

### BARGE OPERATIONS HANDBOOK

**YEAR 2022** 

### NIGERIAN PORTS AUTHORITY

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## **Section One**

## Criteria For Renewal/Issuance of New Barge Operator License and/or Permit to Operate

#### <u>CRITERIA FOR RENEWAL/ISSUANCE OF NEW BARGE OPERATOR</u> LICENSE AND/OR PERMIT TO OPERATE

- 1. For renewal or issuance of new Barge Operator License, download and fill the Barge Operator Prequalification Assessment Form from the Authority's Website.
- 2. If you owned Barge (s) and/or Pusher Tug as a Barge Operator, download and fill as appropriate the Barge/Pusher Tug Minimum Safety Standards Prequalification Checklist for renewal or issuance of new "NPA Permit to Operate".
- 3. Submit Letter of Application along with the Completed Form(s) to the Managing Director of Nigerian Ports Authority at the Corporate Headquarters.
- 4. The Authority will verify the information contained in your submissions within the licensing year.
- 5. After verification of the submissions, the Authority will notify successful Applicants with Letter of Acceptance containing the Guidelines for Barge Operations in the Pilotage District.
- 6. List of successful Applicants shall be published in the Authority's website for the information of Stakeholders and Public.
- 7. All successful Applicants are to:
  - a) maintain an office in the Port City/Town where the barge operation is to be carried out to enhance Participation in the Barge Operations Daily Berthing Meeting and physical enquiries by Stakeholders.
  - b) pay Authority's Bills for renewal or issuance of new License and/or Permit to Operate.
  - c) obtain their "Licenses" and/or "Permits to Operate" at the Authority's Headquarters from the Assistant General Manager, Operations.

## **Section Two**

## Barge Operator License Prequalification Assessment Form

#### BARGE OPERATOR LICENSE PREQUALIFICATION ASSESSMENT FORM

Nam	ne of Company					
Add						
Com	ipany Phone No (s)					
	pany Email Address;					
	tact Person Phone No					
	tact Person Email					
S/N	PRE-QUALIFICATION REQUIREMENTS	COMPLIANCE KEY: APPLICANT = A NPA= V (Verifier) Tick as appropriate			= A ïer)	REMARK
		Yes	5	No		
		Α	V	Α	V	
1.	Evidence of Certificate of Incorporation with Corporate Affairs Commission (CAC).					
2.	Evidence of Company's Current Tax Clearance Certificate.					
3.	<ul> <li>Sworn affidavit disclosing:         <ul> <li>a) That the company does not have any Director who has been convicted in any Country for any criminal offence relating to fraud or financial impropriety or criminal mis presentation or falsification of facts relating to any matter.</li> <li>b) Whether or any serving officer of the Nigerian Ports Authority (NPA) is a present director.</li> <li>c) That the company is not in receivership, subject of any form of insolvency or bankruptcy proceeding or the subject of any form of winding up petition or</li> </ul> </li> </ul>					
	proceedings.					
4.	All documents for submission must be transmitted with a <b>Covering/Forwarding letter</b> under the Company/Firms Letter <b>Head Paper</b> bearing amongst others, the <b>Registration No (RC)</b> as issued by CAC, contact address, Functional Telephone & email. The letter head paper must bear the <b>Names &amp;</b> <b>Nationalities of the Directors</b> of the Company/Firm at the bottom of the page.					
5.	Submission of Company profile.					
6.	Evidence of Operating License (for renewal only)					
7.	Evidence of ownership/charter of Licensed Pusher Tug					
8. 9	Evidence of ownership/charter of Licensed Barge. Evidence of ownership/Rentage of Licensed Jetty as logistic base					
10.	Evidence of experience in Shipping & Logistics or any Marine related activities					
	PORTANT NOTE					
1.	Failure to comply with any of the requirements listed 1-10 above mapplication	•				
2.	<ul> <li>If items 7&amp;8 above are in the affirmative, apply for "NPA Perm follows:         <ol> <li>Download from NPA Website: Barge and Pusher Tug Mini Checklist for Issuance of "NPA Permit To Operate".</li> <li>Fill the Checklist for each of the vessel owned or chartered for all the listed 10 sub items.</li> </ol> </li> <li>Submission of Application Letter:         <ol> <li>Submit Letter of Application along with the Completed Pre Managing Director of Nigerian Ports Authority. (For Applic 2. Submit Letter of Application along with the Completed Pre Barge/Pusher Tug Minimum Safety Standards Prequal Director of Nigerian Ports Authority. (For Application With Vertice Pression)</li> </ol> </li> </ul>	mum d by t quali cant requa	Safe he co ificat witho alificat	ion Asout an	indards by and a ssessm y Vesso Assess	Prequalification ttached evidence ent Form to the el) OR sment Form and

#### **OPERATOR'S LICENSE CATEGORY**

S/N	BARGE ROUTES	CATEGORY (Tick as appropriate)
1.	Intra Pilotage District	
2.	Inter Pilotage District	
3.	West African Coast	

#### **ATTESTATION**

I, ...... do hereby attest that this information is true, accurate and complete to the best of my knowledge and I understand that any falsification, omission, or concealment of material fact may subject me to administrative, civil, or criminal liability."

Signature & Date:

FOR OFFICE USE	
Remark by Verifier/Evaluator:	
Name of Verifier/ Evaluator	
Designation, Signature & Date:	
Remark by Reviewer:	
Name of Reviewer:	
Designation, Signature & Date:	

## **Section Three**

Barge/Pusher Tug Minimum Safety Standards Prequalification Checklist for Issuance of "NPA Permit to Operate"

#### BARGE/PUSHER TUG MINIMUM SAFETY STANDARDS PREQUALIFICATION CHECKLIST FOR ISSUANCE OF "NPA PERMIT TO OPERATE"

	of Vessel									
	of Vessel	Nationality/Flag								
	o. Call Sigr	_			1					
	•									
	of Company									
Addres					1					
	any Phone No	. ,								
Contac	ct Person Pho	one No Email								
S/N		PARA	METERS			COMPLIANCE KEY: APPLICANT = A NPA= V (Verifier) Tick as appropriate Yes No			<sup>.</sup> ) riate	REMARK
						A	V	A	v	-
1.	Certifica	tion and Docu	umentati	on						
	a) Ar	e the following	certificat	tion valid?						
	i.	NIMASA's Ce								
				<u> </u>						
	ii.									
		Condition Su								
	<ul> <li>b) Availability of Publication or equivalent procedural manuals covering the following titles maintained aboard for the use of the Pusher tug/ barge crew:</li> </ul>									
	i. Company Marine Operations Manual									
	ii. Local Tide Tables									
	iii. Harbour Master Notices to Mariners									
	iv. Company Contingency Plan									
		Company Salv	<u> </u>							
	vi. Pilotage District Information Pack									
2										
2.	Pilotage Exemption C			ite (PEC)						
	V	s the Vessel m alid NPA Pilot PEC)?			h					
	,	the Vessel o d Drug Abuse			bhol					
	cre ma	there a s ofessional adv ew; (elements anual and doc ining progress	vancemei should i umentatio	nclude a trair on to monitor	ning					
3.	Navigati	on								
	éq	the vessel uipment and m der: -								
	i. Co	ompass								
	ii. Ma	arine VHF-DSC	c radiotel	ephone						
	ins	stallation								
	iii. Au	itomatic Identif	ication S	ystem (AIS)						
	iv. Mo	bile telephone	)							

	b) is there a deck leadback or			
	b) Is there a deck logbook or equivalent record on board?			
	c) Does the Master make passage plan			
	appropriate to the area and service for			
	navigation?			
4.	Safety Management			
	a) Are operations carried out in compliance			
	with the requirements of NPA regulations?			
	b) Are Safety checks carried out daily on			
	board and a safety checklist completed?			
	c) Is there Manual for Emergency Response			
	procedures on board the vessel, which			
	states actions to be taken in the event of			
	fire, explosion, grounding, and collision?			
5.	Pollution Prevention			
	a) Is there Emergency Response procedures			
	manual on board which cover the actions to			
	be taken in the event of oil spill or oil			
	pollution.			
	b) Are the following pollution control			
	equipment available and ready for immediate use:			
	i. Absorbent Materials		-	
	ii. Non-sparking shovels, buckets,		-	
	squeegees, brooms			
	iii. Containers for recovered waste			
	iv. Emulsifiers (for deck cleaning only)			
6.	Structural Condition			
•-	a) Is the hull structure of the vessel in sound			
	condition and free from fractures, distortion			
	or excessive corrosion?			
	b) Is the fixed fendering systems in sound			
	condition and capable of preventing metal-			
	to-metal contact with other vessels?			
7.	Communication			
	a) Is radio watch maintained on VHF Channel			
	12 and 14 whilst underway in the Port?			
	b) Does the Vessel declare arrival/departure			
	details before entry/exit from the Port			
	respectively?			
	c) Does the Vessel request permission to			
	move from Port Control/Signal Station			
	immediately before getting under way?			
8.	Engine Room and Emergency Steering			
	a) Is the Vessel fitted with emergency back-			
	<ul><li>up power system?</li><li>b) Is the back-up power systems in good</li></ul>			
				1
	order, tested at least monthly and the			
	order, tested at least monthly and the results recorded?			
	order, tested at least monthly and the			

#### ROUTE INTENTION

S/N	BARGE ROUTES	CATEGORY (Tick as appropriate)
1.	Intra Pilotage District	
2.	Inter Pilotage District	
3.	West African Coast	

#### **ATTESTATION**

I, ...... do hereby attest that this information is true, accurate and complete to the best of my knowledge and I understand that any falsification, omission, or concealment of material fact may subject me to administrative, civil, or criminal liability."

Signature & Date: .....

FOR OFFICE USE	
Remark by Verifier/Evaluator:	
Name of Verifier/ Evaluator	
Designation, Signature & Date:	
Remark by Reviewer:	
Name of Reviewer:	
Designation, Signature & Date:	

## **Section Four**

### **Barge Operation Guidelines for Terminal and Barge Operators**

#### **BARGE OPERATION GUIDELINES FOR TERMINAL AND BARGE OPERATORS**

#### **1. TERMINAL OPERATORS**

- a) Terminal Operators shall:
  - i. ensure compliance with NPA License regulations before engaging a Barge Operator, Barge and Pusher Tug.
  - ii. not engage an unregistered/Unlicensed Barge Operator,
  - iii. not engage Barge and/or Pusher Tug without the "Authority's Permit to Operate".
  - iv. not stack Barges with containers' height higher than either the Wheelhouse or line of sight at the Bridge of the Pusher Tug or Self-Propelled Barge.
  - v. maintain daily "**Cargo Record**" containing details of all consignments such as purpose, content, destination etc. at entry/ exit point.
  - vi. maintain detailed daily "**Barge Movement Record**" of barges in the terminal and capture related berthing and sailing time.
  - vii. attend Barge Operation Berthing Meeting with the Harbour Master.
- b) Terminal Operator that flouts any of the provision in **a (i)-(vii)** above shall be directed by the Authority to stop all barge operational activities.

#### 2. BARGE OPERATORS

- a) The Barge Operator's License and Barge/Pusher Tug Permit to Operate is subject to compliance with the following Conditions:
  - i. All operations are carried out with total compliance to all extant regulations.
  - ii. All the Pusher Tugs and Barges (Both Self Propelled and Non-Self-Propelled Barges) to be deployed have valid "NPA Permit to Operate" for the year under consideration.
  - iii. Barges are not stacked with containers' height higher than either the Wheelhouse or line of sight at the Bridge of the Pusher Tug or Self-Propelled Barge.
  - iv. The hull of the barge is painted round with marine orange paint to a minimum wideness of 30cm from the deck.
  - v. On the marine orange paint, the Permit to Operate Number shall be boldly inscribed with marine white paint on the sides (mid ship position), fore and aft of the hull of the barge.
  - vi. The Pilotage Exemption Certificates (PEC) of Masters of the Tugs and/or Self-Propelled Barge is valid for the year under consideration. If the PEC is not valid, the Barge Operator shall request for pilotage service into or out of the Pilotage District from the Authority.
  - vii. The Master and PEC Holder shall provide Port Control/signal station through VHF Radio the arrival and departure details of the Barge. The Master shall also inform Port Control/Signal Station of his movement intention before commencement of towage operation away from the berth to avoid the risk of collision with other vessel(s) in the channel;
  - viii. Attend Barge Operation Berthing Meeting with the Harbour Master.
  - ix. That the Barges/Pusher Tugs shall have Certificate of Registry from NIMASA.

- x. That the Condition Survey/Seaworthiness Report of the Barges/Pusher Tugs are satisfactory for operations.
- xi. That the Barges and cargo must have comprehensive insurance cover by a reputable insurance Company;
- xii. That the operation shall have due regards to ISPS Code;
- xiii. That all accruable revenue to the Authority shall be paid;
- xiv. That you submit a Bank Bond in the sum of Fifty Million Naira (N50,000,000) from a reputable financial institution. Please take note that the Bond shall not be with any precondition. The Legal Division of the Authority shall be custodian of the financial instrument and verify its authenticity;
- Please take note that you shall be required to submit your Bank Bond within Ten (10) working days from the day of acceptable of this offer, otherwise, the offer lapses.
- xvi. That you furnish the Traffic Department with monthly report on your activities, a copy of which should be referred to the office of the Assistant General Manager, Operation, Headquarters;
- xvii. For a Barge licensed for RORO Barge Operations, note that all truck movements by barges shall be pre-approved by the Operations Department on a case-by-case basis specifying take-off and landing points for proper record keeping.
- xviii. This approval is for twelve (12) calendar months and terminates on 31<sup>st</sup> December of the year license was issued. You shall re-apply for renewal on the last quarter of the operational year. The renewal of your License shall be subject to the outcome of the quarterly oversight review of your operations by the Standing Committee to ensure you have addressed ALL observations of the inspection team particularly issues of safety in operation.
- xix. That you indemnify the Authority against all aspects of the operation.
- xx. That you indicate your acceptance of this offer within five (5) working days from the date of receipt of this letter.
- xxi. The Authority may state any other requirement(s) deemed necessary for safety of navigation, security, and revenue mobilization.
- b) Barge Operator that contravened any of the provision in a (i)-(xx) above shall correct non-conformance after a Warning Letter. The Authority's license shall be withdrawn from erring Barge Operator after two consecutive Warning Letters on the same issue and will be directed to stop service indefinitely until further notice.

## **Section Five**

# Standard Operating Procedure (SOP) for Barge Operations

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### STANDARD OPERATING PROCEDURE (SOP) FOR BARGE OPERATIONS WITHIN NIGERIAN PORTS AUTHORITY'S PILOTAGE DISTRICTS, 2022.

The following underlisted Standard Operating Procedure (SOP) shall apply to barge Operating in Nigerian Ports Authority's Pilotage Districts.

#### 1. Registration/Before Arrival:

- i. A company applying for Barge Operational License shall be registered with Corporate Affairs Commission (CAC) and shall produce evidence of such registration.
- ii. All Applications in respect of licensing for Barge Operations shall be addressed to the Managing Director, Nigerian Ports Authority.
- iii. Any application regarding approval for Barge Operation shall be preceded by an inspection of jetty facilities by the Standing Committee on Barge Operation and submission of its report and findings to NPA management for consideration.
- iv. The Inspection Team shall verify the following:
  - (a) Nigerian Maritime Administration and Safety Agency's (NIMASA) Certificate of registration of Barge showing that it is seaworthy.
  - (b) Certifying Documents of the Pusher Tug which must be up to date.
  - (c) Receipt of payment of NPA Conservancy Dues for the Barge
  - (d) Pilot Exemption Certificate (PEC) issued by the Harbour Master of the Pilotage Districts.
  - (e) Insurance certificate for the Barge.
- v. An annual licensing fee of One Hundred Thousand Naira (N100,000.00) shall be paid by the applicant on approval of the application for Intra Pilotage District route.
- vi. The operations shall comply with all Nigerian Ports Authority's extant rules and regulations as outlined in the conditions stipulated in the approval conveyed by the Authority.
- vii. Operations shall have due regards for International Ship and Port Security (ISPS) code.
- viii. Loading /discharging operations shall be monitored by the Traffic Manager of the Port concerned.
- ix. The Operator shall furnish the Traffic Department of the Port with monthly report on all activities in respect of operations, a copy of which shall be sent to the office of the Assistant General Manager, Operations, HQ, for record purposes.
- x. All barges calling at any of the Pilotage Districts must use NPA Pilot except where Pilot Exemption Certificate (PEC) is issued by Nigerian Ports Authority through the concerned Pilotage District.
- xi. Barge shall not proceed to the Berths except approval is granted by the Port Manager of the Pilotage District.
- xii. When a barge arrives the Master or the Pilot shall call the signal station to announce the arrival.

- xiii. All operating licenses are renewable to the expiration of the previous license and is subject to the outcome of the oversight review of the operations of the license.
- xiv. Upon receipt of Barge Operating License, the Operator shall inform the Port Manager and Terminal Operators of the Port before starting Operations.
- xv. Each Operator shall submit Fifty Million Naira(N50,000,000.00) unconditional Bank Bond in favour of Nigerian Ports Authority to qualify for operation within ten (10) working days of submitting the acceptance letter.
- xvi. Payments for the services shall be in compliance with Nigerian Ports Authority's pre-payment policy except where waiver is granted to the applicant by the Managing Director or his/her delegated Officer.
- xvii. NPA in conjunction with NIMASA may carryout periodic inspection on the Pusher Tugs and/or Barges to ensure compliance with Flag state requirements for Barge vessel type.
- xviii. The Agent/Operator shall indemnify the Authority against all aspects of the operation.

#### 2. Roles and responsibilities:

#### 2.1. Barge Operators

When requesting for window from Terminal Operators, the Barge Operator will copy office of General Manager, Marine & Operations and specify in the following order:

- (a) Name of barge
- (b) Expected time of Arrival at the terminal
- (c) Number to be discharged and loaded
- (d) Estimated Time of Departure (ETD)
- (e) Status of the TDO release
- (f) Presence of the Customs documentation clearance
- (g) ETA/Estimated Time of Departure (ETD)

#### 3. Tug/Barge Operations when transiting the Channel:

- i. All Tug Masters engaged in Tug/barge operation within the channel shall at all times have his/her PEC copy available for inspection.
- ii. All Tug/Barge must comply with International Regulations for Preventing Collisions at Sea (COLREGS) when transiting the channel.
  - (a) Appropriate signals should be displayed by day.
  - (b) Appropriate light signal in compliance with COLREGS should be displayed at night.
  - (c) Tug/Barge movement when transiting the channel must be in compliance with COLREGS or with pilot instructions during interaction with pilots.
- iii. All Tug/barge engaged in operation within the Lagos Pilotage District shall be equipped with radio capability for standby on channel 12,14 and 16 at all times.

iv. Every tug/barge movement must be reported to the port Control on Channel 12.

Report should include:

- (a) Name and Particulars of Tugboat/barge
- (b) Present position
- (c) Destination
- (d) Final report when in destination
- (e) Any other report as may be required.
- v. All Tug/Barges when transiting the channel shall keep radio watch standby on VHF Ch. 12/14 and listen out for communication with pilots in the channel.

#### 4. Terminal Operators:

- i. Terminal Operator shall publish fixed Windows every week and circulate among Barge Operators.
- ii. Fixed Window shall be scheduled for the same day and time each week. If multiple barge stops meet this requirement every week, each one will be scheduled as a Fixed Window.

#### 5. Terminal/Barge Operations:

i. Terminal Operators when receiving Tug/Barge or carrying out Barge operation alongside their berths, should inform the Beach Master's office, through the Harbour Master's office via VHF CH. 14 or by the fastest means available.

Information should include:

- (a) The berth/position occupied by the Tug/Barge
- (b) The particulars of the Tug/Barge
- (c) The estimated duration of the operation
- (d) The completion time of the operation
- (e) Time Tug/Barge casts off from the jetty
- ii. Terminals should so far as possible avoid stacking-Barges alongside such that they encroach into the Main channel to obstruct vessels transiting the channel.

In complying with the above regulation, Terminals should ensure that the combined beam of Tug/barges alongside should not exceed the maximum beam of vessels that is normally received at the terminal.

#### 6. Berthing Speed:

The Berthing speed limit is 5 Knot/sec (Berthing speed limit should be at a sage speed). Once the barge is positioned in front of the jetty head, the captain must ensure that barge touches the berth fenders at speeds which are within the acceptable limits of fenders.

#### 7. Approach and Arrival:

- All tugboats must be fitted with VHF radio and have a base station for reporting. They must also have pumping machine, functional horn and tidal charts.
- ii. The Crafts, Cargoes and Crew must have comprehensive insurance cover by a reputable Insurance Company.

- All Personnel involved in the working of the barge must always be with Personal Protective Equipment and adequate Personal Protective Equipment (PPE) must be provided on board.
- iv. No operator shall load above one (1) high on a barge to ensure the vision of the tug pilot is not impaired.
- v. When a barge arrives, the Master or the pilot shall call the Signal Station to announce her arrival.
- vi. The Master/Pilot of the Pusher Tug (in case non-self-propelled or hopper barge) must declare the name of the barge and gross tonnage, draft of the barge, the name and characteristics of the Tug assisting it (non-self-propelled barge) to Nigerian Ports Authority. The master or the Pilot must confirm/declare that equipment on board the tug and barge are in good working conditions.

#### 8. Berthing / Unberthing and Discharging / Loading Operations:

- i. The Terminal Operator must ensure that personnel involved in the working of the barge are always equipped with the Personal Equipment (PPE) at all times.
- ii. Proper mooring gang, equipment and a mooring boat shall be deployed for mooring operations.
- iii. Barges to be moored directly to the shore bollards must be done with adequate mooring lines and sufficient tidal level at the Terminal.
- iv. Line-towing should only be carried out in the daytime (0730 hours 1800 hours).
- v. Berthing, unberthing and movement operations should not be carried out during unfavourable weather condition and or poor visibility.
- vi. Discharge or loading operations shall stop when another barge is arriving or casting off from an adjacent Terminal.
- vii. The Master of tug/ barge must communicate with the harbour Master after approval to berth at the Terminal before entering or sailing from the assigned Terminal.
- viii. A Pusher Tug of sufficient horsepower bollard pull must be deployed to attend to the barge at all times including berthing, during discharging and loading operations.
- ix. Inter-port movement of a barge must be approved by the port manager of the Pilotage District and should be pushed by a Tug of sufficient bollard pull (in case of non-self-propelled Barge).
- x. Terminal Operation shall load or discharge <u>ONLY</u> the barges that have evidence of NPA license.
- xi. The Harbour Master must be sure that the Terminal has the required depth, quay infrastructure (bollards, fenders etc) available for the barge.
- xii. **Departure/Sailing/Movement of Barge within or outside Pilotage District:** The Agent/Importer must apply for and get approval from NPA before the barge sails and should supply the name of Pusher Tug and the characteristics (in the case of non-self-propelled barge) to NPA. The Agent/Importer must ensure that the barge ramp has been retrieved before the barge sails.

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#### 9. Minimum Safety Requirements:

- i. The Pusher Tug Captain and Barge crew are responsible for ensuring containers stacking follow stowage plan (One High Only).
- ii. The weight of cargoes/containers and equipment in the barge shall not exceed the manufacturer's maximum recommended load limit and waterline.
- iii. A safety briefing that includes the location of safety equipment, proper container loading and unloading procedures, and emergency response plan to retrieve and rescue a person who falls overboard must be conducted.
- iv. Loose items that could become a personnel hazard in rough water or fall overboard due to wind or waves must be secured.
- v. The mooring line of the barge must be tended at all times.
- vi. Adequate lighting must be provided at all times in the area where barge is working (loading/discharging).
- vii. The Agent/Barge Operator must ensure that operations are safe at all times for vehicles, machinery and personnel. Vehicles, machinery and equipment to be used must be certified and approved before use.
- viii. Whenever safety is breached, operation of the barge must be suspended.

#### 10. General Safety Equipment:

- i. Fire Extinguisher
- ii. Approved life jacket for each person on board.
- iii. Approved throw-able life ring with attached rope for retrieval:
  - (a) Life rings and retrieval rope must be in good repair.
  - (b) Life rings must be stowed in a readily accessible location near the steering station.
- iv. Paddles (two)
- v. Mooring line or tie-off rope
- vi. Flashlight
- vii. Device such as a bilge pump to bail water
- viii. Bucket to bail water in case primary device fails to operate
- ix. Whistle or horn
- x. First aid kit
- xi. Communication devices designed for emergencies

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#### 11. Fuel Storage Safety:

Since boat engines are often refueled while the Pusher Tug is in the water, the potential for accidents are spills is high.

- 11.1. To prevent accidents and spills during refueling, the Master and Crew members must observe the following procedures:
- (a) Refuel portable fuel tanks onshore before loading or unloading cargoes.
- (b) Extinguish all smoking materials.
- (c) Turn off engines, electrical and electronic equipment, and other appliances that could create a spark.
- (d) Fuel slowly to avoid overflow.
- (e) Wipe up any spills immediately.
- 11.2. To prevent accidents after refueling, the master and crew members must observe the following procedures:
- (a) Before starting the engine, open all ports, hatches, and doors, then start the engine compartment blower to ventilate the space.
- (b) Check the bilge for fuel vapors.
- (c) Let the lowers run for at least four minutes.
- (d) If the Tug exudes smell of fuel vapours, the engine should not be started.