

TROPICAL STORM AND HURRICANE PREPAREDNESS PROCEDURES
PORT OF HOUSTON AUTHORITY
BAYPORT TERMINAL

Hurricane season on the Gulf Coast extends each year from June 1 through November 30.

Every year, prior to the onset of Hurricane season, BPT Managers and critical staff will meet to review the Terminal Hurricane Procedures, and amendments will be made as necessary. Maintenance will perform an inventory of emergency supplies and purchase anything we don't have on hand or that needs to be replaced. Outside maintenance will be responsible for checking the facility to make sure all portable buildings are properly secured. All terminal users and outside warehouses will be notified in writing to be sure that extra care be taken in their usual housekeeping and securing of their facilities.

When the U.S. Weather Service predicts a tropical storm or a hurricane to affect the Houston/Galveston area, a strategy meeting will be called for all Managers and critical staff to discuss specific plans. A person from each department will be assigned to coordinate preparations for their area. Employees with questions about attendance during a storm period should be referred to their managers.

The terminal will continue to receive and deliver cargo as long as it is safe to do so, but if a storm is imminent the following should be used as a guideline. Remember, this timeline is only a guide, and it could be moved forwards or backwards depending on the severity and the expected arrival of the storm.

It should be noted that PHA retains the right to decide when to shut down vessel operations and put its equipment into storm position.

There are several web sites that can provide us with up to the minute weather information. Here are two that we can log onto: www.weather.com (The Weather Channel), and www.khou.com (Channel 2 in Houston). Local television newscasts and news radio also provide extensive coverage of any storm that may threaten our area (TV channels 2, 11, 13, and 26; radio station 740 AM).

A HURRICANE WATCH IS IN EFFECT. THE STORM IS 72 HOURS FROM HOUSTON.
(WHISKEY CONDITION)

- 1) Begin coordinated team communication with Port, WGMA, USCG, Pilots, Trucking Companies, and Terminal Users.
- 2) Verify again emergency equipment inventory and supplies to ensure adequate quantities of rope, plywood, masking tape, flashlights, batteries, cables, turnbuckles, etc. required for lashing down cranes, heavy equipment, and loose items that must remain outside, and boarding up and taping of windows.
- 3) All warehouse users and the outlying empty yards will be notified to begin securing their areas.
- 4) Call all vendors to remove or pump out Port of Potties, waste bladders, waste oil, non hazardous waste, grease traps, trash and dunnage, and scrap metal.
- 5) Any loose gear not in use on the terminal should be moved inside or secured.
- 6) Empty yards on the terminal will be told to check to make sure all container doors are closed and secured.
- 7) A small amount of canned goods, drinking water, and canned drinks should be purchased and stored in case people get stranded on the facility during or after the hurricane. These will be stored at the fire barracks.
- 8) A safe location should be designated as the storm center.
- 9) Each department will inspect their areas of responsibility for compliance.
- 10) Return any equipment rented by PHA that is not being used. *
- 11) Outside maintenance should pump down all lift stations. *

Whiskey: Set when gale force winds are expected to arrive at the port within 72 hours. Port remains open to all commercial traffic, but oceangoing ships and barges must report their intention to remain in port or depart. If they are departing, they must do so within 12 hours of gale-force winds.

THE STORM IS 48 HOURS FROM HOUSTON (X-RAY CONDITION)

- 1) Continue coordinated team communication.

- 2) Move non-essential equipment to a safe location. Service the equipment with fuel, lubricants, etc., in order that it can be used after the storm.
- 3) Make ready all portable generators, air compressors, and portable radios.
- 4) Fill mobile fueling rigs and keep them topped off.
- 5) Lash down non-essential gear and equipment that must remain outside, recheck lashing portable buildings. The yard cranes tie downs in T3 can be used for early lashing due to the location of the tie downs.
- 6) Any daily use materials that carry a warning label (solvents, cleaning agents, paint, pesticides, etc.) should be put into their lockers and secured.
- 7) Begin to stack loaded containers into safe positions on the pad. Begin to stack down the empty containers.
- 8) Each department will inspect their areas of responsibility for compliance.

X-Ray: Gale force winds are expected within 48 hours. The rules are similar to port condition Whiskey.

STORM IS 24 HOURS FROM HOUSTON (YANKEE CONDITION)

- 1) Continue coordinated team communication.
- 2) Move desks, files, office equipment, and furniture away from uncovered windows. Put all papers in file cabinets or drawers along with telephones.
- 3) Computers, copiers, and fax machines should be moved to a safe location. Make sure they are marked with names and departments to hasten redistribution after the storm.
- 4) Continue to secure terminal equipment. Wharf cranes and yard cranes should be put into their tie downs unless they are in use. Terminal crane operators should be used to move the yard cranes into position over the tie downs. Management will determine when or where to tie down on a crane-by-crane basis throughout the day.

- 5) Fill extra drums with fuel, lubricants, water, hydraulic fluids, etc. and stow in a safe location for use after the storm.
- 6) Service all vehicles with fuel, etc.
- 7) Board up or tape all windows.
- 8) Each department will inspect their areas of responsibility for compliance.

Yankee: Gale force winds predicted within 24 hours. Vessels seeking to depart must arrange immediate departure. Cargo operations must cease with 18 kilometer per hour (kph) winds. Transfer hoses must be disconnected with 22 kph winds. Ships seeking to arrive in port should seek an alternate destination.

STORM IS WITHIN 12 HOURS OF HOUSTON (ZULU CONDITION)

- 1) Continue coordinated team communication.
- 2) Secure all electrical power sources not required for minimum operation. Electrical equipment should be turned off and unplugged; lights should be turned off except for areas that might be manned.
- 3) All stacking down of containers left on the terminal should be complete.
- 4) All equipment should now be secured in a safe location; all cranes should be in their tie downs.
- 5) Each department will inspect their areas of responsibility for compliance.
- 6) All other hurricane preparations should be completed. Excuse all non-essential personnel.

Zulu: Gale force winds within 12 hours. The port is closed.

STORM IS WITHIN 6 HOURS OF HOUSTON

- 1) Continue coordinated team communication.
- 2) Storm coordinators should make their last check of the facility to ensure that nothing has been missed. Any last-minute preparations should be completed. Port Police vehicles should be parked under the cover in the covered lanes.

- 3) Prepare to ride out the storm. If you are required to be on premises you should remain indoors. Be sure you have emergency supplies (radio, flashlight, batteries, etc.). Monitor the weather information.

POST STORM OPERATIONS

- 1) Re-staff entrances to keep out vandals and sightseers.
- 2) Survey for damage or injured personnel. Assist any injured as necessary.
- 3) Assess damage of terminal property, provide to the Terminal Manager a written report accompanied by photographs when possible.
- 4) Prioritize cleanup and repairs:
 - A. Remedy dangerous or hazardous conditions
 - B. Remove debris
 - C. Temporary repairs
 - D. Permanent repairs
- 5) Advise Communication Team of port status and plans after the storm.

SECURING EQUIPMENT AND MACHINERY

WHARF CRANES

Cranes 204,205,206,207,208,209,210, 211, 212, 213, 214, 215 should be boomed up and the legs pinned into position on the dock and put into the tie downs. Each crane tie down takes 1 hour and to release each is 40 minutes. The spreader bars should be lowered all the way down with the full weight of the bar on the dock. All baloney cables should be tied off, so they won't get blown from the basket.

YARD CRANES

The 36 (5 over 1) yard cranes should be put into the tie downs in T-3 and balance should have their wheels turned 90 degrees in the pad. We have 40 tie downs for yard cranes on the terminal. The 12 (4 over 1) yard cranes should have their wheels turned 90 degrees in the pad. The spreader bars for both types of yard crane should be locked into a loaded container on the ground with the full weight of the bar on the container. Each crane should be topped off with fuel. (Attempt to have four highs used over 5 high as 5 high are priority to be tied down in high winds according to manufacturer.)

RTG Tie down locations:

TIE DOWNS AT BAYPORT		
Location	# of Tie Downs/ Manholes	# of RTGs that can be Tied Down
2B	16	4
2C	16	4
2D	16	4
3B	20	5
3C	20	5
3D	20	5
6K	12	3
6L	12	3
6M	12	3
Total	144	40

9 tie downs in the CY6S area

TOP LOADERS AND PENCILS

The Operations Manager shall decide a safe area for storage of this equipment during a hurricane. The spreader bar should be locked into a loaded container on the ground with the full weight of the bar on the container. Each piece of equipment should be topped off with fuel and the brake set.

TRUCKS AND BUCKETS

The Operations Manager shall decide a safe area for the storage of this equipment. Trucks should be topped off with fuel and the brakes set.

OTHER GEAR

Any loose equipment or loose gear should be moved indoors or secured to remain outside. All drums of oil, hydraulic fluid, solvents, or other liquid stored in drums should be moved to a safe location to prevent leakage or spillage.

* = Updated 10/22/20