Love Burn DMV Flame Effects Guide

Love Burn 2018 Department of Mutant Vehicles Flame Effects Guide

DMV Fire Safety Agreement

Please Make Sure You Completely Read and Understand the Following Information before Proceeding!

All participants using combustible fuels in an art installation (or for other purposes) at Love Burn must educate themselves about and comply with appropriate practices for storing and handling these materials.

General Fuel Storage Requirements

Separation and Emergency Egress

- A distance of 10′ or greater must be maintained between any stored fuels (liquid fuels and compressed or liquefied fuel gases) and tents, equipment, public areas, RVs and all camp structures.
- A fire lane of 20′ shall be kept free of obstructions to provide emergency access for fire vehicles if needed. No fuel storage area shall be closer than 100′ from another fuel storage area.

Vehicle Protection

- All fuel storage areas must be protected from vehicle collision. A safety area of 10′ around the stored fuel should be marked as off limits using caution tape or other equivalent measures.

Storage Area Safety and Security

- All fuel and flammables must be stored in approved containers which must remain closed except when filling or dispensing.
- Tanks and barrels should be secured to prevent tampering.
- Proper signage of “NO SMOKING – FLAMMABLE” shall be visible from all four directions.
- At least one hand-held portable extinguisher with a 40-B rating is required for any fuel storage area per 55 gallons of fuel capacity. Extinguishers rated as ABC, AB, or BC will have a separate value for the B rating, which indicates the square footage of a class-B fire that a non-expert user should be able to extinguish with it.
    - Example: https://www.lowes.com/pd/First-Alert-Heavy-Duty-Plus-Fire-Extinguisher-Rechargeable/3057079
- The fire extinguisher must be placed 8′ – 10′ from the fuel storage area and be easily visible.

Liquid Fuels

Quantity Limit

- No more than 55 gallons of fuel may be stored in a camp at one time.

Containers

- Fuel must be in stored in appropriate containers, which include approved 5-gallon or smaller containers.
- Fuel containers shall not be overfilled. Most fuel containers are designed to be filled to 80% in order to allow expansion caused by temperature change.
- Fuel containers must remain closed except when filling or dispensing fuel. Proper seal must be ensured on all lids, caps, bungs, or valves to prevent spills or leaks. All containers shall be securable to prevent tampering.
- Fuel must not be stored in close proximity to any sources of artificially-produced heat which could cause the fuel to ignite, and must never be stored inside or under a living area such as a camper or RV.

Secondary Containment

- A secondary containment device or structure capable of holding 110% of the largest single container in the device is required. For example, a single containment device holding a 55-gallon drum and 5-gallon tank needs a capacity of at least 60.5 gallons.

- Collections of small tanks or containers, in total quantities exceeding 20 gallons, also need secondary containment. For collections of small fuel cans, this can be as simple as a fuel-resistant tarp with a raised frame placed beneath to create a containment area.

Handling and Transfer

- When filling or dispensing flammable or combustible liquids, open flames or other ignition sources must be kept at least 50 feet away.
- No gravity-fed tanks are allowed as fittings can break and cause large-scale spills. Electric pumps are preferable.
    - Note: Use proper electrical connections to reduce chances of spark and ignition. All electric pumps must be UL-rated with proper ground bonding.
- Hand pumps are not recommended as fuel can leak out due to gravity. Always keep hose heads above the level of the tank when not in use.
- Fuel containers are only to be opened when dispensing or receiving fuel.
- Fuel spills are most likely to occur at the point of transfer. Take precautions to protect the park surface by transferring fuel over a secondary containment or absorbent material. Love Burn recommends the use of a spill mat or appropriate tarp laid underneath the fuel-dispensing point when fueling vehicles or performing other transfers, to prevent any spills or overfills from contacting the park surface.
    - Example: http://perthpetroleum.com.au/products/collapsible-bunds-and-mats/spill-mats/spill-mat-oil-fuel-only-detail

Spill Control and Response

Preventing spills on the surface of Virginia Key Beach Park is essential to our continued use of this resource for our Event. It is also important to be good stewards of public lands and to leave no trace. The park surface itself adds to the challenge because of its absorbent nature.

- Spill response and containment control materials should be kept on hand to deal with any spill quickly. Basic fuel spill kits should include a shovel and a sealable container for storage until disposal.
    - Example: https://www.grainger.com/product/XSORB-Spill-Kit-3WMP8
- Spill control measures shall be proportional to amounts of fuel stored.
- Fuel spills of more than 1 gallon should be reported to Love Burn Rangers or Emergency Services. Reports should include specific location and contact person at that location.

Fire Suppression Notes

- A flammable liquid fire (including petroleum and other products) burns at the surface of the material, as it is vaporized by the fire or ambient heat. Do not use water on a liquid fuel fire. Applying water merely spreads the flaming liquid over a wider area, where it vaporizes more rapidly, intensifying the fire.
- The best way to put out such a fire is to cut off its air supply or interrupt its chemical chain reaction. The smothering agents commonly used for petroleum fires are carbon dioxide (CO_2) and dry chemical powder extinguishers. Both are effective for flammable liquids, but dry chemical is better for outdoor use because it's not subject to wind, has a longer range and can extinguish pressurized leaks of gas and liquid.

Safety Reminders

- Store fuel away from any running generator.
- Do not fill the tank on a generator that is running.
- When transferring fuel, use a pump. Never try to start a siphon using your mouth. A mouth-full of gas or diesel could be fatal to you. For health reasons, wash hands after fueling.
- Keep all equipment used for petroleum storage and handling in good condition. Watch for leaks, deterioration, or damage.
- If fuel is spilled on your clothing, move away from any ignition source, and allow the clothing to dry. Use waterless soap for hands. If fuel should splash in eyes, use clean water to flush.
- Be aware of static electricity that can build up on you and/or a container. Any spark can ignite gasoline vapors. Always fill containers on the ground, not in vehicles.

- Always use a bonding strap when transferring flammables and combustibles between containers. Compressed and Liquefied Fuel Gases Conditions and Limitations
- LP-Gas tanks and cylinders of 101 gallons or more are not permitted within the camping area, except when installed as part of a Mutant Vehicle Flame Effect's fuel system.
- Acetylene cylinders must be stored away from Oxygen cylinders with a minimum separation of 20′ or more, unless plumbed or in use on a cutting cart. Cylinder Storage and Care
- All gas cylinders of any size must be stored in an upright position and secured to prevent tipping and potentially becoming an unguided projectile.
- All cylinder valve protection caps are to remain on the cylinder valve assemblies unless in use with plumbing or regulator set. This information will help the Emergency Services Department plan for emergencies.

DMV Fire Safety Agreement: Flame Effects

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Please note: Separate on-site inspection from the Fire Safety Lead is mandatory for any MV fitted with Flame Effects.

Flame Effect Definition

Flame Effect is defined as "The combustion of solids, liquids, or gases to produce thermal, physical, visual, or audible phenomena before an audience." This includes all flames that are automated, switched, pressurized or having any other action than simply being lit on fire; as well as projects using propane or other liquid or gaseous fuels.

Safety Responsibility For Flame Effect Art

All artists and their crews are responsible for their own art. Because of the dangerous nature of Flame Effects, no one may operate a Flame Effect without the approval of the Fire Art Response Team (FART).

Fire Art Approval Process

The approval process for your fire art project involves a number of steps, starting well before you depart for Love Burn, and culminating at the Event.

Pre-Event

1. Designate qualified persons to fill the following Project Team roles (defined below): Fire Safety Coordinator and Leave No Trace Coordinator.
2. Complete and submit the Art Installation questionnaire, including:

- Fire Safety Coordinator's name and contact information
- Type of fuel to be used
- How much fuel you expect to consume daily
- Amount of space needed for fire art
- Flame Effect Plan

https://docs.google.com/forms/d/14Gln7t2BCKh3y3w7j8HG1YXnR5qNK5UoT1F-iqewoCA/viewform?edit_requested=true

3. The fire safety team reviews your submitted documentation.
4. Your Project Team, through the Fire Safety Coordinator, engages in an ongoing dialogue with the FART Coordinator to ensure that your plans are complete and in conformity with FART guidelines.
5. Your Fire Safety Coordinator maintains email contact with FART to ensure that all parties are notified of updates and changes.

Event

6. Prepare your Mutant Vehicle and its Flame Effects for inspection.
7. Bring the vehicle to the DMV for inspection of all systems, including its Flame Effects. The Fire Safety Coordinator and Flame Effects Operator must be present at this inspection. At least one FART team inspector is on duty at the DMV inspection station during inspection hours. After the Flame Effects pass inspection a Flame Effects License will be issued.

Project Team Roles

Artist must designate knowledgeable and capable individuals to fill the key roles listed below.

Together, the individuals filling these roles, plus the artist him/herself, make up your Flame Effect Project Team.

It is the joint responsibility of the Artist and the Fire Safety Coordinator to disseminate information and applicable deadlines to all Project Team members. The Artist registering the artwork and the Fire Safety Coordinator can be the same person or two different people.

Each of the following roles is important and will require the full attention of the person chosen to fill it.

Fire Safety Coordinator

The Fire Safety Coordinator serves as the primary point of contact for all communication between your project and the fire team, and is responsible for ensuring that the artwork's use of fire conforms to all applicable guidelines. This responsibility includes:

- Ensuring that all items of required documentation are complete and accurate.
- Receiving feedback and addressing questions and safety concerns raised by the fire safety team.
- Promptly providing documentation updates to the fire safety team, whether in response to the fire safety team's feedback or to design changes independently undertaken by the project.
- Ensuring that the artwork is constructed and operated in accordance with the plan approved by the fire safety team, and that the artwork will not be operated while any identifiable safety hazards are present.

Leave No Trace Coordinator

The Leave No Trace (LNT) Coordinator is responsible for organizing periodic clean-up around the vehicle as needed, and post-event clean-up after the vehicle is dismantled. The person selected to be LNT Coordinator should be adept at recruiting and organizing others to participate in clean-up efforts. Specific responsibilities include:

- Recruiting and organizing LNT crew and ensuring there are enough people for the task.
- Securing proper clean-up tools, including trash cans.
- Leading crew in both daily and post-event clean-up efforts.

The post-event clean-up includes pickup and removal of any materials left after dismantling the vehicle, including any fuel or chemical residue, loose parts, pyrotechnic debris and any other MOOP (Matter Out Of Place) on site. All MOOP removed must be packed out of the park.

Fire Art Safety Plan – Required Documentation

The following items of documentation must be submitted for review and approval by the fire safety team.

Flame Effects Plan

Your Flame Effects Plan is a complete, detailed description of how your artwork incorporates and uses fire. It should include details such as:

- How your device operates
- The fuel(s) it uses, how its fuel is stored, and how fuel flow is controlled
- The types and rated capacities of the components it incorporates, including hoses, valves, solenoids, regulators (and the pressures you intend to set them to), pressure vessels, pumps, pressurization systems, fans/blowers, the pilot light or ignition system, and any other details you may have.

When writing your Flame Effects Plan, please be as clear and concise as possible, while also being as detailed and technical as necessary, to fully convey how your fire elements will work and what will go into making them work that way. If you have not completed the design or construction of your artwork, just be as accurate and complete as you can. If we need further details or clarifications we will contact you.

Flame Effect Diagrams

You will be required to submit detailed diagrams or schematics showing all plumbing and electrical arrangements and controls, and any other relevant technical details. These diagrams should at a minimum illustrate the flow of fuels from the supply to the effect head(s), and all the components those fuels pass through along the way. In particular, you must indicate the locations of any shut-off or other control valves, regulators, pressure vessels, pumps, pressurization systems, fans/blowers, ignition systems and anything else that affects the flow or burning of your Flame Effect's fuels.

If you have not completed the design or construction of your artwork, just be as accurate and complete as you can. If we need further details or clarifications we will contact you.

Layout Diagrams

The following Layout Diagrams are required:

1. Vehicle Flame Effect Layout

    a. Fuel Location & Protection: Location of fuel tanks and lines and how they are protected from damage by collision or participant actions

    b. Safety Zones: Locations of flame heads relative to where participants are able to stand.

    c. Fire Extinguishers: Types and locations.

    d. First Aid Kit: Location of first aid kit with burn supplies.

2. Base Camp Layout

    a. Storage location(s) for flammable liquids, fuel gases or other hazardous/flammable materials.

    b. Storage location(s) for empty fuel containers, if different from above.

    c. Safety perimeters and barriers, and distances to public areas and habitations.

    d. 20′ wide fire lane from street to storage location(s) listed above.

    e. Fire extinguisher locations

Operational Plans Safety Plan

Your Safety Plan should describe all the measures that your crew will employ to ensure that your installation will be safe for participants, performers and crew, both during and after construction, and during strike and clean-up. At a minimum, it should cover:

- Illumination and protection from vehicle traffic for all elements of the installation, including the artwork itself, fuel supplies and fuel storage, operating positions, generators, etc.
- Types, sizes and placement of fire extinguishers or other fire suppression means that will be kept on hand
- Location and contents of first aid kit(s)
- List of Material Safety Data Sheets to be kept on hand
- Safety training your crew members have
- Safety-specific crew roles and responsibilities
- Safety procedures and protocols:
    - Fueling procedures: how do you ensure that fueling is done safely?
    - Daily safety check: what conditions do you check for?
    - Operating procedures: what conditions do you watch for while operating?
        - Safety features, if any, built in to the installation
        - Safety perimeters, and how they are enforced

Emergency Response Plan

No matter how comprehensive your Safety Plan, things still go wrong. Your Emergency Response Plan should list all the ways things may go wrong and expose your crew or other participants to potential injury, and how your crew will respond when they do. At a minimum it should cover:

- Emergency shut-off/shut-down procedures
- Response to fuel leaks
- Response to liquid fuel spills, small and large
- Response to unplanned fires, small and large
- Response to damage (or incipient damage) caused by wind, vehicle collision or other physical forces
- Response to hazardous material exposure of crew, performer or participant
- Response to injury sustained by crew, performer or participant

Leave No Trace Plan

The Artist, Leave No Trace Lead and crew are responsible for all clean up at the art installation site, both nightly and when the Love Burn event ends. Your Leave No Trace plan describes how you will accomplish this. At a minimum it should cover:

- Nightly clean-up procedure
- End-of-event clean-up procedure
- Emergency clean-up procedures (e.g., for liquid fuel spills)
- Clean-up tools and materials to be used

Safety Guidelines for Flame Effects

Please read carefully!

Failure to do so may result in your project not being permitted at Love Burn. The majority of Flame Effects at Love Burn are Liquefied Petroleum Gas (LP-Gas) effects; LP-Gas is often commonly referred to as propane. Most of the guidelines below deal with LP-Gas as a fuel. Regardless of fuel type or technological basis, all Flame Effects must be constructed in such a way as to meet or exceed applicable laws, codes and industry standards.

The National Fire Prevention Association (NFPA) publishes numerous codes and standards for the construction and use of LP-Gas systems, including:

• NFPA 54 – National Fuel Gas Code
• NFPA 58 – Liquefied Petroleum Gas Code
• NFPA 160 – Standard for the Use of Flame Effects Before an Audience

NFPA documents are available for viewing and purchase on the NFPA website and should be reviewed by all Flame Effects artists.

Construction of Flame Effects

• All LP-Gas cylinders shall be designed, fabricated, tested, and marked in accordance with the regulations of the US Department of Transportation (DOT) or the ASME Boiler and Pressure Vessel Code.
• All LP-Gas cylinders must have an unexpired certification date stamp and be in good working order. Tanks in poor condition or out of date are a danger to fill and may cause injury to the fuel team, the artists, and/or participants.
• Each LP-Gas Flame Effect must have a single 1/4-turn shut-off valve as the primary emergency fuel shut-off. When closed, this valve must inhibit all fuel flow to the Flame Effect, regardless of how many LP-Gas cylinders are connected to the Flame Effect. This valve must be exposed and visible at all times, and must be clearly marked as the emergency fuel shut-off.
• All components of the fuel system (fittings, piping, valves, connectors, etc.) must be designed and rated for both the type and pressure of fuel being used. The use of improper fittings can lead to leaks and failures in the fuel system resulting in fires and or injury.
• All LP-Gas metallic piping and fittings that will operate at a pressure greater than 125 psi shall be schedule 80 or heavier.
• All LP-Gas Hoses that will be operated in excess of 5 psi shall be designed for a working pressure of at least 350 psi and shall be continuously marked by the manufacturer to indicate its maximum operating pressure and compatibility with LP-Gas.
• Air or pneumatic line is not acceptable as fuel hose. LP-Gas degrades rubber hose not specifically designed for use with that fuel. This results in the hose cracking from the inside out, potentially leading to a catastrophic failure.
• Hose clamps are prohibited on LP-Gas hose at any pressure. All fuel hose connections shall be factory made, or constructed with a crimped fitting specifically designed for that purpose. Hose clamps are well known for cutting and chafing fuel lines or coming loose, possibly leading to catastrophic failure.
• All metallic tubing joints shall use flare fittings. The use of compression fittings or lead soldered fittings are prohibited.
• Accumulators, surge tanks and other pressure vessels in the system shall be designed, manufactured, and tested in accordance with the ASME Boiler Pressure Vessel Code or the Department of Transportation (DOT) for the pressure of the gas in use.
• Any welding alteration of pressure vessels, or alteration or fabrication of other system components

that hold pressure, must be performed by an American Society of Mechanical Engineers (ASME) certified welder, and must be stamped and certified as such.
• If the fuel supply pressure exceeds the maximum allowable operating pressure (MAOP) of an accumulator or other pressure vessel, a regulator shall be installed between the fuel supply and the pressure vessel to reduce the pressure below the pressure vessel's MAOP. A pressure relief valve shall also be installed in the pressure vessel, with a start-to-leak setting at or below the MAOP and a rate of discharge that exceeds the maximum flow rate of the supply container.
• Fuel tanks for stationary Flame Effects must be protected from vehicle traffic and be well illuminated at night.
• Flame Effects should be constructed and sited in such a way that the flame head and/or hot components are at least six inches from the surface, to prevent baking or scarring of the ground.
• Any artwork, towers or other structures that incorporate Flame Effects should be secured from the wind and encircled with an appropriate safety perimeter to prevent injury to participants. Special Considerations for Mutant Vehicles
• Absolutely no Pyrotechnics (fireworks) of any kind may be used on a Mutant Vehicle. There are no exceptions to this rule. Law Enforcement is quite strict on this policy and you will be cited and possibly removed from the event if you or anyone in or on your vehicle violates this prohibition.
• The use of wood fires or liquid-fueled flame effects on Mutant Vehicles is prohibited.
• Transporting open acetylene cylinders, and use of acetylene in Flame Effects on mobile art, is prohibited.
• Route your hoses inboard and away from hot exhaust pipes or manifolds. You will be moving and you could run into an unlit object or another Mutant Vehicle. All fuel lines should be protected from potential damage due to a collision.
• It is possible that you may have participants on your vehicle. The routing of fuel and electrical lines should also be such that they cannot be damaged by someone grabbing them (say, while traveling over rough terrain) or tripping over them.
• Fuel and electrical lines should be run in such a way as to prevent rubbing, chafing, impingement or other damage that may result from normal use of vehicle.
• Fuel tanks must be mounted and secured within the vehicle so they are protected from damage caused by a collision with another vehicle or solid object, and where participants cannot step or stand on them.
• Fuel tanks should be well ventilated; LP-Gas is heavier than air and in case of a leak will collect in low unventilated areas, resulting in risk of explosion.
• The 1/4-turn main LP-Gas shut-off valve must be placed within easy reach of both the driver and the Flame Effects Operator.
• Flame should be well above the heads of participants: at least 10 feet (3m) above where any participant could stand, whether on the ground, or on your vehicle.
• Flame discharges should be vertical whenever possible; no flame shall be angled closer than 45° to the horizontal.

Maximum LP-Gas Quantity for Mutant Vehicles

In order to ensure the safety of participants and Emergency Services personnel, Love Burn imposes limits on the quantity of LP-Gas that may be carried on Mutant Vehicles. These limits are consistent with regulations imposed by the Federal Department of Transportation (DOT), as well as National Fire Protection Association (NFPA) guidelines.
• The total Aggregate Gross Weight (weight of containers plus fuel when all containers are filled to their maximum permitted filling levels) shall not exceed 250 lb.
• The maximum number of containers shall not exceed five (5).
• The maximum size DOT cylinder shall be 100 lb. water capacity (WC).
• The maximum size ASME portable container shall be 20 gallon water capacity (WC).
• ASME containers shall be designed for portable use, and shall have integral appurtenance protection.
• Containers shall be installed on the vehicle to allow adequate ventilation and access to their appurtenances for easy closure in an emergency situation.
• The containers shall be transported on the vehicle upright with the relief valve in communication

with the vapor space preventing the venting of liquid LP-Gas.
• Containers shall be secured to prevent movement during transportation. The formula to obtain the aggregate gross weight of a cylinder is:
AGW = (WC × 0.42) + TW
where:
• AGW = Aggregate Gross Weight
• WC = Water Capacity (marked on cylinder)
• TW = Tare Weight (the weight of the container when empty; marked on cylinder)
Note that Aggregate Gross Weight is only one consideration in sizing your fuel supply. Regardless of the size(s) of the cylinders you choose, you are limited to a total of five (5) cylinders maximum.

Operation of Flame Effects

Flame Effect Operators

Flame Effects operators and assistants must be 21 years of age or older and be trained in the use of fire extinguishers.
Operators and assistants must wear fire resistant clothing while operating Flame Effects. Personal Responsibility No carelessness, negligence, or unsafe conditions with Flame Effects shall be tolerated. Do not drink, take drugs, or smoke when working with Flame Effects.

Safety Perimeter

An appropriate audience safety perimeter (and performer's safety zone if applicable) shall be established well in advance of Flame Effect operation, and must be approved by the fire safety team. Because of the variety of artwork that incorporates Flame Effects, a member of the fire safety team will help you determine the correct perimeter distance.
In any case, a 20′ zone around the Flame Effect must be kept free of all combustible or flammable materials, and nothing should overhang this zone.

Fueling

Only people familiar with the safety considerations and hazards involved are permitted to connect/disconnect LP-Gas tanks, or to do liquid fuel filling. Wearing personal safety gear (glasses, gloves, etc.) during liquid fuel filling is required.

Daily Safety Check

A daily safety check of all Flame Effect components and connections is mandatory before operation begins. Never start operation of a Flame Effect until the daily safety check is completed. If a safety hazard is identified either during the safety check or during operation, the Fire Safety Liaison must delay or halt operation until the hazard is corrected.

Operating Guidelines

Never light a Flame Effect until all performers, safety monitors and participants are in place and ready.
Never operate a Flame Effect in such a way that it poses a danger to people or property. Remember that this isn't The Playa. There are trees and powerlines all over the park. Don't ignite them.
As an operator of a Mutant Vehicle, you must be aware of your surroundings and park conditions. There may be overhanging vegetation, tall structures, participants on stilts, flammable costumes and unpredictable winds. Any of these factors could result in serious injury. Simply being aware of these conditions will go a long way in preventing an injury.
When bringing your Mutant Vehicle onto paths, exercise even more care when discharging flame effects, being aware of the limited clearance between your vehicle and participants, structures (including overhanging obstructions) and other vehicles.
When parking your Mutant Vehicle, park in a safe location away from sources of ignition. Shut down the Flame Effects, close down the fuel supply cylinders, purge your lines and lock out your controls if Flame Effects will be unattended while the vehicle is parked.

Attending to Flame Effects

Flame Effects must never be left unattended. The winds at Virginia Key Beach Park are highly variable, and may create havoc in a poorly monitored installation. Any Flame Effect found running unattended will be shut down. Egregious and/or repeat offenses will result in the confiscation and/or disabling of the Effect.

No Smoking or Open Flame

ABSOLUTELY no smoking or open flame within 10 feet any storage area where flammable liquids or fuel gases are stored. All fuel and flammables must be stored in approved containers which must remain closed except when filling or dispensing, or when connected to a system for use.

Material Safety Data Sheets

MSDS for any hazardous chemicals used in the construction or operation of the Flame Effect must be kept at the installation, so they are available to guide clean-up activities in case of a material spill, and to provide to emergency medical personnel in case of accidental exposure.

Fire Extinguishers

Artist and Fire Safety Liaison agree to keep available at the art installation at least one dry chemical fire extinguisher rated 3A:40B:C, for use in case of any accidental fire at the art installation. Note that this is a minimum. You should plan to have on hand as many fire extinguishers as necessary for the size of your installation and the nature of the fire hazards it presents. If you are unsure how many extinguishers you should have, the fire safety team can advise you. Please be mindful of the recent safety recalls.

Not all fire extinguishers work for fighting all fires. You and your crew should understand which type of extinguisher is appropriate for each type of fuel present at your installation.

Dry chemical extinguishers are required where fuel is stored, as they provide the best way to put out a fuel fire. They do make messes that must be cleaned up after use. Also, dry chemical extinguishers start to lose charge after a single discharge and must be serviced and refilled.

Water fire extinguishers are useful for putting out fires involving wood, paper, fabric, and performers' bodies. These extinguishers must never be used on liquid fuel fires, as they will spread the fire. Also water is a good conductor of electricity, so these extinguishers are a poor choice for fires where energized electrical equipment is present.

CO2 (Carbon Dioxide) extinguishers are good responses to problems with fire props and fires involving electricity. They leave no residue and can be used repeatedly until they run out. But they work for small fires only. CO2 extinguishers are also good for putting out fires on people's clothing, but use care near exposed skin, since the extinguishing agent exits the horn or nozzle at about -70°F/-56°C.

Wet towels must be available for response to accidental fire on a person (e.g., smothering fire on the face of a fire breather) or to extinguish fire props. Wet towels work better than duvetyn because (a) they both deprive a fire of oxygen and remove heat, and (b) they are more pliable and conform better to the contours of an object, making it easier to achieve an airtight seal. Wet towels can dry quickly, so be sure also to provide a closed container of water for re-wetting them, such as a cooler chest or a bucket with a lid.

First Aid

A basic first aid kit should be available and contain at least the following items for burn treatment and fuel exposure:

• Non-petroleum-based burn cream or aloe vera gel
• Several rolls of 100% cotton gauze and some large gauze pads
• A jug of clean water for cooling burns, or flushing liquid fuel from eyes
• Waterless soap for washing liquid fuel from hands Cool a first- or second-degree burn right away with water, and continue cooling it for at least 15 minutes.

Severe burns, and fuel exposures to eyes, nose or mouth should be treated by Emergency Medical Services. In case of fuel exposure, be sure to provide a copy of the relevant MSDS to the responding medical personnel.

In case of fire on a person's body or clothing, remember this rule: Stop, Drop & Roll! Many people have saved their own lives by dropping and rolling when their clothes caught fire.

• STOP – Stop where you are and DO NOT RUN!
• DROP – Drop to the ground; cover your face with your hands to protect your eyes and airway.
• ROLL – Roll to put out the flames. If you are near someone whose clothing catches fire, be sure to stop him or her from running and make them Stop, Drop & Roll!

Leave No Trace

The Artist, Leave No Trace Lead and crew are responsible for all clean up at the installation site,

both nightly and when the Event ends. The area must be as clean as when you found it, and all MOOP you remove must be packed out of Virginia Key Beach Park. This is what it means to LEAVE NO TRACE.

Think about park clean-up while you are creating your artwork, both in terms of the usual trash that accumulates and extraordinary situations such as fuel spills. How will you prevent these things from happening, and how will you respond if they do?

You must have available at the installation all necessary clean-up tools and materials for both kinds of eventuality, such as shovels, rakes (including “magnetic rakes”), garbage cans (metal ones if you will be dealing with hot ashes), and sealable containers for storage and removal of spill-contaminated dirt.

Any Concern Or Questions About Flame Effects on Mobile Art email: DMV@TheLoveBurn.com

I Have Read and Understand the Above Information and Agree to these Conditions As They Relate to Mutant Vehicles