



# Clark County Department of Building & Fire Prevention

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**Permit Type: 105.7.7**

**Control Number: A.0**

**Effective Date: 11/15/11**

**TITLE: FLAMMABLE/COMBUSTIBLE LIQUIDS – UNDERGROUND STORAGE TANKS**

**SCOPE:** Clark County Department of Building & Fire Prevention requirements for a permit to store flammable/combustible liquids in an underground storage tank.

**PURPOSE:** To standardize plan/permit requirements of the Fire Prevention in accordance with the Clark County Fire Code. Permits are valid through the duration of construction. Work must commence within 180 days, and remain active with no period of inactivity exceeding 180 days, or the permit becomes invalid. It is the desire of the Fire Prevention to attempt to have just one permit of each type for each location. Insofar as possible, it is preferable to revise an existing permit of the same type rather than open another permit of the same type for the same address.

#### **DEFINITIONS:**

**Assessor's Parcel Number (APN):** A unique number assigned to each property by the Clark County Assessor's office.

**Buoyancy Calculations:** Calculations which show that even under severe wet conditions, the tank will not "float" out of ground due to positive buoyancy.

**Flammable Liquid:** Liquid having a flash point less than 100<sup>0</sup> Fahrenheit. These are divided into Class 1-A, 1-B and 1-C.

**Combustible Liquid:** Liquid having a flash point above 100<sup>0</sup> Fahrenheit. These are divided into Class II, Class III-A and Class III-B.

**Secondary Container:** An integral or separate vessel or leak proof container designed to hold the contents of the largest primary container, located within the bounds of the secondary container, includes the outer shell of double-wall tanks.

**Tank:** A vessel containing more than 60 gallons

**Underground Storage Tank (UST):** Vessel, 60 gallons or larger that is designed to contain F/C liquids below grade.

**PERMIT FEES:**

Permit fees shall be assessed in accordance with the Permit Fee Schedule as adopted in the Clark County Fire Code. For applications that are expedited, additional fees shall apply.

**SPECIFICATIONS AND SUBMITTAL REQUIREMENTS:**

An application must be completed for each submittal. A minimum of three copies of plans shall be submitted with the permit application. The plans shall be drawn to an indicated scale. Plans shall show compliance in accordance with Chapter 34 of the Clark County Fire Code, as adopted and amended. Plans must show distance relationship between storage tanks, and other storage tanks, nearest habitable structure, property line, and public ways. On the plans, indicate the project name, address, and APN (Assessor’s Parcel Number). All submittals must be legible and readable or the plan shall be issued a correction letter for cause.

- A permit is required to operate a pipeline for use within a facility to transport flammable/combustible liquids
- A permit is required for all storage/use of flammable/combustible liquids in excess of amounts on table below:

Liquid/Location	Permit Threshold
Flammable/Indoors	5 gallons
Flammable/Outdoors	10 gallons
Combustible/Indoors	25 gallons
Combustible/Outdoors	60 gallons

- A permit is required to operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel dispensing stations, refineries, distilleries, and similar facilities where flammable/combustible liquids are produced, processed, transported, stored, dispensed, or used.
- Plan checklist
  - List quantities and types of F/C liquids to be stored/used
  - List/show processes or vessels that will store or use F/C liquids
  - List vessels, piping, valves and equipment that will use, store or transport F/C liquids
  - Show that tank, piping, valves and equipment is UL listed for its intended use, especially when using petroleum fuels with alcohol additives
  - Note which engineering design criteria has been used for vessels, piping, valves or equipment design (i.e. UL 143, API 650, ASME B31.3, etc.)
  - Note method of secondary containment if MAQ is exceeded
  - Note method of leak detection
  - Include rebar design for concrete cap
  - Show buoyancy calculations with a 20% safety factor (show that weight of concrete cap, overburden, weight of tank and weight of deadmen, if used, exceed the buoyancy of tank calculated by multiplying the displaced volume of outer shell of tank by the density of water)
  - Show location, size and height above grade, of tank vents

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- All leak testing of tank and piping must be observed by FP inspectors prior to tank, piping being covered.
  - Initial and annual leak detection certification is required by the Clark County Health District
  - When flammable/combustible liquids are being dispensed into a vehicle tank as a motor fuel, an additional Motor Fuel Dispensing Permit must be obtained

### **PERMIT REVISIONS AND RESUBMITTALS:**

Revisions to approved plans are required to be submitted and approved. Revisions will be assessed additional plan review fees. A copy of the previously approved plan shall accompany the revised submittal to facilitate the review. Clearly indicate all changes to the revised plans by clouding the change with a delta number to signify the date of plan change. When several changes have been made, a detailed list of changes is required.

Re-submittals to address a Letter of Correction will require a full submittal. These plans require a copy of the red lined plan from the previous submittal to facilitate the review. Clearly indicate all changes by clouding the change with the delta number to signify the date of plan change.

### **PLANS CHECK STATUS INSTRUCTIONS:**

The status of the review can be checked by logging on to:  
[www.clarkcountynv.gov/building/fire-prevention](http://www.clarkcountynv.gov/building/fire-prevention)

### **INSPECTIONS THAT MAY BE REQUIRED AND SCHEDULING INSTRUCTIONS:**

If approved, an inspection will need to be scheduled. To schedule an inspection, go to:  
[www.clarkcountynv.gov/building/fire-prevention](http://www.clarkcountynv.gov/building/fire-prevention)

A fire inspector will review your site in accordance with the approved plans and this guideline.

The Fire Prevention (FP) may witness and accept inspection, testing and maintenance of fire and life safety systems conducted by approved individuals as required by and within the scope and authority of the Clark County Fire Code.

This Guideline does not take the place of the Fire Code and does not take precedence over any Fire Code requirement or position taken by the Fire Chief. When a conflict exists between the requirements of this Guideline and the Fire Code or the opinion of the Fire Chief, the Fire Code or opinion of the Fire Chief prevails.

Technical Assistance may be required and when it is it will require a Technical Opinion and Report prepared by a State of Nevada licensed: qualified engineer, specialist, laboratory, or fire safety specialty organization acceptable to the Fire Chief and the owner. The Fire Chief is authorized to require design submittals to bear the Wet Stamp and Signature of a professional engineer.

Acceptance of Alternative Materials and Methods requires a Technical Opinion and Report prepared by a State of Nevada licensed: qualified engineer, specialist, laboratory, or fire safety specialty organization acceptable to the Fire Chief and the owner. The Fire Chief is authorized to require design submittals to bear the Wet Stamp and Signature of a professional engineer.