



MCRCD/HREC MG1001 Fire Prevention Plan

11/10/21 Rev A

Purpose

The purpose of this Fire Prevention Plan is to establish procedures for identifying fire hazards and preventing fires. All employees, supervisors, and managers are expected to follow the procedures outlined in this plan to ensure that employees and visitors are protected.

Where the site Owner has different Fire Prevention requirements, the more stringent requirement shall be followed.

Authority

California Code of Regulations, Title 8, Section 3221

Responsibility

Names or job titles of those responsible for the control of accumulation of flammable or combustible waste materials.

Randy Reali
215-526-3733

Person(s) responsible for maintenance of equipment and systems installed to prevent or control ignitions of fires (Ex. Fire Extinguishers, etc.).

Randy Reali
215-526-3733

Identification of Fire Hazards

The following is a list of potential fire hazards and their associated work areas:

<u>Work Area</u>	<u>Fire Hazards</u>
Wood Chip Storage Area/Wood chip loading system	Wood chip material
Container	Wood chips, partially pyrolyzed wood products, Producer Gas (CO & H2)
Biochar working storage	Biochar
APL storage area	Isopropyl alcohol

Housekeeping Practices

The following are the fire prevention practices associated with fire hazards identified above:

<u>Type of Fire Hazard</u>	<u>Prevention Practices</u>
Wood chips	Keep areas clear of spilled wood chips
Electrical Systems	Quarterly visual inspection of outlets, conduit, and cabinets for signs of wear or damage.
Electrical Appliances	Employees trained to inspect cords/tools prior to use
Producer Gas	CO monitor installed in container, CO alarms warns of potentially combustible atmosphere.
Flammable/combustible liquids	Store liquids in approved flammable storage cabinet

Refer to the weekly maintenance procedure for housekeeping procedures.

Safe Code of Work Practices

The Wood chip storage area will be kept tidy. Excess spilled wood chips shall be cleaned daily.

All Wood chips stored at the immediate site will be in Super Sacks for ease of loading into the system and to contain/minimize any spillage.

The Container has multiple sources of ignition. No flammable material will be stored inside the container.

The syngas mixture of H₂ and CO is very easily ignited. When the system is operating, the normal inventory of gas is very small as it is consumed by the engine. The container should be fully opened to ensure any Syngas leaks will be well diluted under their LEL level.

Care must be taken not to block potential escape routes, particularly with flammable materials.

Each individual is personally responsible for assuring that extension cords and multiple plugs are in good condition. Cords that are missing the grounding prong, are spliced together, or that are missing their protective sheath shall not be used.

Fire Control Measures

The following is a list of fire control measures installed or available in work areas:

<u>Work Area</u>	<u>Fire Control Measure</u>
Wood chip storage area	Regular inspection, housekeeping
Power Container Work Area	2 Class A fire extinguishers, 1 inside container.
Container Electrical Enclosure	Class B/C fire extinguisher

Maintenance and Inspection Program

The periodic maintenance and inspection frequencies for fire control measures are as follows:

<u>Fire Control Measure</u>	<u>Frequency</u>	<u>Serviced by:</u>
Fire Extinguishers Inspection	Monthly	Facility Team
Fire Extinguishers Service	Annual service	Ukiah Oxygen 707-462-8674

Alarm Systems

The following alarm systems have been installed and tested at the frequency indicated, and should trigger the response listed:

Alarm System	Frequency	Response to Alarm
Carbon Monoxide	Daily	Shut down system

The Carbon Monoxide alarm is primarily for personnel protection. This alarm being activated may not result in a fire, however there is an elevated risk of fire.

Employee Response to Fire Emergencies

The safety of all personnel in the area is the highest priority in a Fire event. As soon as possible, employees should notify the facility as per the Facility Owner's emergency action plan.

Designated and trained employees may attempt to extinguish incipient fires with fire extinguishers.

Training

Employees shall be apprised of the fire hazards of the materials and processes they are exposed to.

Upon initial assignment, employees should be made aware of those parts of this fire

prevention plan which they must know to protect them in the event of an emergency. This program is located in the site manual and is available for review upon request from Randy Reali.

Wildfires

All Power Labs will follow wildfire preparation procedures of the host facility.

In the event of a wildfire evacuation order:

1. the unit will be shut down and at the direction of the host facility, feedstock may be relocated
2. APL personnel are not considered essential and will evacuate and remain offsite for the duration of an evacuation order.
3. All evacuated personnel should check in with APL-Berkeley to confirm they are safely offsite.

If an Evacuation order is expected to be issued, APL management may make the decision to preemptively shut down and evacuate.