

# **ENGINEERING**

# **FIRE RISK ASSESSMENT**

**(FORM 24309)**

**REV. 08/10/16**



**BUILDING AMERICA®**

# Fire Risk Assessment

Type of Risk	Level of Risk					Score
	Low Risk	Score	Moderate Risk	Score	High Risk	
Elevation	< 2,000 ft	1	2,000 - 4,000 ft	2	> 4,000 ft	3
Slope	Level or On a Fill	3	Upslope < 45°	6	Upslope > 45°	9
Slope Facing	North or No Slope	1	East	2	South/West	3
Emergency Access	Road/ROW Access	1	Off-Road Access	2	Only Accessible by Rail	3
Fuel Type	Sparse/green vegetation: new cuttings/slash/brush and hardwood species, if summer/green/fully leafed; marsh grasses; green wetland/meadow/swamp.	3	Moderate vegetation: dried cuttings/slash/brush; brush mixed with dead fine fuels or leaf drop; hardwoods or brush without leaves (except when leaves have just fallen, or in early spring thaw) or if dried out; new and growing perennial grasses; green wetland/meadow/marsh or swamp vegetation after drought.	6	Dry or dead vegetation: very dry slash; dead grass that is high and has brush growing in it; dry hardwoods and leaves; any matured grasses or low-growing plants, weeds or small vegetation after a killing frost.	9
Adjacent Property	Farmland and sparsely vegetated & sparsely populated areas	5	Residential/commercial areas among combustible vegetation or forests not included in Level 1 areas	10	Level 1 Areas or other high risk areas such as a heavily-traveled roadway less than 1/4 mile downwind	15
Fire Danger Class	Low	5	Moderate	10	High-Very High-Extreme	15
Time of Day	8 PM to 10 AM	1	10 AM to 3 PM	2	3 PM to 8 PM	3
Distance to Vegetation	> 100 ft	5	50 - 100 ft	10	< 50 ft	15
Wind Speed	0 - 10 MPH	3	11 MPH - 15 MPH	6	> 15 MPH	9
Temperature	< 60° F	1	61° F - 70° F	2	> 70° F	3
Humidity	> 50%	1	25% - 50%	2	< 25%	3
Precipitation **	Precipitation or Heavy Fog	3	Moisture Within Last 3 Days	6	No Moisture Within Last 3 Days	9
<b>TOTAL</b>	<b>33-54</b>		<b>55-69</b>		<b>70-99</b>	

**\*\*A Fire Risk Assessment must be completed prior to conducting any hot work unless one of the following conditions exist.**

**When any of these conditions exist, the fire risk is low (green). Check the box that applies and complete the remainder of the form below.**

Ground is covered by snow

Ground is covered by a heavy frost

Currently raining, snowing or sleeting

Ground is saturated as evidenced by standing water with no dry vegetation such as cattails or reeds that pose a fire risk

Wind Speed \_\_\_\_\_

Temperature \_\_\_\_\_

Humidity \_\_\_\_\_

Water \_\_\_\_\_

Fire Risk Assessment Form completed by: \_\_\_\_\_ Verified by: \_\_\_\_\_

Subdivision: \_\_\_\_\_ MP: \_\_\_\_\_ Gang(s): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Keep all completed forms in this book. When the book is full, give it to your manager.**

Type of Work	Preventive Actions Based on Level of Risk		
	33-54 or No Vegetation Within 100'	55-69	70-99
Production Rail & Switch Grinding	A+F	A+F+H	X - except as noted in 5.1.2 and 5.2.2
Flash-Butt Welding	A+B	A+B+C+E	(A+B+C+E+F+I) or X
Open-Flame Rail Heating	A	A	(A+F+I) or X
Thermite Welding (including cutting and grinding tasks)	A+B	A+B+(C or D)+E	(A+B+D+E+F+I) or X
Arc Welding, Cutting, Grinding or Using a Torch	A+B	A+B+(C or D)+E	(A+B+(D* or C)+E+F+I) or X
Cadweld Bonding	A	A	(A+B+I) or X

- A** Normal operations
  - B** Use spark shields to protect all hot work
  - C** Saturate with water or clear vegetation within 35 feet of the hot work
  - D** Use a welding tent to protect hot work
  - E** Post fire watcher(s) to watch for signs of smoke or fire during hot work
  - F** Leave one employee at the job site for 1 hr after hot work (2 hrs for timber structures).  
Compliance with sections 5.1.1 (F) and 5.2.1 (F) will satisfy this requirement for production rail and switch grinding operations.
  - H** Hy-rail or off-track water truck will follow grinding operations
  - I** Hot work authorized by director (or MTP, MSP or MBM in their absence) Authorized by \_\_\_\_\_ Time \_\_\_\_\_
  - X** Shut down hot work operations
- \* When fire risk is high, tent must be used (D). If tent cannot be used due to physical limitations, saturate or clear vegetation (C).

**This is to be used as a field reference guide only.  
Read and comply with all applicable instructions detailed in the Fire Prevention Plan.**