

## **TROPICAL STORM AND HURRICANE PREPAREDNESS PROCEDURES PORT HOUSTON - 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 if 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](http://www.weather.com) (The Weather Channel), and [www.khou.com](http://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 terminal 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) All crane tie down areas should be inspected and be made ready for use.
- 6) Any loose gear not in use on the terminal should be moved inside or secured.
- 7) Empty yards on the terminal will be told to check to make sure all container doors are closed and secured.
- 8) 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.
- 9) A safe location should be designated as the storm center.
- 10) Each department will inspect their areas of responsibility for compliance.
- 11) Return any equipment rented by PHA that is not being used. \*
- 12) Outside maintenance should pump down all lift stations. \*
- 13) IT
  - Ensure all critical systems and data are backed up securely.
  - Verify the integrity of backups and ensure they are stored in off-site locations or cloud storage.
  - Make sure staff contacts are up to date.
  - Inspect hardware and infrastructure for vulnerabilities or weaknesses that may be magnified by the storm.
  - Secure loose equipment and ensure critical hardware is elevated or protected from potential flooding.
  - Verify backup power systems (UPS and generators (plus adequate fuel are in place))
  - Ensure shutdown protocols and emergency procedures are reviewed and updated accordingly.
  - Contact critical vendors and service providers to confirm their storm readiness and establish backup plans if their services are disrupted.
- 14) All employees confirmed of their responsibilities when the storm strikes and when the storm passes.

***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. Begin tying down STS/RTG cranes that are not in use.
- 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) YPC begin to down stack all containers into safe positions. Ensure there are no chimney stacks.
- 8) Each department will inspect their areas of responsibility for compliance.
- 9) IT
  - Confirm team is aware of evacuation routes and shelter locations.
  - Confirm team has secured homes and families (including pets, patio furniture secured, and all hanging plants secured.)
  - Secure data centers and server rooms against potential flooding or water damage.
  - Put in place additional cooling measures if necessary to prevent overheating during a power outage.
  - Validate VPN connections as tested and operational.

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

### **STORM IS 24 HOURS FROM HOUSTON (YANKEE CONDITION)**

- 1) Continue coordinated team communication.
- 2) 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.

- 3) Fill extra drums with fuel, lubricants, water, hydraulic fluids, etc. and stow in a safe location for use after the storm.
- 4) Service all vehicles with fuel, etc.
- 5) Board up or tape all windows.
- 6) Each department will inspect their areas of responsibility for compliance.
- 7) IT
  1. Conduct final checks on all critical systems and equipment.
  2. Shutdown non-essential systems to reduce the risk of damage during storm.
  3. Activate emergency response group and ensure all team members know their responsibilities.
  4. Establish contact with the Emergency management team and command center.
  5. Notify stakeholders of any potential interruptions in service and update when contingency plans are put in place.
  6. Set messages on all social media and webpages associated with PHA to report any storm related updates.
  7. Secure any loose objects around IT area that could become flying projectiles in high winds.
  8. Ensure there is adequate supplies for any of the team that must stay on-site during the storm.

***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) IT
  - Conduct a final check of all equipment and systems to ensure they are functioning properly.

- Verify that backup generators, UPS units, and other critical infrastructure are operational and ready to be activated if needed.
- Double-check that all critical data has been backed up and securely stored off-site or in the cloud.
- Gather emergency supplies such as flashlights, batteries, first aid kits, and non-perishable food items.
- Distribute emergency supply kits to designated personnel and ensure they are easily accessible in case of evacuation or prolonged power outages.
- Provide updates on the status of the storm and any changes to the company's emergency response plan.
- Move equipment and valuable assets to higher ground or secure locations within the building to minimize the risk of water damage.
- Establish backup communication channels in case primary methods of communication are disrupted during the storm.
- Provide employees with alternative means of contacting the IT department or emergency response team, such as phone numbers or email addresses.
- Review and finalize evacuation plan for employees who may need to evacuate the area due to the storm.
- Activate the emergency response team and ensure all members are briefed on their roles and responsibilities during the storm.

7) 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.

6) IT

- Check on status and safety of emergency response team as well as personnel not on—site.
- Assess all IT infrastructure including data center, equipment closets as well as user equipment. Identify damage (photograph and document for potential warranty exchange or insurance claims).
- Verify power has been restored to the building as well as all IT infrastructure areas.
- Restore systems based on criticality determined during the initial shutdown.
- Validate backup power has been stabilized and that IT equipment is back on “shore power”.
- Initiate data recovery and restoral procedures. Any lost or corrupted data needs to be restored from data backup.
- Verify data integrity and perform sanity testing to ensure systems are fully operational.
- Repair or replace damaged hardware, network equipment, and other infrastructure components.
- Send out announcements via all available avenues to stakeholders regarding the status of the service systems. (Provide timelines if necessary.)
- Provide assistance to teammates affected by the storm (EAP for PHA employees).
- Check for remote work capability of staff to participate in the recovery period.
- Conduct post-storm review to update or make changes to the preparedness plan.

## **SECURING EQUIPMENT AND MACHINERY**

### **WHARF CRANES**

Cranes 204,205,206,207,208,209,210, 211, 212, 213, 214, 215, 216, 217, 218 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**

All cranes need to have their wheels turned to 90 degrees and have spreader bars locked onto a loaded container in the truck lane. All cranes need to be topped off with fuel. We have 61(5 high

cranes) and 11(4 high cranes). The 5 high cranes take priority to being tied down, due to the manufacturer's recommendation. Please see below tie down locations. We can tie 69 cranes down in the below designated tie down locations.

**RTG Tie down locations:**

TIE DOWNS AT BAYPORT		
Location	# of Tie Downs/ Manholes	# of RTGs that can be Tied Down
1D	16	4
1E	16	4
1F	16	4
1K	16	4
1L	16	4
1M	16	4
2B	16	4
2C	16	4
2D	16	4
2J	16	4
2K	16	4
2L	16	4
3B	20	5
3C	20	5
3D	20	5
6K	12	3
6L	12	3
6M	12	3
7D	12	3
7E	16	4
7F	12	3
<b>TOTALS</b>	<b>328</b>	<b>82</b>

## **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.