Hurricane Preparation Checklist for Gulf Coast Facilities

Provided by ClearPath Environmental Consulting
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Contact: info@clearpathenv.com – Partner with ClearPath for expert guidance on hurricane preparedness, compliance, auditing, and ISO management systems. We help chemical plants, refineries, and LNG facilities mitigate risks and ensure regulatory adherence during storm season.

Introduction

This checklist provides detailed guidance for environmental, health, and safety (EHS) preparation in Gulf Coast facilities, such as chemical plants, refineries, and LNG operations. It addresses safety concerns (e.g., worker protection, generator safety, ride-out crews) and environmental concerns (e.g., hazardous material management, spill prevention, adequate resources for emergency response). Based on the Plan-Do-Check-Act cycle, it helps minimize storm impacts like flooding, spills, and injuries.

Disclaimer: This checklist is not meant to be all inclusive and is intended as a starting point for organizations to develop their own site-specific plans. It does not replace professional advice, regulatory requirements, or tailored assessments. Consult with experts like ClearPath for customized support.

Hurricane Preparation

Hurricanes pose unique risks to Gulf Coast facilities, including high winds, flooding, and power outages that can lead to hazardous material releases, spills, or worker injuries. Facilities must integrate EHS plans with federal (EPA, OSHA), state, and local guidelines. Pre-storm actions like securing hazmat and pre-deploying resources are critical. Ride-out crews, if used, require specific safety protocols. This checklist is divided into phases for preparation, response, and recovery, with emphasis on pre- and post-storm feasibility.

Preparation Phase (Pre-Storm: 72+ Hours Out)

Facility Assessment and Planning

- Has the facility reviewed and updated its hurricane response plan, incorporating EHS risks such as flooding, high winds, and potential power loss?

- Is there a designated EHS team lead responsible for coordinating with local emergency management and monitoring storm forecasts via NOAA or state agencies?

- Have all critical infrastructure elements (e.g., tanks, pipelines, electrical systems) been inspected for vulnerabilities?

- Have backup communication systems (e.g., satellite phones, radios) been tested and assigned?

- Is there a detailed inventory of all hazardous materials (hazmat) on-site, cross-referenced with annual SARA Tier II reports?

- Have spill prevention measures (e.g., secondary containment dikes, barriers) been inspected, reinforced, and pre-stocked with absorbents, booms, and pumps?

- Have stormwater drains and outfalls been protected with plugs, berms, or diversion systems to prevent contaminated runoff?

- Are waste storage areas (e.g., drums, tanks) anchored, covered, and elevated above potential flood levels?

- Has the facility pre-positioned emergency resources (e.g., extra spill kits, sandbags, portable pumps, personal protective equipment - PPE) in accessible, protected locations?

- Have contracts with external response teams (e.g., spill cleanup contractors) been reviewed and confirmed for availability?

Worker Safety and Ride-Out Crews

- If using ride-out crews, have they been assigned to essential personnel, with volunteers as backups if staffing allows?

- Have ride-out crews received specific training on storm monitoring, personal safety, PPE usage, and evacuation triggers (e.g., wind speeds exceeding 75 mph)?

- Are ride-out crews provided with adequate supplies (e.g., food, water, medical kits, sleeping arrangements for 72+ hours post-storm)?

- Has a health and wellness plan been established for ride-out crews, including fatigue management, and rotation schedules?

- Have evacuation routes, safe shelters, and transportation been identified and tested, with drills conducted for all personnel?

- Are non-essential personnel mandated to evacuate early, with clear timelines tied to storm categories?

- Have emergency medical resources (e.g., first-aid stations, AEDs) been stocked and accessible?

Generator and Equipment Safety

- Are backup generators fully fueled, tested under load, and positioned above flood levels with secure anchoring?

- Have fuel storage tanks for generators been inspected for leaks, anchored, and equipped with spill containment?

- Is there a maintenance log for generators, including checks for carbon monoxide detectors, exhaust ventilation, and electrical grounding?

- Are extension cords, wiring, and electrical systems rated for wet conditions and inspected for damage?

- Have pre-storm shutdown procedures been planned for non-essential equipment to minimize fire or explosion risks?

- Are portable generators equipped with ground fault circuit interrupters (GFCIs) and stored in ventilated areas?

Environmental Protection

- Have all potential spill sources (e.g., chemical tanks, pipelines) been isolated, drained where possible, or double-contained?

- Are secondary containment systems (e.g., berms, bunds) intact, tested for capacity, and free of debris?

- Have hazardous waste areas been secured against wind dispersal (e.g., covered, tied down)?

- Is there a plan for pre-storm wastewater management to prevent overflows?

- Have environmental monitoring devices (e.g., level sensors in tanks) been checked and backed up with manual alternatives?

Response Phase (During Storm)

- Are ride-out crews sheltered in designated safe structures, with no outdoor activities during high winds (e.g., 75+ mph)?

- Is real-time monitoring limited to pre-installed sensors (e.g., tank levels) with no physical response until winds subside?

- Have all non-essential systems been shut down to prevent uncontrolled releases?

- Is communication maintained with external authorities (e.g., local EOCs) for updates, without expecting on-site response during peak storm?

- Are generators operated only in ventilated areas, with CO monitoring, and no refueling during high winds?

Recovery Phase (Post-Storm: Winds Below 40 mph)

Inspection and Restart

- Has the facility been thoroughly inspected for structural damage, spills, leaks, or hazmat releases before any restart?

- Are spill response teams deployed immediately for containment and cleanup (e.g., booms for oil, absorbents for chemicals)?

- Have generators been shut down safely, inspected for fuel spills, and drained if flooded?

- Is there a plan for debris removal and waste segregation to avoid environmental contamination?

- Have ride-out crews been debriefed, provided medical check-ups, and relieved by fresh teams?

Reporting and Improvement

- Have any incidents (e.g., spills, releases) been reported to regulators (EPA, state agencies) within required timelines?

- Is there a post-storm review process to update the plan, including lessons learned from the event?

- Have emergency resources (e.g., spill kits, PPE) been replenished and restocked?

- Has the facility conducted a full EHS audit to assess damage and compliance post-recovery?

Next Steps

Use this detailed checklist to safeguard your facility. For expert EHS audits, hurricane response planning, or ISO integration, contact ClearPath Environmental Consulting, Inc. today. We specialize in Gulf Coast risks, helping with spill prevention and safety.

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