

**Site Specific Plan**

**For**

**Fire Protection and Prevention**

**Mohave Wind Project**

**BP Wind Energy**

**1926.24**

**Fire Protection & Prevention Plan  
Table of Contents**

- I. Introduction
- II. Management Objectives
- III. Risk Identification and Assessment
- IV. Assignment of Responsibility
- V. Risk Control
- VI. Types of Risk
  - A. Electrical Hazards
  - B. Portable Heaters
  - C. Office Fire Hazards
  - D. Cutting, Welding, and Open Flame Work
  - E. Flammable and Combustible Materials
  - F. Wild, Grass and Croplands
  - G. Smoking
- VII. Values to Be Protected
- VIII. Protection Capability
- IX. Implementation of Plan
- X. Training
- XI. Program Review

**Fire Protection & Prevention Plan  
For the Mohave Wind Farm Construction Project**

**I. INTRODUCTION**

BP Wind Energy is proposing to develop, construct, and operate the Mohave Wind Project on BLM and Reclamation lands in Mohave County, Arizona. These activities will occur in remote and sometimes isolated areas. Consequently a probability that wild and agricultural land fires may be encountered is present. Additionally, fire hazards normally associated with the construction industry can be anticipated. This Fire Prevention Plan serves to reduce the risk of fires at the Mohave Wind Project.

The 2006 International Building Code requirements shall be followed on this project. Section 14; Fire Safety During Construction and Demolition, is attached for reference.

**II. MANGEMENT OBJECTIVES**

The objective of this Fire Protection and Prevention Plan is to eliminate the causes of fire, prevent loss of life and property by fire, and to comply with the Occupational Safety and Health Administration's (OSHA) standard on fire prevention, 29 CFR 1926.24. Additionally, it provides employees and the public with information and guidelines that will assist them in recognizing, reporting, and controlling fire hazards.

**III. RISKS IDENTIFICATION AND ASSESSMENT**

The identification and assessment of fire hazards is outlined in Section VII of this plan. BP Wind Energy's separate Emergency Response Plan spells out the procedures for responding to fires. This Fire Prevention Plan serves to reduce the risk of fires at the Mohave Wind Project.

- A. Identifies materials that are potential fire hazards and their proper handling and storage procedures;
- B. Distinguishes potential ignition sources and the proper control procedures of those materials;
- C. Describes fire protection equipment and/or systems used to control fire hazards;
- D. Identifies persons responsible for maintaining the equipment and systems installed to prevent or control ignition of fires;
- E. Identifies persons responsible for the control and accumulation of flammable or combustible material;
- F. Describes good housekeeping procedures necessary to insure the control of accumulated flammable and combustible waste material and residues to avoid a fire emergency; and
- G. Provides training to employees with regard to fire hazards to which they may be exposed.

**IV. ASSIGNMENT OF RESPONSIBILITY**

Fire safety is everyone's responsibility. All employees should know how to prevent and respond to fires, and are responsible for adhering to company policy regarding fire emergencies.

- A. Management

Management determines BP Wind Energy's fire prevention and protection policies. Management will provide adequate controls to provide a safe workplace, and will provide adequate resources and training to its employees to encourage fire prevention and the safest possible response in the event of a fire emergency.

#### B. Plan Administrator

The Site HSSE Advisor shall manage the Fire Prevention Plan for BP Wind Energy, and shall maintain all records pertaining to the plan. The Plan Administrator shall also:

- Develop and administer the BP Wind Energy's fire prevention training program.
- Ensure that fire control equipment and systems are properly maintained.
- Control fuel source hazards.
- Conduct fire risk surveys (see Appendix A) and make recommendations.

#### C. Supervisors

Supervisors are responsible for ensuring that employees receive appropriate fire safety training, and for notifying Site Safety Personnel when changes in operation increase the risk of fire. Supervisors are also responsible for enforcing BP Wind Energy's fire prevention and protection policies.

#### D. Employees

All employees shall:

1. Complete all required training before working without supervision.
2. Conduct operations safely to limit the risk of fire.
3. Report potential fire hazards to their supervisors.
4. Follow fire emergency procedures.

### V. RISK CONTROL

#### A. Good Housekeeping

To limit the risk of fires, employees shall take the following precautions:

1. Minimize the storage of combustible materials.
2. Make sure that all exit or evacuation routes are kept free of obstructions.
3. Dispose of combustible waste in accordance with all applicable laws and regulations.
4. Use and store flammable materials in areas away from ignition sources.
5. Keep incompatible (i.e., chemically reactive) substances away from each other.
6. Perform "hot work" (i.e., welding or working with an open flame or other ignition sources) in controlled areas or by the issuance of a Hot Work Permit establishing necessary controls for the particular task at hand. Hot work areas will be wetted down as necessary before hot work is performed.
7. Any Fire Restrictions issued by local authorities will be followed at all times.
8. Keep equipment in good working order (i.e., inspect electrical wiring and appliances regularly and keep motors and tools free of dust and grease.
9. Ensure that heating units are safeguarded.

10. Report all fuel or petroleum leaks immediately. All leaks will be repaired immediately upon notification.
11. Repair and clean up flammable liquid leaks immediately.
12. Keep work areas free of combustible materials.
13. Do not rely on extension cords if wiring improvements are needed, and take care not to overload circuits with multiple pieces of equipment.
14. Turn off electrical equipment when not in use.
15. Turn off idling vehicles as much as appropriate.

## B. Maintenance

All equipment is to be maintained according to manufacturers' specifications. Only properly trained individuals shall perform maintenance work.

The following equipment is subject to the maintenance, inspection, and testing procedures:

1. Portable fire extinguishers;
2. Fire alarm systems; and
3. Water trucks and associated equipment;
4. Emergency backup systems and the equipment they support.

## VI TYPES OF RISK

The following sections address the major workplace fire risks at BP Wind Energy's jobsites and the procedures for controlling those risks.

### A. Electrical Fire Hazards

Electrical system failures and the misuse of electrical equipment are leading causes of workplace fires. Fires can result from loose ground connections, wiring with frayed insulation, or overloaded fuses, circuits, motors, or outlets.

To prevent electrical fires, employees shall:

1. Make sure that worn wires are replaced.
2. Use only appropriately rated fuses.
3. Never use extension cords as substitutes for wiring improvements.
4. Use only approved, and inspected, extension cords [i.e., those with the Underwriters Laboratory (UL) or Factory Mutual (FM) label].
5. Check cords and equipment in hazardous locations where the risk of fire is especially high.
6. Check electrical equipment to ensure it is properly grounded or double insulated.

### B. Portable Heaters

All portable heaters shall be approved by the BPWE HSSE Advisor. Portable electric heaters shall have tip-over protection that automatically shuts off the unit when it is tipped over. There shall be adequate clearance between the heater and combustible furnishings or other materials at all times.

### C. Office Fire Hazards

Fire risks are not limited to BPWE jobsites. Fires in offices have become more likely because of the increased use of electrical equipment, such as computers and fax machines. To prevent office fires, employees shall:

1. Avoid overloading circuits with office equipment.
2. Turn off nonessential electrical equipment at the end of each workday.
3. Keep storage areas clear of rubbish.
4. Ensure that extension cords are not placed under carpets.
5. Ensure that trash and paper set aside for recycling is not allowed to accumulate.

### D. Cutting, Welding, and Open Flame Work

Supervisors will ensure the following:

1. A hot work permit is obtained when necessary.
2. A jobsite evaluation for fire hazards is completed prior to work beginning.
3. Cutting and welding are done by authorized personnel in designated cutting and welding areas whenever possible.
4. Torches, regulators, pressure-reducing valves, and manifolds are UL listed or FM approved.
5. Oxygen-fuel gas systems are equipped with listed and/or approved backflow valves and pressure-relief devices.
6. Cutters, welders, and helpers are wearing eye protection and protective clothing as appropriate.
7. Cutting or welding is prohibited in areas where explosive atmospheres of gases, vapors, or dusts could develop from residues.
8. Small tanks, piping, or containers that cannot be entered are cleaned, purged, and tested before cutting or welding on them begins.
9. A competent Fire watch has been established in accordance with Hot Work Permit requirements.

### E. Flammable and Combustible Materials

The site HSSE Advisors shall regularly evaluate the presence of combustible materials on site (see Appendix D).

Certain types of substances can ignite at relatively low temperatures or pose a risk of explosion if ignited. Such substances obviously require special care and handling.

1. Class A materials.

These include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel and are found in non-specialized areas such as offices.

To handle Class A materials safely:

- a. Dispose of waste daily.
- b. Keep trash in metal-lined receptacles with tight-fitting covers (metal wastebaskets that are emptied every day do not need to be covered).
- c. Keep work areas clean and free of fuel paths that could allow a fire to spread.
- d. Keep combustibles away from accidental ignition sources, such as hot plates, soldering irons, or other heat- or spark-producing devices.
- e. Store paper stock in metal cabinets.
- f. Store rags in metal bins with self-closing lids.
- g. Do not order excessive amounts of combustibles.
- h. Make frequent inspections to anticipate fires before they start.

Water, multi-purpose dry chemical (ABC), and CO<sub>2</sub>, are approved fire extinguishing agents for Class A materials.

2. Class B materials. These include flammable and combustible liquids (oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols.

To handle flammable liquids safely:

- a. Use only pumps that are approved/recognized by an authority (i.e. NFPA, UL, etc.) to dispense liquids from tanks, drums, barrels, or similar containers (or use approved self-closing valves or faucets).
- b. Do not dispense Class B flammable liquids into containers unless the nozzle and container are electrically interconnected by contact or by a bonding wire. Either the tank or container must be grounded.
- c. Store, handle, and use Class B materials only in approved locations where vapors are prevented from reaching ignition sources such as heating or electric equipment, open flames, or mechanical or electric sparks.
- d. Do not use a flammable liquid as a cleaning agent inside a building or tool van (the only exception is in a closed machine approved for cleaning with flammable liquids).
- e. Do not use, handle, or store Class B materials near areas normally used as exits.
- f. Do not weld, cut, grind, or use unsafe electrical appliances or equipment near Class B materials.
- g. Do not generate heat, allow an open flame, or smoke near Class B materials.
- h. Know the location of and how to use the nearest portable fire extinguisher rated for Class B fire.
- i. Water should not be used to extinguish Class B fires caused by flammable liquids. Water can cause the burning liquid to spread, making the fire worse. To extinguish a fire caused by flammable liquids, exclude the air around the burning liquid.

The following fire-extinguishing agents are approved for Class B materials: carbon dioxide, multi-purpose dry chemical (ABC).

#### F. Timber, Grass and Croplands

The jobsite may timber, crop and grassland areas. Strong efforts on the part of everyone must be taken to prevent fire within these areas. All supervisors and employees are to ensure that:

1. All company pickup trucks shall be equipped with a first-aid kit, and fire extinguisher.
2. All pieces of equipment with an internal combustion engine are equipped with a fire extinguisher;
3. All vehicles equipped with catalytic converters are not parked or operated in crop or grasslands unless on a designated roadway.
4. When it is necessary to cross with or operate equipment on crop or grasslands the travel route or place of operation shall be wetted down with a water truck, or otherwise rendered inert. A Hot Work Permit shall be obtained.
5. No hot work is to be performed upon or immediately adjacent to crop or grasslands unless a Hot Work Permit has been issued and all precautions have been taken to insure the work zone has been rendered inert.

#### G. Smoking

Smoking is prohibited on all BPWE jobsites unless within an enclosed vehicle, or designated smoking area. All designated smoking areas shall have a cigarette butt receptacle approved and in accordance with Section 307 of the 2006 International Building Code..

### **VII VALUES TO BE PROTECTED**

In the event of a wildfire, life, safety, environmental, project production and infrastructure values would be affected. Additionally, the production use and economic value of crop and pastureland would be severely impacted. Recreational use of these and adjacent lands would be also affected. The loss of vegetation may result in unnecessary storm water runoff, silting of waterways and other related environmental concerns.

### **VIII PROTECTION CAPABILITY**

Protection capability and response times are limited to the following factors.

1. The project will have water trucks equipped with pumps and hoses. However, project owned/controlled water trucks will operate in a “support only” capacity (i.e. haul/resupply water) to professional firefighters.
2. Additionally, each company pickup truck is equipped with first-aid kits and fire extinguishers.
3. Project personnel are not trained firefighters and are not to fight fires beyond the incipient or initial stages, or as required to facilitate personal safety/egress. Personnel have been trained to summon professional help and evacuate to designated zones of safety.
4. Personnel have not been equipped with or trained in the use of professional firefighting equipment.

## **IX IMPLEMENTATION OF PLAN**

In the event of a fire incident employees will follow the protocols set forth in the emergency action plan and site specific safety handbook (i.e. notify site safety/mgmt. via phone, or radio, immediately). Upon receiving notification from the field, the 911 Emergency Response Plan will be activated and professional assistance summoned.

## **X TRAINING**

The BOP Contractor site HSSE personnel shall present basic fire prevention training to all employees, and subcontractors during the site specific orientation and shall maintain documentation of the training, which includes:

- i. Review of 29 CFR 1926.24, including how it can be accessed;
- ii. This Fire Prevention Plan, including how it can be accessed;
- iii. Good housekeeping practices;
- iv. Proper response and notification in the event of a fire;
- v. Instruction on the use of portable fire extinguishers (as determined by company policy in the Emergency Action Plan); and recognition of potential fire hazards.

The BOP Contractor shall provide training to all project employees about the fire hazards associated with the specific materials and processes to which they are exposed, and will maintain documentation of the training. Employees will receive this training:

- Upon initial assignment,
- Annually, and
- When changes in work processes necessitate additional training.

## **XI PROGRAM REVIEW**

The BPWE Site HSSE Advisor shall review this Fire Prevention Plan at least annually for necessary changes.