



First Wind

Fire Safety

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1 Approval Block:

Authorizing Officer	Name: Claude Cote Title: VP- Safety and Compliance 02/24/2012 <i>Claude Cote</i> _____ Signature	Date
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Changes to this procedure must be approved by the authorized officer and delegated manager.

2 Disclaimer

This document is First Wind proprietary and confidential. It may not be distributed outside First Wind without the written consent of the authorized officer named in section 1 of this document. Only approved plans will be used or circulated to execute directives. Plans in Draft mode may be used under the direction of the Authorized officer named in section 1.

3 Revision History

Revision #	Revision Date	Created / Revised By	Approved By	Section Affected
1.0	02/23/2012	R. Fonbuena	Claude Cote	All, new format

4 Regulatory Requirement

Requirement	Description	-Cross Reference
OSHA 1910.39	Fire Prevention Plans	1910.39 (b)

5 Objective

The Objective of this Plan is to help control or reduce the possibility of fire and to specify the type of equipment to use in the event of fire in a First Wind location. This plan addresses the following issues:

- 5.1 Major anticipated fire hazards.
- 5.2 Potential ignition sources for fires and their control procedures.
- 5.3 The type of fire protection equipment or systems that can control a fire.

This plan requires that all affected personnel be informed of the plan's purpose, preferred means of reporting fires and other emergencies, types of evacuations to be used in various emergency situations, and the fire detection and alarm system. The plan is tied to the Tower Rescue Procedure where procedures are described for the emergency escape from a WTG.

It is important to note that fire extinguishers are designed for emergency escape purposes only. You should never attempt to extinguish a fire if it is beyond the incipient stage, if you do not know what is burning or fueling the fire, or if you can safely evacuate from the fire without the use of a fire extinguisher.

6 Applicability/ Responsibility

This applies to in locations. The responsibilities of this plan are:

6.1 Safety and Permit Compliance Department or Designee

- 6.1.1 Annually review this procedure and update as necessary.
- 6.1.2 Provide general Fire Protection guidance.
- 6.1.3 Review incident patterns relating to this plan.

6.2 Supervisors/Managers

- 6.2.1 Ensure the implementation of this Fire Protection program.
- 6.2.2 Use these procedure guidelines to minimize fire hazards when assigning work activities to site employees.
- 6.2.3 Verify employees are complying with this procedure.

6.3 Employees

- 6.3.1 Comply with all parts of this plan.

7 Definitions

Term	Definition
EHS	Environmental, Health and Safety.
Location	First Wind owned, operated or otherwise staffed location or facility.
Location Head	The person designated by First Wind to have control of or be the highest ranked person at a First Wind Location.
Location EHS Coordinator	The person designated at each location that is responsible to ensure that the EHS Program is properly administered at the location.

8 Plan

8.1 2. Workplace Fire Hazards

- 8.1.1 The first step towards an effective FSP is to assure that hazardous accumulations of combustible waste materials are controlled so that a fast developing fire, rapid spread of toxic smoke, or an explosion will not occur.
- 8.1.2 Fire prevention measures must be developed for all fire hazards found. Once employees are made aware of the fire hazards in their work areas, they must be trained in the fire prevention measures developed and use them in the course of their work. For example, oil soaked rags must be treated differently than general paper trash. In addition, large accumulations of waste paper or corrugated boxes, etc., can pose a significant fire hazard. Accumulations of materials that can cause large fires or generate dense smoke that are easily ignited or may start from spontaneous combustion are the types of materials with which this fire safety plan is concerned. Matches, welder's sparks, cigarettes and similar low-level energy ignition sources may easily ignite such combustible materials.
- 8.1.3 All WTG workers should be monitor housekeeping to reduce and control fuel source hazards such as accumulation of flammable and combustible materials like trash, oily rags, or any other fire hazard.

8.2 Emergency Evacuation in the Event of a Fire

- 8.2.1 Follow posted evacuation routes for your location and proceed to the emergency meeting location. Wait for instructions from the Location Head once everyone is at the emergency meeting location and a head count is performed.
- 8.2.2 The following matrix explains the recommended evacuation procedure in the event of a WTG fire.

Fire Location	Evacuation Method
Fire at the base of the tower with workers above	Evacuate outside the tower to ground level. Immediately evacuate to a safe distance from the WTG
Fire in the Nacelle with workers below	Immediately descend the ladder to ground level and evacuate to a safe distance from the WTG
Fire in the Nacelle with workers above or exterior	Evacuate outside the tower to ground level to a safe distance from the WTG

8.3 Fire Protection Equipment

- 8.3.1 Most office locations are equipped with automatic water sprinklers. These systems should be maintained on a regular basis to ensure they will operate in the event of a fire.
- 8.3.2 Some electronic equipment rooms are protected by non-water based automatic extinguishers. These may include FM200, CO₂ or other chemicals. It is important for personnel who regularly access these locations to be familiar with the MSDS of the chemicals in these extinguishers so they know what to do in the event they are released.
- 8.3.3 The Fire Protection Equipment devices preferred in the tower and Nacelle of the WTG are CO₂ (Carbon Dioxide) or KNO₃ (potassium nitrate) fire extinguishers. These extinguishers are designed for use on Class A (combustible solids) , Class B (liquid) and Class C (electrical) fires. They have been selected for this application because they are most effective for the types of fires anticipated in a WTG. Dry chemical ABC fire extinguishers, although effective for this application, may present additional safety hazards (eye and respiratory irritants) when used in a confined area.
- 8.3.4 Fire Extinguisher Use
 - 8.3.4.1 Should it be necessary to use a fire extinguisher for emergency escape purposes:
 - 8.3.4.2 Pull the Pin at the top of the extinguisher. The pin releases a locking mechanism and will allow you to discharge the extinguisher.
 - 8.3.4.3 Aim at the base of the fire, not the flames. This is important - in order to put out the fire, you must extinguish the fuel.
 - 8.3.4.4 Squeeze the lever slowly. This will release the extinguishing agent in the extinguisher. If the handle is released, the discharge will stop.
 - 8.3.4.5 Sweep from side to side. Using a sweeping motion, move the fire extinguisher back and forth until the fire is completely out.
 - 8.3.4.6 Operate the extinguisher from a safe distance, several feet away, and then move towards the fire once it starts to diminish. Be sure to read the instructions on your fire extinguisher - different fire extinguishers recommend operating them from different distances.
Remember: Aim at the base of the fire, not at the flames
- 8.3.5 Maintenance of Fire Protection Equipment
 - 8.3.5.1 Automatic fire extinguisher systems should be inspected and maintained as per the system's manual.
 - 8.3.5.2 Fire extinguishers must be visually inspected on a monthly basis to ensure they will function properly if needed. Fire extinguishers should undergo a complete inspection annually by a qualified technician. Fire extinguishers should be mounted above a floor and clearly marked. Access to a fire extinguisher should never be blocked.

8.4 Training

- 8.4.1 In the event of a fire, personnel should know what type of evacuation is safest. This is covered in the location specific EAP.
- 8.4.2 Fire Prevention Training, conducted on initial assignment, should include:
 - 8.4.2.1 What to do if worker discovers a fire
 - 8.4.2.1.1 Types of fires

- 8.4.2.1.2 Types of fire prevention equipment
- 8.4.2.1.3 Location of fire prevention equipment
- 8.4.2.1.4 How to use fire prevention equipment
- 8.4.2.1.5 Limitations of fire prevention equipment
- 8.4.2.1.6 Proper care and maintenance of assigned fire prevention equipment

8.4.3 Workers must demonstrate an understanding of the training and the ability to use the equipment properly before they are allowed to perform work requiring the use of the equipment.

8.5 Auditing

8.5.1 First Wind shall review this procedure on an annual basis to ensure the continued effectiveness of the Fire Safety Plan.

8.6 References

- 8.6.1 SA-030-320-002 Emergency Response Equipment Standard
- 8.6.2 SA-010-320-018 Tower Rescue and Emergency Evacuation Plan

9 Appendix