STATE OF CALIFORNIA - STATE AND CONSUMER SERVICES AGENCY ARNOLD SCHWARZENEGGER, Governor

CALIFORNIA BUILDING STANDARDS COMMISSION
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833
(916) 263-0916 FAX (916) 263-0959

December 15, 2010

Bill Bruckart, Building Official
City of Campbell
70 North First Street
Campbell, CA 95008

Dear Mr. Bruckart,

This is to acknowledge receipt of the City of Campbell submittal pertaining to Ordinance No. 2129 with findings on December 13, 2010. As the law states, no local modification or change to the California Building Standards Code (Code) shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission (the Commission).

As a reminder, local modifications are specific to a particular edition of the Code. They must be readopted and filed with the Commission in order to remain in effect when the next triennial edition of the Code is published. In addition, should you receive Fire Protection District ordinances for ratification, it is required to submit the ratified ordinances to the Department of Housing and Community Development [H&SC Section 13869.7(c)], attention State Housing Law Program Manager, rather than the Commission.

This letter attests only to the filing of these local modifications with the Commission, which is not authorized by law to determine the merit of the filing. If you have any questions or need any further information, you may contact me at (916) 263-0916.

Sincerely,

Jane G. Taylor
Senior Architect

cc: Chron
Local Filings

MEMORANDUM

CITY OF CAMPBELL

City Clerk's Office

To: Bill Bruckart, Building Official **Date:** November 5, 2010

From: Wendy Wood, Deputy City Clerk

Subject: **Ordinance Amending Titles: 1,17 and 18 of the Campbell Municipal Code**

At its regular meeting of November 1, 2010, the City Council took the following actions:

1. Introduced Ordinance 2139 amending Title 1, 17 and 18 of the Campbell Municipal Code adopting the 2009 editions of the International Fire Code and Building Code as amended by the State of California in the 2010 Title 24 California Building Regulations and amended by the City of Campbell with correction to the date in section 1.01.010 of the Ordinance. Second reading of Ordinance 2139 is scheduled for the City Council meeting on November 16, 2010.
2. Adopted Resolution 11231 making the appropriate findings for making local amendments to Parts 1 through 12 of the 2010 Title 24 California Building Regulations.

A Certified copy of Resolution 11231 is attached for your records.

RESOLUTION NO. 11231

BEING A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CAMPBELL ADOPTING FINDINGS FOR LOCAL AMENDMENTS TO THE 2010 TITLE 24 CALIFORNIA BUILDING CODE REGULATIONS.

WHEREAS, PERIODICALLY THE State amends the building and fire codes incorporating new standards for building construction and fire safety necessary to protect the public's health, safety and well being; and

WHEREAS, the City Council has determined that the 2010 editions of the California State Building Standards including the California State Green building Standards as amended by the City Council, and the California State Fire Code are in the best interest of protecting the public's health and safety, and preserving and protecting the environment; and

WHEREAS, State law requires local jurisdictions to make a Statement of Findings for local government amendments to the 2010 California Building and Fire Code Standards.

NOW, THEREFORE, BE IT RESOLVED that the City of Campbell City Council does hereby adopt the Statement of Findings for local amendments as required by the State of California as stated in Exhibit A.

PASSED AND ADOPTED this 1st day of November, 2010, by the following roll call vote:

AYES:	Councilmembers:	Kotowski, Furtado, Baker, Low
NOES:	Councilmembers:	None
ABSTAINED:	Councilmembers:	None
ABSENT:	Councilmembers:	Kennedy

APPROVED: _____
Evan Low, Mayor

ATTEST: _____
Anne Bybee, City Clerk

THE FOREGOING INSTRUMENT IS A TRUE AND CORRECT COPY OF THE ORIGINAL ON FILE IN THIS OFFICE.
ATTEST: ANNE BYBEE, CITY CLERK
CITY OF CAMPBELL, CA
BY _____ Deputy City Clerk
DATED 11/9/10

EXHIBIT A

City of Campbell

Building Inspection Division
Phone: (408) 866-2130

70 North First Street
Campbell, CA 95008

Statement of Findings
On Local Government Amendments

Local Government Amendments to the 2010 California Code of Regulations, Title 24 (CCR, T-24) and the 2010 California Fire Code, incorporating the 2009 International Building Code, published by the International Code Conference (ICC), and the 2009 Uniform Plumbing and Mechanical Codes, published by the International Association of Plumbing and Mechanical Officials (IAPMO), and the 2008 National Electrical Code, published by the National Fire Protection Association (NFPA), and the 2009 International Fire Code, published by the International Code Conference (ICC), as adopted into the City of Campbell, Municipal Code in January 2011.

The following amendments with express findings are provided in compliance with the laws of the State of California.

---

1. *(c) Section 1613.8 is added to Section 1613 to read as follows:*

1613.8 ASCE 7, Section 12.8.7. Modify ASCE 7 12.8.7 by amending Equation 12.8-16 as follows:

$$\Theta = \frac{P_x \Delta I}{V_x h_{sx} C_d} \qquad (12.8\text{-}16)$$

Finding:

The amendment to Section 1613.8 is necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life.

2. *(d) Section 1704.4 Concrete Construction. Shall be modified to read:*

The special inspections and verifications for concrete construction shall be as required by this section and TABLE 1704.4.

Exceptions: Special inspections shall not be required for:

1. *Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock, where the structural design of the footing is based on a specified compressive strength, f'c, no greater than 2,500 pouds per square inch (psi) (17.2 Mpa).*

Finding:

The amendment to Section 1704.4 is necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life.

3. *(e) Section 1908.1.8, ACI 318 Section 22.10.1. Delete ACI 318, Section 22.10, and replace with the following:*

22.10 - Plain concrete in structures assigned to seismic design category C, D, E or F.
22.10.1- Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows: ~~Structural plain concrete basement, foundation or other walls below the base are permitted in detached one and two-family dwellings three stories or less in height constructed with stud bearing walls. In dwellings assigned to seismic design category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than $7^{1}/_{2}$ inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 22.6.6.5.~~

(a) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

Exception: In detached one and two-family dwelling three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.

(b) Plain concrete footing supporting walls are permitted, provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. ~~For footings that exceed 8" inches (203 mm) in thickness,~~ A minimum of

one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exception:

1. *~~1.~~ In detached one and two-family dwellings three stores or less in height and constructed with stud bearing walls, plain concrete footings ~~without longitudinal reinforcement supporting walls are permitted.~~ with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross –sectional area of the footing.*
2. *~~For foundations system consisting of a plain concrete stem wall a minimum of one bar shall be provided at the top of the stem wall and at the bottom of the footing.~~*
3. *~~Where a slab on ground is cast monolithically with the footing, on no. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.~~*

Finding:

The amendment to Section 1908.1.8 is necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life. The proposed amendment addresses the problem of poor performance of plain or under-reinforced concrete footings during a seismic event. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance of plain and under-reinforced concrete footings observed in the 1994 Northridge earthquake

4. (f) Section 1910.1 General shall be amended to insert the following sentence; "The slab shall be reinforced with not less than 6"X6", 10 gauge wire mesh or an approved alternate installed at mid-height of the slab." following the first sentence of the section.

Finding:

The amendments to Section 1910.1 are necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life.

5. *(g) Section 2308.9.3* is amended by deleting Item Numbers 5 and 7. ~~adding the following to Item Number 7 at the end of that sentence: "Limited to single story R-3 and U-1 occupancies."~~

Finding:

The amendments to Section 2308.9.3 are necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life.

6. (h) Chapter 31, Section 3109.4.1 is amended to read: "The top of the barrier shall be at least *60 inches (1524 mm)* above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure, and the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

Finding:

The amendment to Section 3109.4.1 is necessary because the City of Campbell has typical warm summer climate, causing the construction and installation of a significant number of in-ground swimming pools. This section as amended will contribute to preventing injury and or death to children who are tempted to make unauthorized access to swimming pools.

7. *(d) Section R313.1 is amended to read:*

R313.1 Townhouse automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in all new townhouses <u>and in existing townhouses when additions are made that increase the building area to more than 3,600 square feet.</u>

<u>Exception: A one-time addition to an existing building that does not total more than 1000 square feet of building area.</u>

8. *(e) Section R313.2 is amended to read:*

R313.2 One- and two-family dwellings automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in one- and two-family dwellings as follows:

1. *In all new one- and two-family dwellings and in existing one- and two-family dwellings when additions are made that increase the building area to more than 3,600 square feet.*

Exception: A one-time addition to an existing building that does not total more than 1000 square feet of building area.

2. *In all new basements and in existing basements that are expanded.*

Exception: Existing basements that are expanded by not more than 50%.

9. (d) *Section R403.1.3 Seismic Reinforcing, first paragraph, shall be amended to read: "Concrete footings located in Seismic Design Categories D_0, D_1 and D_2, as established in Table R301.2(1), shall have minimum reinforcement of at least two continuous longitudinal reinforcing bars not smaller than No. 4 bars. Bottom reinforcement shall be located a minimum of 3 inches (76 MM) clear from the bottom of the footing."*

Finding:

The amendment to Section R403.1.3 is necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life. The proposed amendment addresses the problem of poor performance of plain or under-reinforced concrete footings during a seismic event.. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance of plain and under-reinforced concrete footings observed in the 1994 Northridge earthquake

10. (e) *Section R506.1 General, shall be amended to add the following sentence;*

"The slab shall be reinforced with not less than 6"X6", 10 gauge wire mesh or an approved alternate installed at mid-height of the slab." Following the first sentence of the section.

Finding:

The amendment to Section R506.1 is necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life.

11. (e) *Table R602.10.1.2 (2), Add new footnote 'd' to the end of Table R602.10.1.2(2), to read:*
d. In Seismic Design Categories D_0 D_1 and D_2, Methods GB and PCB are not permitted.

Finding:

The amendment to Table R602.1.2 (2) is necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life.

12. (g) *Section R602.10.2.1, shall add new subsection R602.10.2.1.1, to read: "Limits on methods GB and PCP. In Seismic Design Categories D_0, D_1 and D_2, Methods GB is not permitted for use as intermittent braced wall panels, but gypsum board is permitted to be installed when required by this Section to be placed on the opposite side of the studs from other types of braced wall panel sheathing. In Seismic Design Categories D_0, D_1 and D_2, the use of Method PCP is not permitted.*

Finding:

The amendments to Section R602.10.1 is necessary because the City of Campbell is located in a region subject to significant seismic activity. This section as amended will contribute to preventing building failures due to earthquakes and prevent injury and loss of life.

13. (h) *Appendix G, Swimming Pools, Spas and Hot Tubs, Section AG105 Barrier Requirements, AG105.2 Outdoor swimming pool, Subsection (1)shall be amended to read: "The top of the barrier shall be at least 60 inches (1524 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be a ground level or mounted on top of the pool structure, and the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).*

Finding:

The amendment to Appendix G, Section AG105.2 is necessary because the City of Campbell has typical warm summer climate, causing the construction and installation of a significant number of in-ground swimming pools. This section as

amended will contribute to preventing injury and or death to children who are tempted to make unauthorized access to swimming pools.

14. International Property Maintenance Code, Section 303 Swimming Pools, Spas and Hot Tubs, Subsection 303.2 Enclosures. Is amended to read: "Private swimming polls, hot tubs and spas, containing water more than 24 inches (610 mm) in depth shall be completely surrounded by a fence or barrier at least 60 inches (1524 mm) in height above the finished ground level measured on the side of the barrier away from the pool".

Finding:

The amendment to Section 303 is necessary because the City of Campbell has typical warm summer climate, causing the construction and installation of a significant number of in-ground swimming pools. This section as amended will contribute to preventing injury and or death to children who are tempted to make unauthorized access to swimming pools.

15. California Code of Regulations Title 24, Part 11: *Section 101.3 Scope. Shall be amended to read: The provisions of this code shall apply to the planning, design operation, construction, use and occupancy of every newly constructed building or structure, unless otherwise indicated in the code, throughout the State of California.*

In the City of Campbell, the provisions of this code, chapter 5 shall apply to all non-residential remodels and tenant improvements provided all of the following conditions are present:

*i. Two of four building systems are modified **
ii. Project is greater than 10,000 sq ft.
iii. Project is greater than $1 million in permit valuation as determined by the Building Official

** the four systems include: envelope, lighting, interior services and HVAC*

It is not the intent that this code substitute or be identified as meeting the certification requirements of any green building program.

Finding:

The amendment to Section 101.3 requiring the inclusion of qualifying commercial remodels and tenant improvements to comply with mandatory nonresidential standards is based upon demonstrated significant positive effects on energy and resource efficiency, waste and pollution generation, and the health and productivity of a building's occupants over the life of the building. Significant reductions to local landfills as a result of required waste recycling. Reductions in green house gas emissions will result in improved climate in the Santa Clara Valley.

16. *Section 101.3.1 State-regulated buildings, structures and applications, sub-section (3) shall be changed to read: Low-rise residential buildings constructed throughout the State of California, and all residential buildings in the City of Campbell, including but not limited to, hotels, motels, lodging houses, apartment houses, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilets or cooking facilities regulated by the Department of Housing and Community Development. See Section 104 for additional scoping provisions.*

Finding:

The inclusion of all new residential construction to comply with mandatory residential standards is based upon demonstrated significant positive effects on energy and resource efficiency, waste and pollution generation, and the health and productivity of a building's occupants over the life of the building. Significant reductions to local landfills as a result of required waste recycling. Reductions in green house gas emissions will result in improved climate in the Santa Clara Valley.

17. *Section 102.3 Verification. Shall be modified to read: Prior to final building inspection and occupancy for projects included in this chapter, documentation of conformance for applicable green building measures shall be provided to the enforcing agency. Alternate methods of documentation shall be acceptable when the enforcing agency finds that the proposed alternate documentation is satisfactory to demonstrate substantial conformance with the intent of the proposed green building measure. When required by the Building Official, a qualified independent green building professional shall provide evidence of adequate green building compliance or documentation to the Building Official to satisfy the requirements of compliance for residential and non-residential projects covered under this chapter. The building Official shall make the final determination whether a project meets the requirements of this chapter.*

Finding:

This amendment will insure better enforcement of the adopted standards and produce better health, less waste and cleaner air as a direct result.

Statement of Findings for Local Government Amendments
2010 California Fire Code

The amendments to the California Fire Code sections listed below are necessary because Campbell is located in a region subject to significant seismic activity. A large seismic event may initiate numerous fires and calls for emergency assistance within the City. The amendments to the listed sections provide additional safeguards for Fire Department personnel and increase the effectiveness of suppression operations and emergency responses since available fire fighting resources will be diminished during a City-wide disaster.

316.6
503.1
503.1.1
503.2.1
504.4
510.1.1
1411.1

The amendments to the California Fire Code sections listed below are necessary because Campbell is located in a region subject to significant seismic activity. A large seismic event will likely initiate numerous structure fires within the City. The amendments to the listed sections will, over time, increase the number of sprinkler-protected properties and improve the level of sprinkler protection in those structures. Fire sprinkler protected buildings will be less susceptible to destruction by earthquake-caused fires as responses by fire suppression crews may be significantly delayed during a major City-wide seismic event.

903.2
903.3.1.1
903.3.1.2
903.3.1.3

The amendments to the sections listed below are necessary because Campbell is located in a region subject to significant seismic activity. Should a significant seismic event occur, hazardous materials releases could pose significant threats to both the commercial and the adjacent residential areas. Should a major seismic event occur, local emergency response resources would be seriously impacted and maybe unavailable to effectively respond to all incidents. These amendments will reduce the hazardous materials release potential through enhanced containment, detection and/or suppression facilities, equipment and systems.

1802
2701.2.2.2
2703.1.3.1
2703.1.5
2703.1.6

2703.2.2.1
2703.2.2.2
2703.5.2
2703.5.3
2703.9.8
2703.9.11
2704.2.1
2704.2.2
2705.4.4
3103
3404.2.7.5.8
3404.2.7.5.9
3701.3
3702
3704.1.4
3704.1.5
3704.1.6
3704.1.7
3704.1.9
3704.1.10
3704.1.11
3704.1.12
3704.1.16
3704.1.17
3704.2
3704.2 Table
3704.2.1
3704.2.1.1
3704.2.2
3704.2.2.7
3704.2.2.10.1
3704.3
3704.3 Table
3704.3.1
3704.3.1.1
3704.3.3
4105.3.1

City of Campbell 2010 California Fire Code Amendments

SECTION 105

PERMITS

Section 105.6.8 is amended to read as follows:

105.6.8 Compressed Gases. An operational permit is required for the storage, use or handling at normal temperature and pressure (NPT) of compressed gases in excess of the amounts listed in Table 105.6.8, to install any piped distribution system for compressed gases, or to install a non-flammable medical gas manifold system. A permit is required to install, repair, abandon, remove, place temporarily out of service, close or substantially modify a compressed gas system.

Exceptions:

1. Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.

2. Routine maintenance.

3. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

4. Inert and simple asphyxiants at or below the amounts listed in Table 105-A.

The permit applicant shall apply for approval to close storage, use or handling facilities at least 30 days prior to the termination of the storage, use or handling of compressed or liquefied gases. Such application shall include any change or alteration of the facility closure plan. This 30-day period may be waived by the chief if there are special circumstances requiring such waiver.

Amend Table 105.6.8 to read:

TABLE 105.6.8
PERMIT AMOUNTS FOR COMPRESSED GASES[1]

TYPE OF GAS	AMOUNT(cubic

	feet)[2] X 0.0283 for m^3
Corrosive	200
Flammable (except cryogenic and liquefied petroleum gases)	200
Highly toxic	Any amount
Inert and simple asphyxiant	6,000
Irritant	200
Moderately toxic	20
Other health hazards	650
Oxidizing (including oxygen)	504
Pyrophoric	Any amount
Radioactive	Any amount
Sensitizer	200
Toxic	Any Amount
Unstable (reactive)	Any amount

[1] Refer to Chapters 27, 30, 32, 35, 37, 40 and 41 for additional requirements and exceptions.

[2] Cubic feet measured at normal Temperature and pressure.

Section 105.6.10 is amended to read as follows:

105.6.10 Cryogenic fluids. An operational permit is required to produce, store transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed in Table 105.6.10 or to install a cryogenic vessel or piping system for the storage or distribution of cryogens.

Exception: Permits are not required for vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.

Amend Table 105.6.20 to read:

TABLE 105.6.20
PERMIT AMOUNTS FOR HAZARDOUS MATERIALS[1]

TYPE OF MATERIAL	AMOUNT
Carcinogens	10 pounds
Combustible liquids	See Section 105.6.16
Corrosive materials:	

Gases Liquids Solids	See Section 105.6.8 55 gallons 500 pounds
Cryogens	See Section 105.6.10
Explosive materials	See Section 105.6.14
Flammable materials: Gases Liquids Solids	 See Section 105.6.8 See Section 105.6.16 10 pounds
Highly toxic materials: Gases Liquids Solids	 Any amount Any amount Any amount
Moderately toxic gas	20 cubic feet
Organic peroxides: Liquids: Class I-IV Liquids: Class V Solids: Class I-IV Solids: Class V	 Any Amount No Permit Required Any Amount No Permit Required
Oxidizing materials: Gases Liquids Solids:	 504 Cubic Feet Any amount Any amount
Other health hazards: Liquids Solids	 55 gallons 500 pounds
Pyrophoric materials: Gases Liquids Solids	 Any amount Any amount Any amount
Radioactive materials: Gases Liquids Solids	 Any Amount See Section 105.6.47 See Section 105.6.47

Toxic materials:	
Gases	Any amount
Liquids	Any amount
Solids	Any amount
Unstable (reactive) materials:	
Gases	Any amount
Liquids	Any amount
Solids	Any amount
Water reactive materials:	
Liquids	Any amount
Solids	Any amount

[1] See Article 80 for additional requirements and exceptions.

For SI: 1 gallon = 3.785 L, 1 pound = 0.454kg.

a. 20 gallons when Table 2703.1.1(1) Note k applies and hazard identification signs in accordance with Section 2703.5 are provided for quantities of 20 gallons or less.

b. 200 pounds when Table 2703.1.1(1) Note k applies and hazard identification signs in accordance with Section 2703.5 are provided for quantities of 200 pounds or less.

Section 105.6.48 is added to read as follows:

105.6.48 Day care facility. An operational permit is required to operate a business as a day care facility for more than 6 people.

Section 105.6.49 is added to read as follows:

105.6.49 Institutional. A permit is required to operate, maintain, or use any institutional type occupancy. For the purpose of this Section, an institution shall be, but is not limited to: hospitals, children's home, home or institution for insane or mentally retarded persons, home or institution for the care of aged or senile persons, sanitarium, nursing or convalescent home, certified family care homes, residential care homes for the elderly, out of home placement facilities, halfway house, and day care nurseries or similar facility of any capacity.

SECTION 106

INSPECTIONS

Section 106.5 is added to read as follows:

106.5 Final Inspection. No final inspection as to all or any portion of a development shall be deemed completed until the installation of the required fire protection facilities and access ways have been completed and approved. No final certificate of occupancy may be granted until the Fire Department issues notice of final clearance of such fire protection facilities and access ways to the Building Department.

SECTION 108
BOARD OF APPEALS

Section 108 is deleted in its entirety and replaced as follows:

108.1 Appeals. Appeals shall be in accordance with Section 17.80.010 of the Campbell Municipal Code.

SECTION 109
VIOLATIONS

Section 109.3 is amended to read:
109.3 Violation penalties. See Section 17.70.010 of the Campbell Municipal Code.

Chapter 2
DEFINITIONS

SECTION 202 GENERAL DEFINITIONS

The following definitions are added:

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

1. It has been evaluated by the International Agency for Research on Cancer and found to be a carcinogen or potential carcinogen, or
2. It is listed as a carcinogen or potential carcinogen in the latest edition of the Annual Report on Carcinogens published by the National Toxicology program, or
3. It is regulated by OSHA as a carcinogen.

DEVICE. Device is, for the purpose of Exhibit "A", an appliance or piece of equipment that plays an active part in the proper functioning of the regulated systems. Examples include, but are not limited to the following: smoke detectors, heat detectors, flame detectors, manual pull stations, horns, alarms, bells, warning lights, hydrants, risers, FDCs, standpipes, strobes, control panels, transponders, and other such equipment used to detect, transmit, initiate, annunciate, alarm, or respond according to the system design criteria.

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 the body tissue of oxygen or affect reproductive capabilities, including mutations (chromosomal damage) or teratogens (effect on fetuses).

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.

WORKSTATION is a defined space or independent principal piece of equipment using hazardous materials where a specific function, laboratory procedure or research activity occurs. Approved or listed hazardous materials storage cabinets, flammable liquid storage cabinets or gas cabinets serving a workstation are included as part of the workstation. A workstation is allowed to contain ventilation equipment, fire protection devices, electrical devices, and other processing and scientific equipment.

Chapter 3
GENERAL PRECAUTIONS AGAINST FIRE

SECTION 311 VACANT PREMISES

The following sections are deleted:

Delete Section: **311.5 Placards.**
Delete Section: **311.5.1 Placard Location.**
Delete Section: **311.5.2 Placard Size And Color.**
Delete Section: **311.5.3 Placard Date.**
Delete Section: **311.5.4 Placard Symbols**
Delete Section: **311.5.5 informational Use**

SECTION 316 HAZARDS TO FIREFIGHTERS

Add Section 316.6 to read:

316.6 Roof Guardrails At Interior Courts. Roof openings into interior courts that are bounded on all sides by building walls shall be protected with guardrails. The top of the guardrail shall not be less than 42 inches in height above the adjacent roof surface that can be walked on. Intermediate rails shall be designed and spaced such that a 12-inch diameter sphere cannot pass through.

Exception:
Where the roof opening is greater than 600 square feet in area.

Chapter 4
EMERGENCY PLANNING AND PREPAREDNESS

SECTION 404 FIRE SAFETY AND EVACUATION PLANS

Amend Section 404.2 as follows:

404.2 Where Required. An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

1. Group A buildings having an occupant load of 100 or more persons.

2. Group B buildings having an occupant load of 500 or more.
3. Group E: See §3.13 Title 19, CCR for regulations.
4. Group H.
5. Group I. See §3.09 Title 19, CCR for regulations.
6. Group R-1. See §3.09 Title 19, CCR for regulations.
7. Group R-2 college and university buildings.
8. Group R-4.
9. Group M buildings having an occupant load of 500 or more persons.
10. Covered malls exceeding 50,000 square feet (4645 m2) in aggregate floor area.
11. Underground buildings.

Amend Section 404.3.1 as follows:

404.3.1 Fire Evacuation Plans. Fire evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete or, where approved, by selected floors or areas only.
2. Description of what the fire alarm, if required, sounds and looks like (audible and visual warning devices).
3. Procedures for employees who must remain to operate critical equipment before evacuating.
4. Procedures for accounting for employees and occupants after evacuation has been completed.
5. Identification and assignment of personnel responsible for rescue or emergency medical aid.
6. The preferred and any alternative means of notifying occupants of a fire or emergency.
7. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.
8. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.
9. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.

Amend Table 405.2 as follows:

TABLE 405.2
FIRE AND EVACUATION DRILL
FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION
Group A	Quarterly	Employees
Group B[b]	Annually	Employees

Group E	See §3.13 Title 19, CCR	
Group I	See §3.13 Title 19, CCR	
Group R-1	See §3.13 Title 19, CCR	
Group R-2[c]	Four annually	All occupants
Group R-4	Quarterly on each shift	Employees[b]

SECTION 408 USE AND OCCUPANCY- RELATED REQUIREMENTS

Section 408.2.2 is deleted:

Section 408.3.1 is deleted:

Section 408.3.2 is deleted:

Section 408.3.3 is deleted:

Section 408.3.4 is deleted:

Section 408.5.1 is deleted:

Section 408.5.2 is deleted:

Section 408.5.3 is deleted:

Section 408.5.4 is deleted:

Section 408.5.5 is deleted:

Section 408.6 is deleted:

Section 408.6.1 is deleted:

Section 408.6.2 is deleted:

Section 408.7 is deleted:

Section 408.7.1 is deleted:

Section 408.7.2 is deleted:

Section 408.7.3 is deleted:

Section 408.7.4 is deleted:

Section 408.8 is deleted:

Section 408.8.1 is deleted:

Section 408.8.2 is deleted:

Section 408.8.3 is deleted:

Amend Section 408.9 to read:

408.9 Group R-2 Occupancies. Group R-2 occupancies shall comply with the requirements of Sections 408.9.1 through 408.9.3 and Sections 401 through 406. Group R-2 college and university buildings shall comply with the requirements of Sections 408.9.1 through 408.9.6 and Sections 401 through 406.

Add Section 408.9.4 to read:

408.9.4 First Emergency Evacuation Drill. The first emergency evacuation drill of each school year shall be conducted within 10 days of the beginning of classes.

Add Section 408.9.5 to read:

408.9.5 Time of Day. Emergency evacuation drills shall be conducted at different hours of the day or evening, during the changing of classes, when the school is at assembly, during the recess or gymnastic periods, or during other times to avoid distinction between drills and actual fires. In Group R2 college and university buildings, one required drill shall be held during hours after sunset or before sunrise.

Section 408.10 is deleted:

Section 408.10.1 is deleted:

Section 408.10.2 is deleted:

Section 408.10.3 is deleted:

Section 408.10.4 is deleted:

Section 408.10.5 is deleted:

Amend Section 408.11.1.2 to read:

408.11.1.2 Revisions. The lease plans shall be revised annually or as often as necessary to keep them current.

Chapter 5
FIRE SERVICE FEATURES

SECTION 503 FIRE APPARATUS ACCESS ROADS

Amend Section 503.1. as follows:

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.2 and as per Fire Department access road Standards.

Amend Section 503.1.1 as follows:

503.1.1 Building and Facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend within 150 feet (45,720 mm) of all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:

1. When the building is equipped throughout with an approved automatic sprinkler installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, the dimension may be increased to 300 feet.
2. When fire apparatus roads cannot be installed because of topography, waterways, nonnegotiable grades or other similar conditions, an approved alternative means of fire protection shall be provided.

Amend Section 503.2.1 as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of 13 feet 6 inches (4115 mm).

Exception:
When there are not more than two Group R, Division 3, or Group U occupancies, the access road width may be modified by the fire code official.

Add Section 503.7 as follows:

503.7 Traffic Calming Devices. Traffic Calming Devices such as speed humps, traffic circles or other physical measures intended to control vehicle speed on fire apparatus access roads are prohibited unless approved by the fire code official.

SECTION 504 ACCESS TO BUILDINGS AND ROOFS

Add Section 504.4 to read:

504.4 Access Control Devices. When access control devices including bars, grates, gates, electric or magnetic locks or similar devices, which would inhibit rapid fire department emergency access to the building, are installed, such devices shall be

approved by the fire code official. All electrically powered access control devices shall be provided with an approved means for deactivation or unlocking from a single location or otherwise approved by the fire department.

Access control devices shall also comply with Chapter 10 Egress.

SECTION 510 EMERGENCY RESPONDER RADIO COVERAGE

Amend Section 510.1 to read follows:

510.1 Emergency responder radio coverage in buildings. All buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communications system of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communications system. Emergency responder radio coverage systems shall be installed in accordance with Section 510 and Appendix J.

Add Section 510.1.1 as follows:

510.1.1 Obstruction by new buildings. When in the opinion of the fire code official, a new structure obstructs the line of sight emergency radio communications to existing buildings or to any other locations, the developer of the structure shall provide and install the radio retransmission equipment necessary to restore communications capabilities. The equipment shall be located in an approved space or area within the new structure.

Chapter 6
BUILDING SERVICES AND SYSTEMS

SECTION 605 ELECTRICAL EQUIPMENT, WIRING AND HAZARDS

Add Section 605.11 to read:

605.11 Immersion Heaters. All electrical immersion heaters used in dip tanks, sinks, vats and similar operations shall be provided with approved over-temperature controls and low liquid level electrical disconnects. Manual reset of required protection devices shall be provided.

SECTION 608 STATIONARY STORAGE BATTERY SYSTEMS

Add Section 608.6.4 to read:

608.6.4 Failure of Ventilation System. Failure of the ventilation system shall automatically disengage the charging system.

Chapter 8
INTERIOR FINISH, DECORATIVE MATERIALS AND FURNISHINGS

SECTION 806 DECORATIVE VEGETATION IN NEW AND EXISTING BUILDINGS

Amend Section 806.1.1 as follows:

806.1.1 Display inside buildings. The display of Christmas trees and other decorative vegetation in new and existing buildings shall be in accordance with the California Code of Regulations, Title 19, Division 1, §3.08 and Sections 806.1 through 806.5.

Exceptions: Deleted

Chapter 9
FIRE PROTECTION SYSTEMS

SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

Amend Section 903.2 to read:

903.2 Where required. Approved automatic sprinkler systems in new and existing buildings and structures shall be provided in the locations described in this Section or in Sections 903.2.1 through 903.2.18 whichever is the more restrictive.

For the purposes of this section, firewalls used to separate building areas shall be constructed in accordance with the California Building Code and shall be without openings or penetrations.

1. An automatic sprinkler system shall be provided throughout all new buildings and structures.

   Exception: Group A, B, E, F, I, L, M, S and U occupancy buildings and structures that do not exceed 1,000 square feet of building area.

2. An automatic sprinkler system shall be provided throughout existing buildings and structures when alterations or additions are made that create conditions described in Sections 903.2.1 through 903.2.18.

3. An automatic sprinkler system shall be provided throughout existing buildings and structures, when additions are made that increase the building area to more than 3,600 square feet.

   Exception: A one-time addition to an existing building that does not total more than 1000 square feet of building area.

4. An automatic sprinkler system shall be provided throughout all new basements regardless of size and throughout existing basements that are expanded by more than 50%.

Amend Section 903.1.1 to read:

903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1 and local standards.

1. For new buildings having no designated use or tenant, the minimum sprinkler design density shall be Ordinary Hazard Group 2.

   Amend Section 903.3.1.2 to read:

903.3.1.2 NFPA 13R sprinkler systems. Where allowed in buildings of Group R, up to and including four stories in height , automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R and local standards.

Amend Section 903.3.1.3 to read:

903.3.1.3 NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one-and two-family dwellings and townhouses shall be installed throughout in accordance with NFPA 13D and local standards.

Amend Section 912.2 to read:

912.2 Location. With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the building for other fire apparatus. The location of fire department connections shall be approved by the fire code official.

Chapter 14
FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

SECTION 1404 PRECAUTIONS AGAINST FIRE

Add Section 1404.8 to read:

1404.8 Fire Walls. When firewalls are required, the wall construction shall be completed (with all openings protected) immediately after the building is sufficiently weather-protected at the location of the wall(s).

SECTION 1411 MEANS OF EGRESS

Amend Section 1411.1 as follows:

1411.1 Stairways Required. Each level above the first story in new multi-story buildings that require two exit stairways shall be provided with at least two usable exit stairways after the floor decking is installed. The stairways shall be continuous and discharge to grade level. Stairways serving more than two floor levels shall be enclosed (with openings adequately protected) after exterior walls/windows are in place. Exit stairs in new and in existing, occupied buildings shall be lighted and maintained clear of debris and construction materials at all times.

Exception:
For new multi-story buildings, one of the required exit stairs may be obstructed on not more than two contiguous floor levels for the purposes of stairway construction (i.e., installation of gypsum board, painting, flooring, etc.).

Add Section 1411.1.1 to read:

Section 1411.1.1 Required Means Of Egress. All new buildings under construction shall have at least one unobstructed means of egress. All means of egress shall be identified in the prefire plan see Section 1408.2.

Chapter 18
SEMICONDUCTOR FABRICATION FACILITIES

SECTION 1802 DEFINITIONS

Amend the following definition to read:

CONTINUOUS GAS DETECTION SYSTEM. An approved gas detection system where the analytical instrument is maintained in continuous operation and sampling is performed without interruption. Analysis is

allowed to be performed on a cyclical basis at intervals not to exceed 30 minutes. In occupied areas where air is re-circulated and not exhausted to a treatment system (e.g. breathing zone), the Chief may require a cyclical basis at intervals not to exceed 5 minutes. The gas detection system shall be able to detect the presence of a gas at or below the permissible exposure limit in occupiable areas and at or below ½ IDLH (or 0.05 LC 50 if no established IDLH) in unoccupiable areas.

Delete Definition: **Workstation.**

Chapter 19
LUMBER YARDS AND WOOD WORKING FACILITIES

SECTION 1907 STORAGE OF WOOD CHIPS AND HOGGED MATERIAL ASSOCIATED WITH TIMBER AND LUMBER PRODUCTION FACILITIES

Add Section 1907.6 to read:

1907.6 Fire Protection Water Supply System. An approved fire protection water supply and hydrant system suitable for the fire hazard involved shall be provided for open storage yards and processing areas. Hydrant systems shall be installed in accordance with NFPA 24.

SECTION 1908 STORAGE AND PROCESSING OF WOOD CHIPS, HOGGED MATERIALS, FINES, COMPOST AND RAW PRODUCT ASSOCIATED WITH YARD WASTE AND RECYCLING FACILITIES

Add Section 1908.11 to read:

1908.11 Fire Protection Water Supply System. An approved fire protection water supply and hydrant system suitable for the fire hazard involved shall be provided for open storage yards and processing areas. Hydrant systems shall be installed in accordance with NFPA 24.

Chapter 27
HAZARDOUS MATERIALS-GENERAL PROVISIONS

SECTION 2701 GENERAL

Amend Section 2701.2.2.2 to read:

2701.2.2.2 Health Hazards The material categories listed in this section are classified as health hazards. A material with a primary classification as a health hazard can also pose a physical hazard.

1. Highly toxic, toxic and moderately toxic.
2. Corrosive materials.
3. Other health hazards including carcinogens, irritants and sensitizers.

SECTION 2702 DEFINITIONS

Amend the following definition to read:

SECONDARY CONTAINMENT. Secondary containment is that level of containment that is external to and separate from primary containment and is capable of safely and securely containing the material, without discharge, for a period of time reasonably necessary to ensure detection and remedy of the primary containment failure.

SECTION 2703 GENERAL REQUIREMENTS

Add Section 2703.1.3.1 to read:

2703.1.3.1 Toxic, Highly Toxic, Moderately Toxic Gases And Similarly Used Or Handled Materials. The storage, use and handling of toxic, highly toxic and moderately toxic gases in amounts exceeding Table 3704.2 or 3704.3 shall be in accordance with this chapter and Chapter 37. Any toxic, highly toxic or moderately toxic material that is used or handled as a gas or vapor shall be in accordance with the requirements for toxic, highly toxic or moderately toxic gases.

Add Section 2703.1.5 to read:

2703.1.5 Other Health Hazards Including Carcinogens, Irritants and Sensitizers. The storage, use and handling of materials classified as other health hazards including carcinogens, irritants and sensitizers in amounts exceeding 810 cubic feet for gases, 55 gallons for liquids and 5,000 pounds for solids shall be in accordance with this Section 2703.

Add Section 2703.1.6 to read:

2703.1.6 Secondary Containment Requirements. A containment system shall be required for all hazardous materials, which are liquids or solids at normal temperature, and pressure (NTP) where a spill is determined to be a plausible event and where such an event would endanger people, property or the environment. Construction shall be substantial, capable of safely and securely containing a sudden release without discharge. Design criteria shall be performance oriented and constructed of physically and chemically compatible materials to resist degradation and provide structural and functional integrity for a period of time reasonably necessary to ensure detection, mitigation, and repair of the primary system. **Regardless of quantities, secondary containment for outdoor storage areas shall also comply with Section 2704.2.2.4.** Monitoring of secondary containment shall be accordance with Section 2704.2.2.5.

Amend Sec. 2703.2.2.1 to read:

2703.2.2.1 Design And Construction. Piping, tubing, valves, fittings and related components used for hazardous materials shall be in accordance with the following:

1. Piping, tubing, valves, fittings and related components shall be designed and fabricated from materials compatible with the material to be contained and shall be of adequate strength and durability to withstand the pressure, structural and seismic stress, and exposure to which they are subject.
2. Piping and tubing shall be identified in accordance with ASME A13.1 and Santa Clara County Fire Chiefs Marking Requirements and Guidelines for Hazardous Materials and Hazardous Waste to indicate the material conveyed.
3. Readily accessible manual valves or automatic remotely activated fail-safe emergency shutoff valves shall be installed on supply piping and tubing at the following locations:
   3.1. The point of use.
   3.2. The tank, cylinder or bulk use.

4. Manual emergency shutoff valves and controls for remotely activated emergency shutoff valves shall be identified and the location shall be clearly visible accessible and indicated by means of a sign.
5. Backflow prevention or check valves shall be provided when the backflow of hazardous materials could create a hazardous condition or cause the unauthorized discharge of hazardous materials.
6. Where gases or liquids having a hazard ranking of:

   Health hazard Class 3 or 4
   Flammability Class 4
   Reactivity Class 4

   in accordance with NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge (psig)(103 Kpa), an approved means of leak detection, emergency shutoff and excess flow control shall be provided. Where the piping originates from within a hazardous material storage room or area, the excess flow control shall be located within the storage room or area. Where the piping originates from a bulk source, the excess flow control shall be located as close to the bulk source as practical.

   Exceptions:
   1. Piping for inlet connections designed to prevent backflow.
   2. Piping for pressure relief devices.
7. Secondary containment or equivalent protection from spills shall be provided for piping for liquid hazardous materials and for highly toxic and toxic corrosive gases above threshold quantities listed in Tables 3704.2 and 3704.3. Secondary containment includes, but is not limited to double walled piping.

   Exceptions:
   1. Secondary containment is not required for toxic corrosive gases if the piping is constructed of inert materials.
   2. Piping under sub-atmospheric conditions if the piping is equipped with an alarm and fail-safe-to-close valve activated by a loss of vacuum.
8. Expansion chambers shall be provided between valves whenever the regulated gas may be subjected to thermal expansion. Chambers shall be sized to provide protection for piping and instrumentation and to accommodate the expansion of regulated materials.

Amend Section 2703.2.2.2 to read:

2703.2.2.2 Additional Regulation for Supply Piping for Health Hazard Materials. Supply piping and tubing for gases and liquids having a health hazard ranking of 3 or 4 shall be in accordance with ASME B31.3 and the following:

8.1. Piping and tubing utilized for the transmission of toxic, highly toxic, or highly volatile corrosive liquids and gases shall have welded or brazed connections throughout except for connections within an exhausted enclosure if the material is a gas, or an approved method of drainage or containment is provided for connections if the material is a liquid.

8.2. Piping and tubing shall not be located within corridors, within any portion of a means of egress required to be enclosed in fire-resistance-rated construction or in concealed spaces in areas not classified as Group H Occupancies.

EXCEPTION:
Piping and tubing within the space defined by the walls of corridors and the floor or roof above or in concealed space above other occupancies when installed in accordance with Section 415.8.6.3 of the California Building Code as required for Group H, Division 5 Occupancies.

8.3. All primary piping for toxic, highly toxic and moderately toxic gases shall pass a helium leak test of 1x10-9 cubic centimeters/second where practical, or shall pass testing in accordance with an approved, nationally recognized standard. Tests shall be conducted by a qualified "third party" not involved with the construction of the piping and control systems.

Amend Section 2703.3.1 as follows:

2703.3.1 Unauthorized Discharges. When hazardous materials are released in quantities reportable under state, federal or local regulations or when there is release or a threatened release that presents a threat to health, property or the environment, the fire code official shall be notified immediately in an approved manner and the following procedures required in accordance with Sections 2703.3.1.1 through 2703.3.1.4.

Add Sec. 2703.5.2 to read:

2703.5.2 Ventilation Ducting. Product conveying ducts for venting hazardous materials operations shall be labeled with the hazard class of the material being vented and the direction of flow.

Add Sec. 2703.5.3 to read:

2703.5.3 "H" Occupancies. In "H" occupancies, all piping and tubing may be required to be identified when there is any possibility of confusion with

hazardous materials transport tubing or piping. Flow direction indicators are required.

Amend Section 2703.9.8 to read:

2703.9.8 Separation of Incompatible Materials. Incompatible materials in storage and storage of materials that are incompatible with materials in use shall be separated. When the stored materials are in containers having a capacity of more than 5 pounds (2 kg) or 0,5 gallon (2 L), separation shall be accomplished by:

1. Segregating incompatible materials in storage by a distance of not less than 20 feet (6096 mm) and in an independent containment system.
2. Isolating incompatible materials in storage by a noncombustible partition extending not less than 18 inches (457 mm) above and to the sides of the stored material.
3. Storing liquid and solid materials in hazardous material storage cabinets.
4. Storing compressed gases in gas cabinets or exhausted enclosures in accordance with Sections 2703.8.5 and 2703.8.6. Materials that are incompatible shall not be stored within the same cabinet or exhausted enclosure.

Add Sec. 2703.9.11 to read:

2703.9.11 Fire Extinguishing Systems For Workstations Dispensing, Handling or Using Hazardous Materials. Combustible and non-combustible workstations, which dispense, handle or use hazardous materials, shall be protected by an approved automatic fire extinguishing system in accordance with Section 1803.10.

Exception:
Internal fire protection is not required for Biological Safety Cabinets that carry NSF/ANSI certification where quantities of flammable liquids in use or storage within the cabinet do not exceed 500ml.

SECTION 2704 STORAGE

Amend Section 2704.2.1 as follows:

2704.2.1 Spill Control for Hazardous Material Liquids. Rooms, buildings or areas used for storage of hazardous material liquids shall be provided with spill control to prevent the flow of liquids to adjoining areas.

Floors in indoor locations and similar surfaces in outdoor locations shall be constructed to contain a spill from the largest single vessel by one of the following methods:

1. Liquid-tight sloped or recessed floors in indoor locations or similar areas in outdoor locations.
2. Liquid-tight floors in indoor locations or similar areas provided with liquid-tight raised or recessed sills or dikes.
3. Sumps and collection systems.
4. Other approved engineered systems.

Except for surfacing, the floors, sills, dikes, sumps and collection systems shall be constructed of noncombustible material, and the liquid-tight seal shall be compatible with the material stored. When liquid-tight sills or dikes are provided, they are not required at perimeter openings having an open-grate trench across the opening that connects to an approved collection system.

Amend Section 2704.2.2 as follows:

2704.2.2 Secondary Containment for Hazardous Material Liquids and Solids. Buildings, rooms or areas used for the storage of hazardous materials liquids or solids shall be provided with secondary containment in accordance with this section.

Delete Table: **2704.2.2 REQUIRED SECONDARY CONTAINMENT FOR HAZARDOUS MATERIAL SOLIDS AND LIQUIDS STORAGE**

SECTION 2705 USE, DISPENSING AND HANDLING

Amend Sec. 2705.4.4 to read:

2705.4.4 Emergency Alarm. When hazardous materials having a hazard ranking of 3 or 4 in accordance with NFPA 704, or toxic gases exceeding 10 cu. ft. and any amount of highly toxic compressed gases are transported through corridors or exit enclosures, there shall be an emergency telephone system, a local manual alarm station or an approved alarm-initiating device at not more than 150-foot (45,720 mm) intervals and at each exit and exit-access doorway throughout the transport route. The signal shall be relayed to an approved central, proprietary or remote station service or constantly attended on-site location and shall also initiate a local audible alarm.

Chapter 31
CORROSIVE MATERIALS

SECTION 3102 DEFINITIONS

Add the following definition to read:

CORROSIVE LIQUID. Corrosive liquid is a liquid which, when in contact with living tissue, will cause destruction or irreversible alteration of such tissue by chemical action. Examples include acidic, alkaline or caustic materials. Such material will be considered corrosive when the Ph is 2 or less or 12.5 or more, except for foodstuffs or medicine. Included are Department of Transportation and Title 22, California Code of Regulations, 66261.22 classed corrosives.

Chapter 33
EXPLOSIVES AND FIREWORKS

Amend Section 3301.1 to read:
3301.1 Scope. For explosives requirements see California Code of Regulations, Title 19, Division 1, Chapter 10 and section 3301.2 of this chapter. For fireworks requirements see California Code of Regulations, Title 19, Division 1, Chapter 6 and section 3301.3 of this chapter. For small arms ammunition, see Section 3301.5 of this chapter.

Exceptions:
1. The armed Forces of the United States, Coast Guard or National Guard.
2. Explosives in forms prescribed by the official United States Pharmacopoeia.
3. The use of explosive materials by federal, state and local regulatory, law enforcement and fire agencies acting in their official capacities.
4. Items preempted by federal regulations.

Add Section 3301.2 is to read:
3301.2 Explosives. . The possession, manufacture, storage, sale, handling, and use of explosives are prohibited.

Add Section 3301.3 is to read:
3301.3 Fireworks. The possession, manufacture, storage, sale, handling, and use of fireworks, including those fireworks classified as Safe and Sane by the California State Fire Marshal, are prohibited.

Exceptions:

a. Storage, handling and use of fireworks and pyrotechnic special effects outside of buildings when used for public or proximate audience displays, motion picture, television, theatrical and group entertainment productions and when in accordance with Title 19 of the California Code of Regulations.

b. Storage, handling and use of pyrotechnic special effects fireworks inside of buildings when used for proximate audience displays or special effects in theatrical, television, motion picture and group entertainment productions when in accordance with Title 19 of the California Code of Regulations and when in buildings equipped throughout with an approved fire sprinkler system.

Add Section 3301.4 is to read:
3301.4 Rocketry. The storage, handling, and use of model rockets shall be in accordance with Title 19 of the California Code of Regulations and as approved by the Fire Code Official.

Add Sections 3301.5 through 3301.5.3.2.3 to read:
3301.5 Small Arms Ammunition-General. Indoor storage and display of black powder, smokeless propellants and small arms ammunition shall comply with Sections 3301.5.1 through 3301.5.4.2.3.

3301.5.1 Packages. Smokeless propellants shall be stored in approved shipping containers conforming to DOTn 49 CFR, Part 173.

3301.5.1.1 Repackaging. The bulk repackaging of smokeless propellants, black powder and small arms primers shall not be performed in retail establishments.

3301.5.1.2 Damaged packages. Damaged containers shall not be repackaged.

Exception: Approved repackaging of damaged containers of smokeless propellant into containers of the same type and size as the original container.

3301.5.2 Storage in Group R occupancies. The storage of small arms ammunition in Group R occupancies shall comply with Sections 3301.5.2.1 through 3301.5.2.3.

3301.5.2.1 Smokeless propellants. Smokeless propellants intended for personal use in quantities not exceeding 20 pounds (9 kg) are permitted to be stored in Group R-3 occupancies where kept in original containers. Smokeless powder in quantities exceeding 20 pounds (9 kg) but not exceeding 50 pounds (23 kg) are permitted to be stored in Group R-3 occupancies where kept in a wooden box or cabinet having walls of at least 1 inch (25 mm) nominal thickness.

3301.5.2.2 Black powder. Black powder intended for personal use in quantities not exceeding 20 pounds (9 kg) are permitted to be stored in Group R-3 occupancies where

kept in original containers and stored in a wooden box or cabinet having walls of at least 1 inch (25 mm) nominal thickness

3301.5.2.3 Small arms primers. No more than 10,000 small arms primers shall be stored in Group R-3 occupancies.

3301.5.3 Display and storage in Group M occupancies. The display and storage of small arms ammunition in Group M occupancies shall comply with Sections 3301.5.3.1 through 3301.5.3.2.3.

3301.5.3.1 Display. The display of small arms ammunition in Group M occupancies shall comply with Sections 3301.5.3.1.1 through 3301.5.3.1.3.

3301.5.3.1.1 Smokeless propellant. No more than 20 pounds (9 kg) of smokeless propellants, each in containers of 1 pound (0.454 kg) or less capacity, shall be displayed in Group M occupancies.

3301.5.3.1.2 Black powder. No more than 1 pound (0.454 kg) of black powder shall be displayed in Group M occupancies.

3301.5.3.1.3 Small arms primers. No more than 10,000 small arms primers shall be displayed in Group M occupancies.

3301.5.3.2 Storage. The storage of small arms ammunition in Group M occupancies shall comply with Sections 3301.5.3.2.1 through 3301.5.3.2.3.

3301.5.3.2.1 Storage of Smokeless propellant. Commercial stocks of smokeless propellants not on display shall not exceed 100 pounds (45 kg). Quantities exceeding 20 pounds (9 kg), but not exceeding 100 pounds (45 kg) shall be stored in portable wooden boxes having walls of at least 1 inch (25 mm) nominal thickness.

3301.5.3.2.2 Black powder. Commercial stocks of black powder not on display shall not exceed 50 pounds (23 kg) and shall be stored in a type 4 indoor magazine. When black powder and smokeless propellants are stored together in the same magazine, the total quantity shall not exceed that permitted for black powder.

3301.5.3.2.3 Small arms primers. Commercial stocks of small arms primers not on display shall not exceed 750,000. Storage shall be arranged such that not more than 100,000 small arms primers are stored in any one pile and piles are at least 15 feet (4572 mm) apart.

Chapter 34
FLAMMABLE AND COMBUSTIBLE LIQUIDS

SECTION 3404 STORAGE

Amend section 3404.2.7.5.8 to read:

3404.2.7.5.8 Overfill Prevention. An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfill of all Class I, II and IIIA liquid storage tanks. Storage tanks in refineries, bulk plants or terminals regulated by Sections 3406.4 or 3406.7 shall have overfill protection in accordance with API 2350.

An approved means or method in accordance with Section 3404.2.9.7.6 shall be provided to prevent the overfilling of Class IIIB liquid storage tanks connected to fuel-burning equipment inside buildings.

Exception Deleted

Add section 3404.2.7.5.9 to read:

3404.2.7.5.9 Automatic Filling of Tanks. Systems that automatically fill flammable or combustible liquid tanks shall be equipped with overfill protection, approved by the fire code official, that sends an alarm signal to a constantly attended location and immediately stops the filling of the tank. The alarm signal and automatic shutoff shall be tested on an annual basis and records of such testing shall be maintained on-site for a period of five (5) years.

Chapter 37
HIGHLY TOXIC AND TOXIC MATERIALS

SECTION 3701 GENERAL

Add Sec. 3701.3 to read:

3701.3 Moderately Toxic Gases With a LC50 Equal To Or Less Than 3000 Parts Per Million. Notwithstanding the hazard class definition in Section 3702, moderately toxic gases with an LC50 less than 3000 parts per million shall additionally comply with the requirements for toxic gases in Section 3704 of this code.

SECTION 3702 DEFINITIONS

The following definitions are added to read:

MODERATELY TOXIC GAS. Moderately toxic gas is a chemical or substance that has a median lethal concentration (LC50) in air more than

2000 parts per million but not more than 5000 parts per million by volume of gas or vapor, when administered by continuous inhalation for an hour, or less if death occurs within one hour, to albino rats weighing between 200 and 300 grams each.

MAXIMUM THRESHOLD QUANTITY (MAX TQ). Maximum Threshold Quantity (Max TQ) is the maximum quantity of a moderately toxic or toxic gas, which may be stored in a single vessel before a more stringent category of regulation is applied. The following equation shall be used to calculate the Max TQ:

Max TQ (pounds) = LC50 (ppm) x 2 lb.

For gas mixtures containing one or more toxic, highly toxic or moderately toxic components, LC50 shall be calculated using CGA Standards P-20 and P-23 as referenced in Appendix E, Section 103.1.3.1

Amend Sec. 3704 to read:

SECTION 3704 HIGHLY TOXIC, TOXIC AND MODERATELY TOXIC COMPRESSED GASES INCLUDING THOSE USED AS REFRIGERANTS.

Add Sec. 3704.1.4 to read:

3704.1.4 Automatic Shut-Off Valve. An automatic shut-off valve, which is of a fail-safe to close design, shall be provided to shut off the supply of highly toxic gases for any of the following:

1. Activation of a manual fire alarm system.
2. Activation of the gas detection system.
3. Failure of emergency power.
4. Failure of primary containment.
5. Seismic activity.
6. Failure of required ventilation.
7. Manual activation at an approved remote location.

Add Sec. 3704.1.5 to read:

3704.1.5 Emergency Control Station. Signals from emergency equipment used for highly toxic gases shall be transmitted to an emergency control

station or other approved monitoring station, which is continually staffed by trained personnel.

Add Sec. 3704.1.6 to read:

3704.1.6 Maximum Threshold Quantity. Toxic gases stored or used in quantities exceeding the maximum threshold quantity in a single vessel per control area or outdoor control area shall comply with the additional requirements for highly toxic gases of Section 3704 of this code.

Moderately toxic gases stored or used in quantities exceeding the maximum threshold quantity. in a single vessel per control area or outdoor control area shall comply with the additional requirements for toxic gases of Section 3704 of this code

Add Section 3704.1.7 to read:

3704.1.7 Reduced Flow Valve. All containers of materials other than lecture bottles containing Highly Toxic material and having a vapor pressure exceeding 29 psia shall be equipped with a reduced flow valve when available. If a reduced flow valve is not available, the container shall be used with a flow-limiting device. All flow limiting devices shall be part of the valve assembly and visible to the eye when possible; otherwise, they shall be installed as close as possible to the cylinder source.

Add Section 3704.1.8 to read:

3704.1.8 Annual Maintenance. All safety control systems at a facility shall be maintained in good working condition and tested not less frequently than annually. Maintenance and testing shall be performed by persons qualified to perform the maintenance and tests. Maintenance records and certifications shall be available to any representative of the Fire Department for inspection upon request.

Add Section 3704.1.9 to read:

3704.1.9 Fire Extinguishing Systems. Buildings and covered exterior areas for storage and use areas of materials regulated by this Chapter shall be protected by an automatic fire sprinkler system in accordance with NFPA 13. The design of the sprinkler system for any room or area where highly toxic, toxic and moderately toxic gases are stored, handled or used shall be in accordance with Section 2704.5.

Add Section 3704.1.10 to read:

3704.1.10 Local Gas Shut Off. Manual activation controls shall be provided at locations near the point of use and near the source, as approved by the fire code official. The fire code official may require additional controls at other places, including, but not limited to, the entry to the building, storage or use areas, and emergency control stations.
Manual activated shut-off valves shall be of a fail-safe-to-close design.

Add Section 3704.1.11 to read:

3704.1.11 Exhaust Ventilation Monitoring. For highly toxic gases and toxic gases exceeding threshold quantities, a continuous monitoring system shall be provided to assure that the required exhaust ventilation rate is maintained. The monitoring system shall initiate a local alarm. The alarm shall be both visual and audible and shall be designed to provide warning both inside and outside of the interior storage, use, or handling area.

Add Section 3704.1.12 to read:

3704.1.12 Emergency Response Plan. If the preparation of an emergency response plan for the facility is not required by any other law, responsible persons shall prepare, or cause to be prepared, and filed with the fire code official, a written emergency response plan. If the preparation of an emergency response plan is required by other law, a responsible person shall file a copy of the plan with the Fire Chief.

Add Section 3704.1.13 to read:

3704.1.13 Emergency Response Team. Responsible persons shall be designated the on-site emergency response team and trained to be liaison personnel for the Fire Department. These persons shall aid the Fire Department in preplanning emergency responses, identifying locations where regulated materials are stored, handled and used, and be familiar with the chemical nature of such material. An adequate number of personnel for each work shift shall be designated.

Add Section 3704.1.14 to read:

3704.1.14 Emergency Drills. Emergency drills of the on-site emergency response team shall be conducted on a regular basis but not less than once every three months. Records of drills conducted shall be maintained.

Add section 3704.1.15 to read:

3704.1.15 Cylinder Leak Testing. Cylinders shall be tested for leaks immediately upon delivery and again immediately prior to departure. Testing shall be approved by the fire code official in accordance with appropriate nationally recognized industry standards and practices, if any. Appropriate remedial action shall be immediately undertaken when leaks are detected

Add Sec. 3704.1.16 to read:

3704.1.16 Inert Gas Purge System. Gas systems shall be provided with dedicated inert gas purge systems. A dedicated inert gas purge system may be used to purge more than one gas, provided the gases are compatible. Purge gas systems inside buildings shall be located in an approved gas cabinet unless the system operates by vacuum demand.

Add Sec. 3704.1.17 to read:

3704.1.17 Seismic Shutoff Valve. An automatic seismic shut-off valve, which is of a fail-safe to close design, shall be provided to shutoff the supply of highly toxic, toxic and moderately toxic gases with an LC_{50} less than 3000 parts per million upon a seismic event within 5 seconds of a horizontal sinusoidal oscillation having a peak acceleration of 0.3G ($1.47 m/sec^2$) and a period of 0.4 seconds.

Amend Section 3704.2 to read:

3704.2 Indoor Storage and Use. The indoor storage or use of highly toxic, toxic and moderately toxic compressed gases shall be in accordance with Sections 3704.2.1 through 3704.2.2.10.3.3. The threshold quantity for highly toxic, toxic and moderately toxic gases for indoor storage and use are set forth in Table 3704.2.

Add Table 3704.2 to read:

Threshold Quantities for Highly Toxic, Toxic and Moderately Toxic Gases for Indoor Storage and Use	
Highly Toxic	0
Toxic	10 cubic feet
Moderately Toxic	20 cubic feet

Amend Section 3704.2.1 to read:

3704.2.1 Applicability. The applicability of regulations governing the indoor storage and use of highly toxic, toxic, and moderately toxic compressed gases shall be as set forth in Sections 3704.2.1.1 through 3704.2.1.3.

Amend Sec. 3704.2.1.1 to read:

3704.2.1.1 Quantities Not Exceeding the Maximum Allowable Quantity per Control Area. The indoor storage or use of highly toxic, toxic and moderately toxic gases in amounts exceeding the maximum allowable quantity per control area set forth in Table 3704.2 shall be in accordance with Sections 2701, 2703, 3701, ~~and~~ 3704.1 and 3704.2,

Amend Sec. 3704.2.2 to read:

3704.2.2 General Indoor Requirements. The general requirements applicable to the indoor storage and use of highly toxic and toxic compressed gases shall be in accordance with Sections 3704.2.2.1 through 3704.2.2.10.3.

Moderately toxic gases with an LC_{50} less than 3000 parts per million shall comply with the requirements for toxic gases in Sections 3704.2.2.1 through 3704.2.2.10.3

All other moderately toxic gases exceeding the threshold quantity shall comply with the requirements for toxic gases in Sections 3704.2.2.1 through 3704.2.2.7.

Amend Sec. 3704.2.2.7 to read:

3704.2.2.7 Treatment Systems. The exhaust ventilation from gas cabinets, exhausted enclosures, gas rooms and local exhaust systems required in Section 3704.2.2.4 and 3704.2.2.5 shall be directed to a treatment system. The treatment system shall be utilized to handle the

accidental release of gas and to process exhaust ventilation. The treatment system shall be designed in accordance with Sections 3704.2.2.7.1 through 3704.2.2.7.5 and Section 505 of the California Mechanical Code.

Exceptions:

1. Highly toxic, toxic and moderately toxic gases storage. A treatment system is not required for cylinders, containers and tanks in storage when all of the following are provided:
   1.1. Valve outlets are equipped with gas-tight outlet plug or caps.
   1.2. Hand wheel-operated valves have handles secured to prevent movement.
   1.3. Approved containment vessels or containment systems are provided in accordance with Section 3704.2.2.3.

Amend 3704.2.2.10.1 to read:

3704.2.2.10.1. Alarms. The gas detection system shall initiate a local alarm and transmit a signal to a constantly attended control station when a short-term hazard condition is detected. The alarm shall be both visual and audible and shall provide warning both inside and outside the area where the gas is detected. The audible alarm shall be distinct from all other alarms.

Exception Deleted

Amend Section 3704.3 to read:

3704.3 Outdoor Storage and Use. The outdoor storage or use of highly toxic, toxic and moderately toxic compressed gases shall be in accordance with Sections 3704.3.1 through 3704.3.4. The threshold quantity for highly toxic, toxic and moderately toxic gases for outdoor storage and use are set forth in Table 3704.3.

Add Table 3704.3 to read:

Threshold Quantities for Highly Toxic, Toxic and Moderately Toxic Gases for Outdoor Storage and Use	
Highly Toxic	0
Toxic	10 cubic feet
Moderately Toxic	20 cubic feet

Amend Section 3704.3.1 to read:

3704.3.1 Applicability. The applicability of regulations governing the outdoor storage and use of highly toxic, toxic, and moderately toxic compressed gases shall be as set forth in Sections 3704.3.1.1 through 3704.3.1.3.

Amend Section 3704.3.1.1

3704.3.1.1 Quantities Not Exceeding The Maximum Allowable Quantity Per Control Area. The outdoor storage or use of highly toxic and toxic gases in amounts exceeding the threshold quantity per control area set forth in Table 3704.3 shall be in accordance with Sections 2701, 2703, 3701, 3704.1, and 3704.3.

Moderately toxic gases with an LC50 less than 3000 parts per million in amounts exceeding the threshold quantity in Table 3704.3 shall comply with the requirements for toxic gases in Sections 2701, 2703, 3701, 3704.1 and 3704.3.

Moderately toxic gases in amounts exceeding the threshold quantity in Table 3704.3 shall comply with the requirements for toxic gases in Sections 2701, 2703, 3701, 3704.1 and 3704.3.2.1 through 3704.3.2.5.

Amend Section 3704.3.3 to read:

3704.3.3 Outdoor Storage Weather Protection For Portable Tanks and Cylinders. Weather protection in accordance with Section 2704.13 and this section shall be provided for portable tanks and cylinders located outdoors and not within gas cabinets or exhausted enclosures. The storage area shall be equipped with an approved automatic sprinkler system in accordance with Section 2704.5.

Exceptions Deleted

CHAPTER 41
PYROPHORIC MATERIALS

Add Section 4105.3.1 to read:

4105.3.1 Silane distribution systems automatic shutdown. Silane distribution systems shall automatically shut down at the source upon activation of the gas detection system at levels above the alarm level and/or failure of the ventilation system for the silane distribution system.