INSTRUCTIONS FOR COMPLETING CHEMICAL SURVEY FORM:

The two page chemical survey form is designed so that the City can comply with MIOSHA requirements and ensure that all applicable codes are met prior to issuing certificates of occupancy. The form is divided into four columns;

1. Chemical Type: This column classifies chemicals by the hazard that they present. Definitions of each chemical classification are below. Chemicals produced, stored, or disposed of in connection with your business must be included on the Chemical Survey form. The following materials are exempt and do not need to be reported on the form:

- The quantities of alcoholic beverages, medicines, foodstuffs, cosmetics, and consumer or industrial products containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, in retail or wholesale sales occupancies, are unlimited when packaged in individual containers not exceeding 1.3 gallons (5 L).
- Refrigeration systems
- Stationary lead-acid batteries used for facility standby power, emergency power, or uninterrupted power supply as regulated by Section 608 of the International Fire Code.
- Corrosives utilized in personal and household products in the manufacturer's original consumer packaging in Group M occupancies. (ie: cleaning supplies)
- The storage of distilled spirits and wines in wooden barrels and casks.

2. Max. Quantity On Hand: For each class of hazardous chemical, specify the maximum quantity or peak inventory of that chemical class that will ever be on site at one time. If you do not have a particular type of chemical, please indicate "0" or "None" in this column. If you have any chemicals of the listed type then you must indicate the maximum quantity or peak inventory of that chemical with a number and a measurement , such as "2000 gallons" or "500 pounds". You may estimate the amount as closely as possible. Responding with a check mark, line, "X", or non-specific description such as "small quantity" is not acceptable and businesses responding in this manner will be referred to MIOSHA for non-compliance with reporting requirements.

3. Container Type & Volume: Specify what types of containers are used for storage of chemicals and how much material those containers can hold. If you have multiple types of containers, please use the Additional Comments portion of the form and clearly indicate which chemicals are stored in which containers. MIOSHA requires that compressed gas cylinders show volume in water capacity, and a conversion chart is included at the end of these directions to help you calculate the water capacity of your compressed gas cylinders. The Fire Department exempts small quantities of compressed gas cylinders used to fuel fork-lifts, please list the number of fork-lift cylinders in the additional comments section and note how much flammable gas is stored in those cylinders. Container examples: 55 gallon drums, Type B gas cylinder.

4. Max. Storage Height: Indicate the maximum height, expressed in feet and inches, at which the chemical will be stored**.** For shelving or racks, this is measured from the floor to the TOP of the topmost container on the highest shelf or rack (not just to the height of the top shelf). For materials stored in piles, it is measured from the floor to the TOP of the pile.

APPLICATION FEE:

Based upon the amount of chemicals reported on your chemical survey form, an application fee will be assessed and an invoice will be sent to you. If you have no chemicals of any type listed on the survey form then no fee will be assessed, however you are still required to complete the Disclosure and permit Application Form and the Chemical Survey Form.

If a Site Specific Plan is required due to the amount of chemicals on site, the forms for completion of a Site Specific Plan will be sent with your invoice. If you have completed a Site Specific Plan within the last five years a new Site Specific Plan will not be required.

FAILURE TO FILE CHEMICAL SURVEY AND APPLICATION FORMS:

Businesses that fail to file a chemical survey form and application or waiver form as required shall be reported to MIOSHA for enforcement action.

MATERIAL DEFINITIONS:

- **Explosives and Blasting Agents:** Does not include Class C explosives. "Explosive" means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected sudden shock, pressure, or high temperature. "Blasting Agent" means a material designed for blasting. It must be so insensitive that there is very little probability of 1) accidental explosion, or 2) going from burning to detonation.
- **Consumer Fireworks:** Class 1.3G (formerly Class C, Common Fireworks) fireworks which are small devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion.
- **Highly Toxic Materials (gas, liquid or solid):** A chemical that has a median lethal dose of 1) 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each, or 2) 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each, or 3) 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) to albino rats weighing between 200 and 300 grams each.
- **Toxic Materials (gas, liquid, or solid):** A chemical that has a median lethal dose of more than 1) 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, or 2) 200 milligrams or less per kilogram, but not more than 1000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each, or 3) 200 parts per million but not more than 2000 parts per million in air 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) to albino rats weighing between 200 and 300 grams each.
- **Flammable Gas:** A gas that can burn with the evolution of heat and flame. Flammable compressed gas is any compressed gas of which; 1) a mixture of 13 percent or less (by volume) with air is flammable, or 2) the flammable range with air is under 12 percent.
- **Non-Flammable Gas:** Any compressed gas other than a flammable compressed gas.

- **Flammable Liquid:** Any liquid having a flashpoint below 100 degrees F (38 degrees C), except any mixture having components with flashpoints of 100 degrees F or higher, the total of which makes up 99 percent or more of the total volume of the mixture.
- **Combination Flammable Liquid:** A combination or mixture of liquids with a flash point below 100 degrees F (38 degrees C).
- **Combustible Liquid:** A liquid having a flash point at or above 100 degrees F (38 degrees C). The category of combustible liquid does not include compressed gasses or cryogenic fluids.
- **Flammable Solid:** A solid, other than a blasting agent or explosive, that is capable of causing fire through friction, absorption, or moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which has an ignition temperature below 212 degrees F (100 degrees C) or which burns so vigorously and persistently when ignited as to create a serious hazard. A chemical shall be considered a flammable solid as determined in accordance with the test method of CPSC16 CFR; Part 1500.44, if it ignites and burns with a self-sustained flame at a rate greater than 0.1 inch (2.5mm) per second along its major axis.
- **Cryogenic Flammable:** A fluid having a boiling point lower than -130 degrees F (-89.9 degrees C) at 14.7 PSI atmosphere that is flammable in its vapor state.
- **Pyrophoric/Spontaneously Combustible Material:** A substance which may undergo spontaneous heating or self-burning under normal transportation conditions or a chemical with an autoignition temperature at or below 130 degrees F (54 degrees C) in air.
- **Oxidizer:** A chemical that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gasses. Examples being: chlorate, permanganate, inorganic peroxide, or a nitrate that yields oxygen readily.
- **Oxidizing Gas:** A gas that can support and accelerate combustion of other materials.
- **Cryogenic Oxidizing:** A fluid having a boiling point lower than -130 degrees F (-89.9 degrees C) at 14.7 PSI atmosphere that readily yields oxygen or other oxidizing gas.
- **Irritating Material, Liquid and Solid:** A liquid or solid substance which, upon contact with fire or air, gives off dangerous or intensely irritating fumes.
- **Corrosives, Liquid and Solid:** Any liquid or solid that causes visible destruction or irreversible damage to human skin tissue. Also, it may be a liquid that has a severe corrosion rate on steel.
- **Unstable, Reactive:** A material, other than an explosive, which in the pure state or as commercially produced, will vigorously polymerize, decompose, condense or become self-reactive and undergo other violent chemical changes, including explosion, when exposed to heat, friction or shock, or in the absence of an inhibitor, or in the presence of contaminants, or in contact with incompatible materials.
- **Water Reactive:** A material, other than an explosive, which in the pure state or as commercially produced, will vigorously polymerize, decompose, condense or become self-reactive and undergo other violent chemical changes, including explosion, when exposed to water.
- **Radioactive Material (Yellow 111 Label):** Any material, or combination of materials, that spontaneously gives off ionizing radiation.
- **Organic Peroxide:** 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 has been replaced by an organic radical.
- **Know Human Carcinogen:** A chemical that 1) has been evaluated by the International Agency for Research on Cancer (IARC) and found to be a carcinogen or potential carcinogen, or 2) it is listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP)(latest edition), or 3) it is regulated by OSHA as a carcinogen.

- **Combustible Fiber:** Readily ignitable and free-burning materials in a fibrous or shredded form, such as cocoa fiber, cloth, cotton, excelsior, hay, hemp, or similar materials.

Reference Chart for Compressed Gas Cylinders:

Cylinder Size	Nominal Size	Water Capacity (gallons)	Volume (cubic feet*)	US DOT Specs
LB	2"X15"	0.12	0.016	3E1800
QT	3"X14"	0.24	0.0318	4B240ET
XL	14.5"X50"	28.54	3.83	4BA240
XG	15"X56"	33.38	4.46	4AA480
BL	7.25"X39"	4.15	0.55	3AL2216
B	8.5"X31"	4.55	0.61	3AA2015
SSB	8"X37"	4.99	0.67	3A1800
D	4"X8"	0.59	0.08	3AA2015
LP5	12.25"X18.25"	5.73	0.76	4BW240
AL	8"X53"	7.8	1.04	3AL2015
10S	4"X31"	2.19	0.13	3A1800
E	4"X26"	1.19	0.16	3AA2015
A	9"X56"	11.57	1.55	3AA2015
K	9.25"X60"	13.19	1.76	3AA2400
CL	6.9"X21"	1.56	0.21	3AL2216
XM	10"X49"	14.35	1.92	3A480
XP	10"X55"	14.72	1.98	4BA300
C	6"X24"	1.82	0.24	3AA2015
XF	12"X46"	16.09	2.15	8AL
*Volume in cubic feet at 70 degrees Fahrenheit (21 degrees Celcius) at one atmosphere pressure				