TRUCKEE MEADOWS FIRE PROTECTION DISTRICT

HAZARDOUS MATERIALS MANAGEMENT PLAN (HMMP) INSTRUCTIONS AND SUPPLEMENTAL INFORMATION

TRUCKEE MEADOWS FIRE PROTECTION DISTRICT

Hazardous Materials Management Plan Instructions

When Is A Hazardous Materials Management Plan Required?

Truckee Meadows Fire Protection District requires a hazardous materials management plan (HMMP) from all businesses within the community for any of the following:

Note: A list of all regulated items is found on p. 8 of this packet. Definitions are found on pp. 14-19.

1) Any amount of the following materials are stored or used:

    a. Highly Toxic (liquid, solid, or gas)
    b. Toxic (liquid, solid, or gas)
    c. Pyrophoric (liquid, solid, or gas)
    d. Class 4 Oxidizers (liquid or solid)
    e. Class I and Class II Organic Peroxides (liquid or solid)
    f. Class 3 and Class 4 Unstable (liquid or solid)
    g. Unstable gases
    h. Class 3 Water Reactive (liquid or solid)

2) All hazardous (Group H) occupancies.

3) All buildings utilizing more than one control area.

4) All facilities exceeding the following:

    a. More than 500 pounds aggregate of any regulated solids.
    b. More than 55 gallons aggregate of any regulated liquids.
    c. More than 200 cubic feet aggregate of any regulated gases.

All other facilities storing or using hazardous materials that do not meet any of the above criteria must submit a hazardous materials inventory statement (HMIS). Current reports for the Nevada State Fire Marshal may be substituted in lieu of a new HMIS.

Facilities that are not required to complete an HMIS or an HMMP need only submit the declaration on the following page stating no hazardous materials are used or stored on site.

Note: Common cleaning and office supplies, though regulated, do not require an HMMP or an HMIS when stored or used in amounts required for day to day janitorial or clerical purposes.

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Hazardous Materials Management Plan Instructions

Declaration for Facilities Not Storing or Using Hazardous Materials

Business Name:		**Phone:**
Address:		
Person Responsible for Business:		**Phone:**
Person Responsible for Declaration:		**Phone:**
Property Owner:	**Address:**	**Phone:**
Principal Business Activity:		

Declaration: To the best of my knowledge, I certify that the business listed above does not store or use regulated hazardous materials in quantities that require either a hazardous materials inventory statement (HMIS) or a hazardous materials management plan (HMMP). I am aware that increasing or introducing hazardous materials requires fire department approval.

Note: Common cleaning and office supplies do not constitute regulated hazardous materials for the purpose of this declaration when used or stored in normal quantities for day to day janitorial or clerical purposes.

Signature:	**Date:**
Print Name:	**Title:**

Hazardous Materials Management Plan Instructions

Section I – Facility Description

Part A – General Facility Information

1. Fill out the information requested in the table and sign the declaration.
2. Applicants who have previously submitted a Hazardous Materials Management Plan with the Truckee Meadows Fire Protection District and have no changes from the last report need only submit Part A. Those with changes since the last report need to submit Part A in addition to all other parts with changes. New applicants need to submit the entire report.

Part B – General Facility Site Plan

1. Using the sheet provided, draw a site plan of your facility showing the locations of the items listed below. Should you already have a site plan of your facility, you may substitute your drawing into the HMMP application. Please use the standard map symbols found on p. 7 of this application.

    a. All buildings and structures on the property.
    b. All internal roads and fire lanes on the property.
    c. Storm and sanitary sewer drains.
    d. Fire hydrants.
    e. Fire department connections (for fire sprinkler systems).
    f. External control valves (to shut the water off to fire sprinkler systems).
    g. Gates on fire department access routes.
    h. Indicate the northern direction.

    If you are submitting a drawing on your own paper, please print the business name, address and date the drawing was completed.

    If your facility is large, you may provide an overall site plan (small scale) followed by additional pages dividing the property into quadrants. Additional sheets are available at the end of this packet and may be duplicated as necessary.

Part C – Facility Storage and Use Map

1. Provide a floor plan of each building drawn to approximate scale and indicating northern direction. For those facilities storing or using

hazardous materials outside, provide a separate plan of the exterior storage and use areas. For large buildings, an overall plan of the building may be provided followed by additional plans (on a larger scale) dividing the building into quadrants.

2. Identify each storage or use area with the following designations:

    a. Indoor storage or use areas are to be indicated with the letters *IHM* (for Indoor Hazardous Materials) followed by a number starting with 1. (IHM 1, IHM 2, IHM 3, etc.)
    b. Outdoor storage or use areas are to be indicated with the letters *OHM* (for Outdoor Hazardous Materials) followed by a number starting with 1. (OHM 1, OHM 2, OHM 3, etc.)

    These designations are important in that they will be used in the Hazardous Materials Inventory Statement later in the submittal

3. Show the following on the Facility Storage and Use Map using the standard symbols found on p. 7 of this document:

    a. Access to each storage or use area (doors, ramps, stairs, etc.)
    b. Location of emergency equipment (fire sprinkler risers, indoor control valves for fire sprinklers, fire alarm control panels, interior fire hose valves, smoke control equipment, etc.)
    c. The location of any fire department key box (Knox Box).
    d. General purpose of rooms in the facility (storage room, break room, offices, manufacturing, retail sales, etc.)
    e. Location of all above ground and underground tanks, sumps, piping, etc.

Section II – Hazardous Materials Inventory Statement

Part A - Declaration

1. Fill out the appropriate information.

Part B – Inventory Statement

Note: The HMIS is a list of chemicals stored or used in a facility. A separate HMIS is required for each storage or use area indicated on the facility storage map (Section 1 Part C). A sample HMIS is included on p. 9 of this packet. Applicants who have completed a report for

the Nevada State Fire Marshal may substitute the current report for the TMFPD HMIS. However, the use or storage area designated in Section 1, Part C, Step 2 must be indicated next to each item on the state report (IHM 1, OHM 1, etc.)

1. Complete **business name and address**.

2. Complete **building number**, if there are multiple buildings. If not, enter "N/A"

3. Enter Permit Application Number (**PAC)** number if this HMIS submittal is in relation to a Building Safety Division application for new construction or remodeling permit. If none, enter "N/A"

4. Complete **business address**.

5. **Facility Map Page Number:** From Section 1 Part C, indicate the page number of the facility storage and use map plan corresponding to the chemicals listed.

6. **Facility Map Number:** From Section 1 Part C, each storage or use area is designated (IHM 1, OHM 3, etc). Place the designation of the area in which the listed chemicals are used or stored.

7. #: Number each separate chemical listed.

8. **MSDS:** Materials Safety Data Sheets, which you must obtain from your supplier, typically have manufacturer's product number at the top of the first page. If it does not, enter, " none."

9. **Chemical Name:** The scientific designation of a chemical according to accepted standards, or a name which will clearly identify a chemical for the purposes of evaluation.

10. **Concentration:** If the chemical is a solution, the percent of its concentration (for example, ispropanol anhydrous, 99%).

11. **CAS#:** Enter the CAS (chemical abstract service number) found in 29 CFR or on the MSDS. For mixtures, enter the CAS number of the mixture as a whole, if it has been assigned a number distinct from its components. For a chemical that has no CAS number, enter "none."

12. **Physical state:** Enter whether the material is a solid, liquid, or gas. (S, L,G)

13. **Physical class:** If the material has a physical hazard, enter (by code) the type of hazard. (See p. 8 of this packet for a list of hazards and assigned codes.) To determine physical hazards for the materials, consult the MSDS for the material and reference the definitions in the Fire Code. A material may have multiple physical hazards and may have both physical and health hazards. Definitions of these hazards are found on pp. 14-19 of this packet.

14. **Health Class:** If the material has a health hazard, enter (by code) the type of hazard. A material may have multiple health hazards and may have both physical and health hazards. See physical class above for more information. See p. 8 of this packet for a list of hazards and the assigned codes. Definitions of these hazards are found on pp. 14-19 of this packet.

15. **Container Size(s):** Indicate the size (or range of sizes) of containers.

16. **Storage Amount:** Maximum total quantity stored at one time in the identified control area. Does not include amount that is "in use." **NOTE:** For all amounts, solids will be measured in pounds, liquids in gallons, and gases in cubic feet.

17. **Use Amount (Open/Closed):** Maximum total quantity in use open and in use closed at one time in the identified control area. "Use" is defined as the placing in action or making available for service by opening or connecting anything utilized for confinement of material, whether a solid, liquid, or gas.

    - Use – closed system: Use of a solid or liquid hazardous material in a closed vessel or system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations and all uses of compressed gases. Example – product conveyed through a piping system into a closed vessel, system or piece of equipment.

    - Use – open system: Use of a solid or liquid hazardous material in a vessel or system that is continuously open to the atmosphere during normal operations and where the vapors are liberated, or the product is exposed to the atmosphere during normal operations. Example – dispensing from or into open containers and dip tank operations.

18. **NFPA 704:** Firefighter warning placard system. This is the "diamond" with blue (health), red (fire), yellow (reactivity), and white (other) fields

with numbers that indicate the hazard level of materials present in a building. Most MSDS will provide this information or you can reference the latest edition of NFPA 704 *Standard System for the Identification of the Hazards of Materials for Emergency Response.* Please note, two similar systems are currently in use, the NFPA 704 and the HMIS. Provide the information for the NFPA 704 system, not the HMIS system. See the information provided on pp. 10-13 of this packet for additional information and examples of the NFPA 704 system

19. Enter **Completed By**, **Title** and **Telephone Number**.

Provide copies of the Material Safety Data Sheet (MSDS) for each material with the submittal of the completed Hazardous Material Inventory Statement (HMIS).

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Hazardous Materials Inventory Statement – Classifications by Hazard

Note: A material with a primary classification within one class can also present a hazard in another class. Be sure to list all applicable hazards for each material.

Physical Hazards

CL2	Combustible liquid, Class II
CL3A	Combustible liquid, Class III-A
CL3B	Combustible liquid, Class III-B
CF	Combustible fiber
CR	Cryogenic, flammable or oxidizing
EXP	Explosive
FLS	Flammable solid
FG	Flammable gas
F1A	Flammable liquid, I-A
F1B	Flammable liquid, I-B
F1C	Flammable liquid, I-C
OPD	Organic peroxide, unclassified detonable
OP1	Organic Peroxide, Class I
OP2	Organic Peroxide, Class II
OP3	Organic Peroxide, Class III
OP4	Organic Peroxide, Class IV
OP5	Organic Peroxide, Class V
OX4	Oxidizer, Class 4
OX3	Oxidizer, Class 3
OX2	Oxidizer, Class 2
OX1	Oxidizer, Class 1
OG	Oxidizing Gas
PYR	Pyrophoric
UR4	Unstable (reactive), Class 4
UR3	Unstable (reactive), Class 3
UR2	Unstable (reactive), Class 2
UR1	Unstable (reactive), Class 1
WR1	Water reactive, Class 1
WR2	Water reactive, Class 2
WR3	Water reactive, Class 3

Health Hazards

COR	Corrosives
HTX	Highly toxics
IRR	Irritants
SEN	Sensitizers
OHH	Other health hazards
TOX	Toxics

TRUCKEE MEADOWS FIRE PROTECTION DISTRICT

Hazardous Materials Management Plan Instructions

HAZARDOUS MATERIAL INVENTORY STATEMENT EXAMPLE

Business Name: Your Business Name **Building #** **PAC #** 12345

Address: Your Address **Facility Map P #** 3 **Facility Map #:** IHM 2 Page 1 of 1

#	MSDS	Chemical Name Concentration	CAS #	Physical State	Physical Class	Health Class	Container Size(s)	Storage Amount	Use Amount Open	Use Amount Closed	N.F.P.A. 704 H	N.F.P.A. 704 F	N.F.P.A. 704 R	N.F.P.A. 704 O
1	89610	Isopropanol Anhydrous, 99%	000067-63-0	Liquid	F1A		4 oz cans	400 gal	0	0	1	3	0	-
2	None	Sulfuric Acid, 98%	7664-93-9	Liquid	WR1	COR/TOX	55 gal drums	200 gal	0	0	3	0	2	W
3	4410	Sodium Fluoride	7681-49-4	Solid		IRR/TOX	5 gal can	50 lbs	0	0	3	0	0	-
4	0009	Safety Wash	None	Liquid	CL2	IRR	1 to 5 gal cans	1 gal	0	0	0	1	0	-
5	352400	Hydraulic Oil-Blend:	None	Liquid	CL2		.25 gal bottles	55 gal	0	0	0	1	0	-
		Zinc Diakyldithiophosphate	68-649-42-3	Liquid	CL2	IRR					2	1	0	-
		Vinyl Acetate	108-05-4	Liquid	F1C/UR4	IRR					2	3	2	-
6	00717	Acetylene	74-86-2	Gas	FG/UR4		Gas cylinder	40 cu.ft.	0	20 cu.ft	0	4	2	-

Completed By: Your Name **Title:** Your Title **Telephone Number:** Your Telephone Number

NFPA 704 RATING SYSTEM

FLAMMABILITY: Read the **FIRE AND EXPLOSION HAZARD DATA** section of the MSDS and determine the rating (0-4) which best meets the product. Report the NFPA 704 RATING and all corresponding HAZARD CATEGORIES that apply on the Hazardous Materials Inventory Statement.

RATING	DESCRIPTION	HAZARD CATEGORY
4	Materials having flash points below 73 F and a boiling point less than 100 F. This would include materials that ignite spontaneously when exposed to air; also included are flammable gases and flammable cryogenic materials and Class I-A flammable liquids.	Combustible Dust Cryogenic Flammable Flammable Gas (gaseous or liquefied) Flammable Liquid I-A Organic Peroxide I Pyrophoric Gas
3	Materials having flash points below 73 F and having a boiling point at or above 100 F and those liquids having a flash point at or above 73 F and below 100 F. This would include Class I-B and Class I-C flammable liquids.	Combustible Fiber Flammable Liquid I-B Flammable Liquid I-C Organic Peroxide II Pyrophoric Solid or Liquid
2	Materials having flash points between 100 F and 200 F. This would include Class II and III-A combustible liquids.	Combustible Liquid II Combustible Liquid IIIA Flammable Solid Organic Peroxide III
1	Materials having flash points above 200 F. This includes Class III-B combustible liquids.	Combustible Liquid III-B Organic Peroxide IV
0	Materials that will not burn.	

NFPA 704 RATING SYSTEM

REACTIVITY: Read the **REACTIVITY DATA** section of the MSDS and determine the rating (0-4) which best meets the product. Report the NFPA 704 RATING and all corresponding HAZARD CATEGORIES that apply on the Hazardous Materials Inventory Statement.

RATING	DESCRIPTION	HAZARD CATEGORY
4	Materials that are readily able to detonate, or are of explosive decomposition or reactive at normal temperatures and pressures.	Explosives Organic Peroxide Unclassified, detonable Unstable Reactive Class 4 Unstable Reactive Class 3D
3	Materials capable of detonation or explosive decomposition or explosive reaction but require a strong initiating source or that must be heated under confinement.	Organic Peroxide I Organic Peroxide II Unstable Reactive Class 3N Water Reactive Class 3
2	Materials that readily undergo violent chemical change at elevated temperatures or pressures; this includes materials that may react violently with water or form potentially explosive mixtures with water.	Organic Peroxide III Unstable Reactive Class 2 Water Reactive Class 2
1	Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures; this includes materials that change or decompose on exposure to air, light, or moisture.	Organic Peroxide IV Unstable Reactive Class 1 Water Reactive Class 1
0	Materials that in themselves are normally stable even under fire conditions; this includes materials that do not react with water.	

NFPA 704 RATING SYSTEM

SPECIAL HAZARD: Read the **HEALTH HAZARD INFORMATION** section, the **FIRE AND EXPLOSION HAZARD DATA** section, and the **REACTIVITY DATA** section of the MSDS and determine the rating which best meets the product. Report the NFPA 704 RATING and all corresponding HAZARD CATEGORIES that apply on the Hazardous Materials Inventory Statement.

RATING	DESCRIPTION	HAZARD CATEGORY
— W	Water Reactive. Materials that react with water.	Water Reactive Class 3, 2, or 1
OX	Oxidizer. Materials with oxidizing properties.	Cryogenic Oxidizing Compressed Gas Oxidizing Liquefied Gas Oxidizing Oxidizer Class 4, 3, 2, or 1
RAD	Radioactive. Materials or combinations of materials that spontaneously emit ionizing radiation.	Radioactive
COR	Corrosive. Materials that cause visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.	Corrosive
UD	Unclassified Detonable. Materials that present an extremely high explosion hazard through rapid explosive decomposition and are regulated as explosive materials.	Unclassified Detonable
4D	Class 4 Detonable. Materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures.	Class 4 Detonable
3D	Class 3 Detonable. Materials that, in themselves, are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation.	Class 3 Detonable
3N	Class 3 Non-Detonable. Materials which explode or decompose explosively, but that do not detonate.	Class 3 Non-Detonable

Definitions

AEROSOL is a product which is dispensed from an aerosol container by a propellant. Aerosols shall be subdivided as follows:

- Class 1- the Chemical Heat of Combustion for the aerosol mixture is less than 8,600 Btu/lb. (20 kJ/g)
- Class 2- the Chemical Heat of Combustion for the aerosol mixture is greater than 8,600 Btu/lb. (20 kJ/g) and less than 13,000 Btu/lb. (30 kJ/g)
- Class 3- the Chemical Heat of Combustion for the aerosol mixture is greater than 13,000 Btu/lb. (30 kJ/g)

CARCINOGEN is any substance that causes the development of cancerous growths in living tissue. A chemical is considered to be a carcinogen if it:

- Has been evaluated by the International Agency for Research on Cancer (IARC) and found to be a carcinogen or potential carcinogen, or
- Is listed as a carcinogen or potential carcinogen in the latest edition of the Annual Report on Carcinogens published by the National Toxicology Program (NTP), or
- Is regulated by OSHA as a carcinogen.

Chemical mixtures (generally zero-prefixed CAS numbered items) will be indicated as being carcinogenic if the mixture contains a carcinogen in a concentration of 0.1% or more as indicated on the MSDS.

COMBUSTIBLE FIBERS are readily ignitable and free-burning fibers, such as cotton, sisal, henequen, ixtle, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled wastepaper, kapok, hay, straw, excelsior, Spanish moss and other like materials.

COMPRESSED GAS is a material, or mixture of materials, which is a gas at 68 °F (20ºC) or less at 14.7 psia (101.3 kPa) of pressure.

CONTROL AREA is a building or portion of a building within which the exempted amounts of hazardous materials are allowed to be stored, dispensed, used or handled.

CORROSIVE is a chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. A chemical is considered to be corrosive if, when tested on the skin of albino rabbits by the method described in the U.S. Department of Transportation in Appendix A to CFR 49 Part 173, it destroys or changes irreversibly the structure of the tissue at the site of contact following an exposure period of four hours. This term shall not refer to action on inanimate surfaces.

CONTROL AREA is a building or portion of a building within which the exempted amounts of hazardous materials are allowed to be stored, dispensed, used or handled.

CRYOGENIC FLUIDS is a fluid that has a normal boiling point below -150°F (-

101.1°C).

EXPLOSIVE/BLASTING AGENT

Explosive:

- A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure, or high temperatures, or
- A material or chemical, other than a blasting agent, that is commonly used or intended to be used for the purpose of producing an explosive effect.

Blasting Agent:

- A material or mixture consisting of a fuel and oxidizer intended for blasting, not otherwise classified as an explosive, in which none of the ingredients is classified as explosive, provided that the finished product as mixed and packaged for use
- or shipment cannot be detonated by means of a no. 8 test blasting cap when unconfined. Materials or mixtures classified as nitrocarbonitrates by DOT regulations are included in this definition.

FLAMMABLE GAS is a gas which at ambient temperature and pressure is flammable in mixture of 13 percent or less (by volume) with air, or the flammable range with air is wider than 12 percent, regardless of the lower limit.

FLAMMABLE LIQUEFIED GAS is a liquefied compressed gas which under the charged pressure is partially liquid at a temperature of 70 degrees Fahrenheit and which is flammable.

FLAMMABLE/COMBUSTIBLE LIQUIDS

FLAMMABLE LIQUID is any liquid having a flash point below 100 degrees Fahrenheit and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 degrees Fahrenheit. Class I liquids shall include those having flash points below 100 degrees Fahrenheit and may be subdivided as follows:

- CLASS I-A shall include those having flash points below 73 degrees Fahrenheit and having a boiling point below 100 degrees Fahrenheit.
- CLASS I-B shall include those having flash points below 73 degrees Fahrenheit and having a boiling point at or above 100 degrees Fahrenheit.

- CLASS I-C shall include those having flash points at or above 73 degrees Fahrenheit and below 100 degrees Fahrenheit.

COMBUSTIBLE LIQUID is a liquid having a flash point at or above 100 degrees F. (37.8C). Combustible liquids are subdivided as follows. The Category of Combustible

liquids does not include compressed gases or cryogenic fluids.

- Class II liquids are those having flash points at or above 100 degrees F. (37.8C) and below 140 degrees F. (60C).
- Class III-A liquids are those having flash points at or above 140 degrees F (60C) and below 200 degrees F. (93.3C).
- Class III-B liquids are those liquids having flash points at or above 200 degrees F. (93.3C).

FLAMMABLE SOLID is a solid substance, other than one which is defined in this article as a blasting agent or explosive, that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or as a result of retained heat from manufacture, or which has an ignition temperature below 212 degrees Fahrenheit, or which burns so vigorously or persistently when ignited so as to create a serious hazard. Finely divided solid materials which when dispersed in air as a cloud may be ignited and cause an explosion are flammable solids. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites one-tenth of an inch per second along its

HIGHLY TOXIC MATERIAL is a material which produces a lethal dose or lethal concentration which falls within any of the following categories:

- A chemical that has a median lethal dose (LD50) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 or 300 grams each.
- A chemical that has a median lethal dose (LD50) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
- A chemical that has a median lethal concentration (LC50) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

Mixtures of these materials with ordinary materials, such as water, may not warrant a classification of highly toxic. While this system is basically simple in application, any hazard evaluation which is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.

IRRITANT is a chemical which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41 for four hours' exposure or by other appropriate techniques, it results in an empirical score of 5 or more. A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.

LIQUEFIED PETROLEUM GAS (LP-gas) is a material which is composed predominantly of the following hydrocarbons or mixtures of them: propane, propylene, butane (normal butane or isobutane) and butylenes.

ORGANIC PEROXIDE is an organic compound that contains the bivalent -0-0- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms have been replaced by an organic radical.

- CLASS I peroxides are capable of deflagration, but not detonation. These peroxides present a high explosion hazard through rapid decomposition.
- CLASS II peroxides burn very rapidly and present a severe reactivity hazard.
- CLASS III peroxides burn rapidly and present a moderate reactivity hazard.
- CLASS IV peroxides burn in the same manner as ordinary combustibles and present minimum reactivity hazard.
- UNCLASSIFIED (DETONATABLE) PEROXIDES are peroxides which are capable of detonation. These peroxides present an extremely high explosion hazard through rapid explosive decomposition and are regulated in accordance with the provisions of Article 77 for Class A explosives.

OTHER HEALTH HAZARDS Target organ toxins - substances which cause damage to particular organs or systems. Including: hepatoxins, nephrotoxins, neurotoxins, blood or hematopopoistic system toxins, pulmonary damaging agents, reproductive toxins, cutaneous and eye hazards not classified as irritant or corrosive.

As defined in the 1993 Supplement to the Uniform Codes OTHER HEALTH HAZARD MATERIAL is a hazardous material which affects target organs of the body, including, but not limited to, those materials which produce liver damage, kidney damage, damage to the nervous system, act on the blood to decrease hemoglobin function, deprive body tissue of oxygen, or affect reproductive capabilities, including mutations (chromosomal damage) or teratogens (affect on fetuses).

OXIDIZER is a chemical other than a blasting agent or explosive as defined in 29 CFR 1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

- CLASS 1 An oxidizer whose primary hazard is that it slightly increases the burning rate but does not cause spontaneous ignition when it comes in contact with combustible materials.
- CLASS 2 An oxidizer that will cause a moderate increase in the burning rate or that may cause spontaneous ignition of combustible materials with which it comes in contact.
- CLASS 3 An oxidizer that will cause a severe increase in the burning rate of combustible materials with which it comes in contact or that will undergo vigorous self-sustained decomposition due to contamination or exposure to heat.
- CLASS 4 An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock. In addition, the oxidizer will enhance the

burning rate and may cause spontaneous ignition of combustibles.

PYROPHORIC is a chemical that will spontaneously ignite in air or below a temperature of 130 degrees Fahrenheit (54.4 degrees Centigrade).

RADIOACTIVE MATERIAL is any material or combination of materials that spontaneously emits ionizing radiation.

SENSITIZER is a chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

TOXIC MATERIAL is a material which produces a lethal dose or a lethal concentration within any of the following categories:

- A chemical or substance that has a median lethal dose (LD50) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
- (b) A chemical or substance that has a median lethal dose (LD50) of more than 200 milligrams per kilogram but not more than 1000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.
- (c) A chemical or substance that has a median lethal concentration (LC50) in air more than 200 parts per million but not more than 2000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

NOTE: Mixtures of these materials with ordinary materials, such as water, may not warrant a classification of highly toxic. While this system is basically simple in application, any hazard evaluation which is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.

UNSTABLE REACTIVE is a chemical which in the pure state or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shock pressure and temperature.

- CLASS 1 materials which in themselves are normally stable but which can become unstable at elevated temperatures and pressures.
- CLASS 2 materials which in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This degree should include materials which can undergo chemical change with rapid release of energy at normal temperatures and pressures and which can undergo violent chemical change at

elevated temperatures and pressures.

- CLASS 3 materials which in themselves are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This degree should include

  materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures.
- CLASS 4 materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This class should include materials which are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

WATER REACTIVE means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

- CLASS 1 materials which may react with water with some release of energy but not violently.
- CLASS 2 materials which may form potentially explosive mixtures with water.

CLASS 3 materials which react explosively with water without requiring heat or confinement.

The following pages are provided for facilities requiring multiple pages for the HMIS, and the HMMP. Should the applicant require additional pages, the following sheets may be duplicated as necessary.