minimal depth of a waterway at its shallowest point.
- (i) "Project depth" refers to the officially charted navigation channel depth that the USACE maintains.
- (j) "Permitted depth" refers to the maximum depth of a waterway in the way of a facility allowed by the facility's USACE permit.

UNDER-KEEL GUIDELINES.

The following minimum under-keel guidelines apply in all conditions of tide and weather.

- (a) Four (4) feet for transits in the navigation channel between the sea buoy, across the Savannah Bar, through Jones Island range, USACE Station – 14, where the project depth of the channel decreases from 44 feet to 42 feet.

(b) Two (2) feet for transits between Jones Island range and the point in the navigation channel which is adjacent to the facility of destination.

(c) When operating on waters outside the established navigation channel, and while moored at a facility pier, one (1) foot for single skin tank vessels greater than 5000 gross tons and six (6) inches for all other deep draft vessels. These guidelines are also applicable for vessels maneuvering outside the boundaries of the navigation channel.

SOUNDINGS

(a) The USACE will continue to conduct regular surveys of the navigation channel and provide reports of the channel condition to the pilots and all concerned parties. This data is posted on the USACE website. A link to the USACE website can be found at www.savannahmaritime.com . Other information including, but not limited to, maintenance dredging, agitation dredging, use of disposal areas and general harbor maintenance issues will also be reported at the monthly SMA meetings.

(b) At a minimum interval of every 90 days operators will conduct soundings at their facilities. Operators may execute alternate facility sounding schedules if they maintain historical data or a maintenance program demonstrating that soundings are not necessary. Facilities which receive vessels infrequently may choose to forego the minimum 90 day survey provided they conduct a survey to establish suitable water depths are available not more than 30 days prior to a vessel arrival.

(c) If substantive changes in the channel condition are evidenced by the USACE survey in the area of a facility, a more frequent sounding schedule may be recommended for that facility. Facilities will provide to the bar pilots the following sounding information:

- (1) Sounding date;
- (2) Controlling depth (based on soundings);
- (3) Authorized depth (based on USACE permit); and,
- (4) Comments.

(d) Soundings must consist of a vessel's berthing area as well as its maneuvering area adjacent to the navigation channel.

(e) The bar pilots will receive all controlling depth and facility depth information. They will consolidate that information and share it with vessel masters, docking pilots, and federal pilots.

PRE-TRANSIT CONFERENCE

A conference between a vessel's master and the appropriate pilot will take place prior to the vessel's inbound or outbound transit. This practice has been observed for the past several years and was adopted following the National Transportation Safety Board issued recommendation M-93-34. This recommendation addressed the need for pilots to confer with vessel masters and relevant deck officers in order for them to be conversant with the transit route and be aware of any special risks that the transit may incur. The following matrix is an extension of the current practice to include members providing the information required.

ITEM	PROVIDED BY	METHOD	RECEIVED
mean draft	Master	via Agent	Facility
trim/list	Master	Pre-transit conference	Pilots
speed/squat	Master	Pre-transit conference	Pilots
maneuvering performance tests	Master	Pre-transit conference	Pilots
transit route	Pilot	Pre-transit conference	Master
tide/seas/wx	Pilot	Pre-transit conference	Master
facility depth	Facility	Pilot	Master
transit depth	Pilot/ACOE	Pre-transit conference	Master
maneuverability	Master	Pre-transit conference	Pilot

The under-keel clearance will be calculated by the pilot and master then promptly logged after the pre-transit conference. In addition, the equipment tests required by 33 CFR 164.25 will be conducted and the results logged prior to the vessel's inbound or outbound transit. The master and pilot shall discuss the results of the tests prior to the inbound or outbound transit.

POSITIVE CONTROLS

The following "controls" will be practiced to ensure the integrity of the minimum under-keel clearance guidelines.

(a) If a vessel in transit, using "tidal lift" to assure its under-keel clearance, should experience a steering failure or loss of power that requires the vessel to drop anchor, it shall be assisted by tugs and if possible to a safe haven. This safe haven shall be either offshore or a port facility that was chosen based on having depth sufficient to accommodate the vessel's draft and with permission obtained from that facility's owner or operator. It is the responsibility of the Coast Guard, the pilots and master to identify, in advance, the towing requirements necessary to ensure the aforementioned actions may take place in a timely manner. This information shall also be discussed between the master and pilot prior to transit. Tugboat operators shall give the highest priority toward the assistance of vessels experiencing this type of casualty. Immediately after addressing resultant safety concerns, notify the COTP of the vessel casualty.

(b) The Savannah Pilots Association's Pilotage regulations shall remain the recognized standard for maximum deep draft of vessels crossing the Savannah Bar under normal weather and navigation channel conditions.

(c) If a vessel is using "tidal lift" to assure minimum under-keel clearance while moored at a facility, that vessel must have a contingency plan in place which provides the personnel necessary to move the vessel away from the facility prior to exceeding the clearance. The vessel shall be moved offshore or to an area similar to those described in paragraph under the Positive Controls section paragraph (a).

(d) In order to maintain two-way vessel traffic. Vessel pilots and masters shall be cognizant of the latest soundings available throughout the transit across the breadth of the project. When making meeting or overtaking arrangements, pilots shall consider the available depths and shall remain in compliance with the appropriate, under-keel clearance limits.

WAIVERS

(a) A waiver for any of the Savannah River Pilot’s Association under-keel clearance guidelines may be applied for by sending a written request, with supporting documentation, to the Savannah River Pilot Dispatcher. The Master or authorized representative shall consider the nature of each request for waiver and evaluate it on a case-by-case basis.

(b) A waiver for any of the under keel clearance requirements for single bottom tank ships and barges detailed in 33 CFR 157.455 may be applied for by sending a request, with supporting documentation, to the COTP. The COTP shall consider the nature of each request for waiver and evaluate it on a case-by case basis.

PILOTAGE REGULATIONS OF THE SAVANNAH PILOTS ASSOCIATION

START	INBOUND	DEADLINES
LW + 3.0 hours	42’00"	HW – 1.0 hours
LW + 2.5 hours	41’00"	HW – .5 hours
LW + 1.5 hours	40"00"	HW
LW + 1.0 hours	39’00"	HW
LW	38’00"	LW
LW + 2.0 hours	39’00"	HW + 2.5 hours
LW + 2.5 hours	40’00"	HW + 2.0 hours
LW + 3.0 hours	41’00"	HW + 1.0 hours

LW + 3.0 hours	42'00"	HW + .5 hours
LW + 4.0 hours	43'00"	HW

OUTBOUND

ALL VESSELS GCT

TIDES – SAVANNAH RIVER ENTRANCE

WIND FACTOR – 0

TIME LIMITS SUBJECT TO CHANGE DUE TO WEATHER CONDITIONS OR LOW POWERED VESSELS OR EMERGENCIES

FROM SAVANNAH RIVER TO TOWN

+ 1 hour - high water, + 1-1/2 hours – low water

GUIDELINES FOR DEVELOPING CONTINGENCY PLANS

USING "TIDAL LIFT"

TO MAINTAIN UNDER-KEEL CLEARANCE REQUIREMENTS

1. The following are recommended guidelines to assist with the development of contingency plans for vessels desiring to use tidal lift in conjunction with cargo unloading. These guidelines are intended to assist with written calculations for draft reductions and to ensure under-keel clearance is maintained. A simple tidal lift calculation form is enclosed. Use of the form is recommended but not required.
2. The time of mooring, maximum draft, time cargo operations will commence, tank information, facility sounding data, standby tug and layberth shall be determined. The vessel's maximum draft shall be compared against the facility soundings. The difference between the facility's sounding depth and the vessel draft (to include the under-keel clearance requirement) shall be the lift basis for which a sufficient cargo discharge rate shall be established. Height of tide should be incorporated in these calculations.
3. A draft reduction rate, expressed in inches per hour, should be computed. This rate shall be compared against the required reduction in the vessel draft. These calculations will indicate if the under-keel clearance will be maintained.
4. The calculations shall be reviewed and mutually approved by the vessel master, facility manager, and pilot. Once mutually approved, the vessel agent shall maintain the written calculations until the vessel departs the port.

February 18, 2009

5. Should an insufficient draft reduction be obtained prior to low tide, then the vessel should either be offloaded or moved. Notification shall be made to the COTP if an emergency vessel movement is required.

6. If the calculations are accepted by these parties, notification to the COTP is not required. Provided that the calculations are completed, and standby tugs and a lay berth are identified, no further action is required.

TIDAL LIFT CALCULATION FORM

Mooring date and time: _____

FACILITY:

Facility: _____

Time of MLW at Facility: _____ Facility MLW depth: ft in

Lay berth: _____ Lay berth MLW depth: ft in

VESSEL/CARGO DISCHARGE RATE:

Vessel: _____ Vessel draft: ft in

Vessel type: _____ Hull type: _____ Cargo ops time: _____

Draft reduction rate per hour based on cargo operations: ft in

REQUIRED DRAFT REDUCTION:

Vsl draft: ft in + under-keel clearance: _____ in = : ft in

(Note: Required under-keel clearance is 12 inches for single hull Tankers +5000 GT, 6 inches for all others)

Subtract the limiting MLW depth at facility: - : ft in

Apply the Height of Tide to MLW (add/subtract amount): ft in

(Note: Subtract the amount for a positive tide, add the amount for a negative tide)

Equals the required reduction to the vessel's draft: = : ft in

(Note: If less than zero, enter zero here. You need go no further)

CALCULATED DRAFT REDUCTION:

Time from start of cargo ops to MLW at facility (hours): hrs

Multiply by the Draft reduction rate per hour: X : ft in

Equals the calculated reduction to the vessel's draft: = : ft in

Will the calculated draft reduction equal or exceed the required draft reduction prior to the time of MLW at the facility? Yes / No

Tug company on standby: _____ Response time: _____

These cargo unloading calculations have been determined to be sufficient to insure adequate vessel under-keel clearances are maintained at all times.

MASTER _____ PILOT _____

FACILITY REP _____

**PORT USERS WORKGROUP MEMBERS FROM ORIGINAL AGREEMENT
NOVEMBER 27, 1996**

Membership by subcommittee:

PRE-TRANSIT SUBCOMMITTEE:

George Cate, Jr., Savannah Maritime (NYK) - Chairman
Kim Brown, Georgia Ports Authority
Chris Rice, Georgia Ports Authority
Spencer Edleman, Savannah Bar Pilots
Alan Garrett, Army Corps of Engineers
Fred Beason, Jr., Peeples Industries
LCDR Linda Fagan, USCG
LT Rich Reinemann, USCG

TRANSIT SUBCOMMITTEE:

Capt. William T. Brown, Chairman Savannah Bar Pilots
Spencer Edleman, Savannah Bar Pilots
Kim Brown, Georgia Ports Authority
Chris Rice, Georgia Ports Authority
Jim Murray, Turecamo Towing
Bob Cooley, Turecamo Towing
Ed Bazemore, Crescent Towing
Dave Harmon, CITGO
John McCarthy, Coastal Pilots
Henry Griffith, Coastal Pilots
George Cate, Jr., Savannah Maritime Assoc.
Wade Seyle, Jr. Army Corps of Engineers
Fred Beason, Jr., Peeples Industries
LCDR Jim McDonald, USCG
LCDR Linda Fagan, USCG
LT Ed Bass, USCG

FACILITY SUBCOMMITTEE:

Fred Beason, Jr., Chairman Peeples Industries
Fritz Hiltzheimer, Georgia Ports Authority
Kim Brown, Georgia Ports Authority
Tom Taylor, Georgia Ports Authority
Nick Johnson, Georgia Ports Authority
Amy Hughes, Savannah Mfg Council
Philip Rowland, Savannah Sugar Refinery
Jim Richards, Savannah Sugar Refinery
Kevin Russom, Georgia Pacific

Robert White, ST Services
Andy Calhoun, Colonial Terminals
Dave Harmon, CITGO
Debra Scott, CITGO
Floyd Manson, Savannah Electric
Dennis Heinen, Savannah Electric
Roy Babot, Koch Materials
Kenneth Taut, Koch Materials
Alan Garrett, Army Corps of Engineers
Tom Miller, Army Corps of Engineers
Bob Cooley, Turecamo Towing
LCDR Linda Fagan, USCG
LT Rich Reineman, USCG
LT Ed Bass, USCG

**SAFETY AND NAVIGATION SUBCOMMITTEE FROM REVISED AGREEMENT,
JANUARY 21, 2009**

CDR Lonnie Harrison, Jr. USCG	COTP	MSU Savannah
David Schaller	CAO	Georgia Port Authority
Chris Rice	Ops	Georgia Port Authority
Capt. Tommy Brown	M.P.	Savannah Pilots
Rich Wigger	EVP	Colonial Marine
Mike Collins	VP	Yang Ming Lines
Edward Bazemore	VP	Crescent Towing
Ronald Droop	VP	Moran Towing
Jerry Hogan	Pres.	M. J. Hogan & Co.
Fred Beason	Pres.	The Beason Co.
Roberta Beasley	GM	USMX
Stanley Clark	Chief, Nav Mgmt	USACE
DaWayne Penberthy	Marine Ops	Southern LNG
Charlie Sutlive	Ex Dir.	Savannah Maritime
Tom Wright	Secretary	Savannah Maritime
Walt Mitchell	VP	Zim Lines

Typographic errors on page 5 and 6 corrected to conform to Savannah Pilots documents on August 6, 2009. TWW