	COMPANY HEALTH AND SAFETY PROGRAM	
	Document No. 8.10	Date: August 16, 2006
	Fire Protection and Prevention Plan	Revision: 0

1.0 PURPOSE

The purpose of this plan is to set procedures and provide fire protection equipment with criteria for the prevention of fires. This plan has been developed in response to providing HES personnel fire protection and through the requirements set in 29 CFR 1910.38(b) and 1926.150-152(a)-(d).

2.0 SCOPE

This plan applies to all Projects and projects of HES and any contractor(s) working directly for HES.

3.0 POLICY

It is the policy of HES to enact fire protection activities by designated personnel and evacuate remaining personnel in an emergency fire situation. Specific emergency evacuation activities for fires and tornado events are identified in 4.1 Emergency Action Plan of the Company Health & Safety Program.

4.0 FIRE PREVENTION PLAN

OSHA Standards, 29 CFR 1910.38(b), Fire Prevention Plans require an employer to cover designated actions to ensure employee safety from fire emergencies. The Uniform Fire Codes will be utilized for applicable city and county code requirements. The Fire Prevention Plan includes the following:

1. Major fire hazards and their proper handling and storage procedures;

Fuel sources (i.e., gasoline, diesel fuel, welding gases)

- Each flammable and combustible liquid type will be handled in industry approved storage containers;
- Approved safety cans or DOT approved containers will be used for the handling and use of flammable liquids in quantities of 5 gallons or greater;
- Flammable or combustible liquids must not be stored in areas used for exits, stairways, or normally used for the safe passage of people;
- Each container must be labeled to identify the contents;
- Welding gas cylinders must have their protective caps in place when not in use;
- Refueling must not take place near an ignitable heat source;
- Fuel types must be stored in approved locations.

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Potential ignition sources (such as welding, smoking, candles, etc.) and their control procedures;

- Welding activities must not be conducted on or near an ignitable fuel source.
- *Candles will not be left unattended in office spaces due to their fire hazard potential.*
- *Space heaters must be turned off before leaving the office or before the end of the day and kept clear of combustible material while on. (e.g. furniture)*
- *Smoking is prohibited around ignition sources (e.g. equipment refueling)*
- Cutting or sawing activities must not be conducted in or around an ignitable atmosphere.

And the type of fire protection equipment to aid in the control of fires;

- Generally, Class B fire extinguishers will be used.
- Carbon tetrachloride and other toxic vaporizing liquid fire extinguishers are prohibited.
- Refer to *Table F-1 Fire Extinguishing Data* (Developed by OSHA) included at the end of this plan. Table F-1 may be used as a guide for selecting the appropriate portable fire extinguishers.

2. Personnel responsible for the maintenance of equipment installed to prevent or control ignitions or fires;

The Safety Manager is responsible for maintenance of equipment (fire extinguishers). Project Managers and Supervisors are responsible for reporting the need for maintenance of equipment beyond annual inspections.

3. Personnel responsible for the control of fuel source hazards;

Project Managers and Supervisors are responsible for controlling fuel source hazards. The hazards must be eliminated or minimized to reduce the risk of an emergency from occurring.

4. Housekeeping procedures must be defined to control accumulations of flammable and combustible waste materials and residues so that they do not contribute to a fire emergency.

- Combustible/Flammable materials will not be allowed to accumulate near potential heat sources;
- Combustible/Flammable materials will be disposed of in a timely manner;

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- Combustible/Flammable materials will be stored in applicable approved containers;
5. Personnel will be apprized of the fire hazards of the materials and processes to which they are exposed.
- MSDS information must be reviewed for each new type of material in the work place;
 - Processes must define the fire hazards associated with the activity to personnel;
6. Equipment and systems installed on heat producing equipment to prevent accidental ignition of combustible materials will be periodically checked to ensure proper working condition. Check periods may be prior to use and before storing after use.

5.0 STEPS IN FIRE PROTECTION

Once an employee has discovered a fire they should quickly and carefully remove anyone who is injured or in immediate danger. This employee must be cautious in not to risk injury to themselves and remain able to report the fire.

The nearest telephone should be used to report the fire with the following information:

- What is burning
- Location of the fire
- Fire Suppression System
- Name, phone #, and location of the person reporting the fire
- Number of personnel at the location

Emergency telephone numbers for the fire Project, hospital, ambulance, police, and safety contact must be posted in the Site Health and Safety Plan as well as any heavy equipment in use.

A system for alerting employees of an emergency is necessary to ensure timely evacuation of the area. Two-way radio/mobile phone communications will be used as a primary means of contact for an emergency event. Verbal language will be used for evacuation purposes as a backup means of communication. If working on a site or in a facility that has its own emergency alerting system, the existing alarm system should be a part of the emergency action plan.

Once the alarm has been sounded and the fire reported, the fire should then be contained if not extinguished. All doors and windows should be closed and any flammable materials removed if possible. All non-emergency electrical equipment should be turned off or unplugged.

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Extinguishment of the fire should be attempted only if portable fire extinguishers are available and the fire is in its early or beginning stage under safe conditions. Once the size of the fire or potential explosion hazard presents an immediate danger to life or health, evacuation should be the primary objective.

After evacuation has been deemed necessary, personnel are to immediately vacate the area. Emergency exits and routes should be identified prior to the start of the project. Emergency exits and routes for the office are posted within the facility.

Exits must be kept accessible and clear for traffic at all times. Emergency exits and routes in the field (out of the office) are to be identified and discussed prior to the start of work, typically in the Site Health and Safety Plan. In an evacuation event, no one should re-enter until the emergency has been declared clear with no unsafe conditions present.

6.0 FIRE PREVENTION (IGNITION HAZARDS)

Access to all available firefighting equipment will be maintained at all times and conspicuously located through the Project Manager and Supervisor supported by the Safety Manager.

All fire extinguishers will be periodically inspected and maintained in operating condition. Defective equipment will be immediately replaced.

A fire extinguisher, rated not less than 2A, will be provided for every 3,000 square feet of the protected building area, when applicable.

Travel distance from any point of the protected area to the nearest fire extinguisher must not exceed 100 feet.

If a fire extinguisher, not rated less than 2A, is not available then one 55-gallon open drum of water with two fire pails may be substituted.

Extinguishers and water drums, subject to freezing, must be protected from freezing.

Portable fire extinguishers will be inspected and maintained in accordance with Maintenance and Use of Portable Fire Extinguishers, NFPA No. 10A-1970.

Internal combustion engine powered equipment must be so located that the exhausts are well away from combustible materials.

Smoking is prohibited at or in the vicinity of operations that may constitute a fire hazard, and will be conspicuously posted: "No Smoking or Open Flame."

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Proper grounding techniques must be used when a risk or danger is present from sparking or static electricity.

The nozzle of air, inert gas, and steam lines or hoses, when used in the cleaning or ventilation of tanks and vessels that contain hazardous concentrations of flammable gases or vapors, will be bonded to the tank or vessel shell. Bonding devices must not be attached or detached in hazardous concentrations of flammable gases or vapors.

7.0 FIRE PREVENTION (OPEN YARD STORAGE)

Combustible materials must be piled stable and no higher than 20 feet.

Driveways between and around combustible storage piles must be at least 15 feet wide and maintained free from accumulation of rubbish, equipment, or other articles or materials.

The entire storage site must be kept free from accumulation of unnecessary combustible materials.

No combustible material will be stored outdoors within 10 feet of a building or structure.

Portable fire extinguishing equipment, suitable for the fire hazards identified above, must be provided at warehouse entrance and within the heavy equipment on the yard storage lot.

The storage area will be graded in a manner to divert possible spills away from buildings or other exposures; however care must be taken to assure that such grading does not direct such spills into a natural waterway..

Outdoor portable tank storage:

Portable tanks must not be closer than 20 feet from any building. Two or more portable tanks, grouped together or individually, having a combined capacity in excess of 2,200 gallons, will be separated by a 5-foot-clear area.

Emergency venting must be provided on the tanks.

8.0 FIRE PREVENTION (INDOOR STORAGE)

Storage must not obstruct, or adversely affect, means of egress (exit).

All materials will be stored, handled, and piled with due regard to their fire characteristics.

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Noncompatible materials, which may create a fire hazard, must be segregated by a barrier having a fire resistance of at least one hour or placed completely apart from each other.

Clearance will be maintained around lights and heating units to prevent ignition of combustible materials.

No more than 25 gallons of flammable or combustible liquid will be stored in a room outside of an approved storage cabinet.

Quantities of flammable and combustible liquid in excess of 25 gallons will be stored in an acceptable or approved cabinet meeting the requirements of 29 CFR 1926.152(b)(2)(i)(ii)(iii).

Not more than 60 gallons of flammable or 120 gallons of combustible liquid must be stored in any one storage cabinet. Not more than three such cabinets may be located in a single storage area. Quantities in excess of this must be stored in an inside storage room.

Inside storage rooms must be constructed to meet the required fire-sensitive for their use. Such construction must comply with the test specifications set forth in Standard Methods of Fire Test of Building Construction and Material, NFPA 251-1969.

9.0 FIRE CONTROL FOR LIQUID STORAGE

At least one portable fire extinguisher having a rating of not less than 20-B units will be located not less than 25 feet, nor more than 75 feet, from any flammable liquid storage area located outside.

At least one portable fire extinguisher having a rating of not less than 10-B:C units will be provided on all tank trucks or other vehicles used for transporting and/or dispensing flammable or combustible liquids (per DOT regulation).

10.0 TRAINING

HES will identify fire hazards of applicable materials and processes to which employees may be exposed. Employees will be made aware of and understand the information presented in this fire prevention plan.

Employees who have had no training or experience with fire extinguisher usage should not use fire extinguishers until the proper training and instruction has been provided. Misuse of fire extinguishers may make a fire situation worse.

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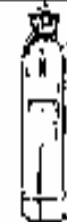












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Fire Extinguishers Selection Table

Revision: B

Table F-1 FIRE EXTINGUISHERS DATA

	WATER TYPE				FOAM	CARBON DIOXIDE	DRY CHEMICAL			
	 STORED PRESSURE	 CARTRIDGE OPERATED	 WATER PUMP TANK	 SODA ACID	 FOAM	 CO ₂	SODIUM OR POTASSIUM BICARBONATE		MULTI-PURPOSE ABC	
							 CARTRIDGE OPERATED	 STORED PRESSURE	 STORED PRESSURE	 CARTRIDGE OPERATED
CLASS A FIRES WOOD, PAPER, TRASH HAVING GLOWING EMBERS 	YES	YES	YES	YES	YES	NO <small>(BUT WILL CONTROL SMALL SURFACES)</small>	NO <small>(BUT WILL CONTROL SMALL SURFACES)</small>	NO <small>(BUT WILL CONTROL SMALL SURFACES)</small>	YES	YES
CLASS B FIRES FLAMMABLE LIQUIDS, GASOLINE, OIL, PAINTS, GREASE, ETC. 	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
CLASS C FIRES ELECTRICAL EQUIPMENT 	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES
CLASS D FIRES COMBUSTIBLE METALS 	SPECIAL EXTINGUISHING AGENTS APPROVED BY RECOGNIZED TESTING									
METHOD OF OPERATION	PULL PIN- SQUEEZE HANDLE	TURN UPSIDE DOWN AND BUMP	PUMP HANDLE	TURN UPSIDE DOWN	TURN UPSIDE DOWN	PULL PIN- SQUEEZE LEVER	RUPTURE CARTRIDGE SQUEEZE LEVER	PULL PIN- SQUEEZE HANDLE	PULL PIN- SQUEEZE HANDLE	RUPTURE CARTRIDGE- SQUEEZE LEVER
RANGE	30' - 40'	30' - 40'	30' - 40'	30' - 40'	30' - 40'	3' - 8'	5' - 30'	5' - 30'	5' - 30'	5' - 30'
MAINTENANCE	CHECK AIR PRESSURE GAUGE MONTHLY	WEIGH GAS CARTRIDGE ADD WATER IF REQUIRED ANNUALLY	DISCHARGE AND FILL WITH WATER ANNUALLY	DISCHARGE ANNUALLY RECHARGE	DISCHARGE ANNUALLY RECHARGE	WEIGH SEAL ANNUALLY	WEIGH GAS CARTRIDGE- CHECK CONDITION OF DRY CHEMICAL ANNUALLY	CHECK GAS PRESSURE GAUGE AND CONDITION OF DRY CHEMICAL ANNUALLY	CHECK GAS PRESSURE GAUGE AND CONDITION OF DRY CHEMICAL ANNUALLY	WEIGH GAS CARTRIDGE- CHECK CONDITION OF DRY CHEMICAL ANNUALLY

