1. The individual has been adequately trained as evidenced by a current certificate of training by the manufacturer(s) of the UST components.

2. The individual shall possess a current UST system installer certificate from the ICC, indicating that the individual has passed the ICC UST installing/retrofitting exam.

3. The service technician shall possess or work under the direct and personal supervision of an individual physically present at the work site who possesses a current certificate from the ICC, indicating that the individual has passed the California UST Service Technician Exam.

- Contractor shall contact Dig Alert at least (48) hours prior to any excavation.

- An individual(s) installing UST components shall meet the following requirements, or work under the direct and personal supervision of an individual physically present at the work site who meets the following requirements:

   - Tank vent piping to be removed.
   - Tank vent risers (typ. of 3)

- Canopy to remain

- Fuel dispensers & UDCs to be removed (typ. of 4)

- Product & Vapor piping to be removed.

- Propylene tanks to be removed

- Canopy

- Parking

- APPROACH

- PLANTER

- APPROACH

- APPROACH

- PARKING

- PARKING

- PARKING

- TANK REMOVAL PLAN

- TRIPLE RINSE, INERT, AND REMOVE (3) EXISTING UNDERGROUND TANKS, PRODUCT, VENT AND VAPOR PIPING. LOAD ONTO TRUCK AND TRANSPORT TO APPROVED DISPOSAL FACILITY.

- SAW CUT, BREAK OUT CONCRETE, AND EXCAVATE TO EXPOSE EXISTING UNDERGROUND STORAGE TANKS AND ATTACHED PIPING. SLOPE EXCAVATION PER OSHA REQUIREMENTS.

- REMOVE AND DISPOSE OF (4) EXISTING FUEL DISPENSERS AND UNDER DISPENSER CONTAINMENT SUMPS.

- TAKE SOIL SAMPLES AS DIRECTED BY LOCAL CUPA AND TRANSPORT TO LAB FOR ANALYSIS.
CONTRACTOR: DESIGN: SP-1

PROJECT:...

DATE	DRAWN:
SCALE:
DRAWN	BY: ...

1/2
5/6
3/4
7/8
(N) 3+1 DISPENSER
W/ D.W. UDC
(GAS / DSL)
6 8
(N) 3+0 DISPENSER
6
7

EXCAVATION

APPROACH

VENT PIPING

PLANTER

P.L.

P.L.

10

11

5/6
7/8

APPROACH

5

P.L.

12

NOTE: ALL PIPING SHALL HAVE SLOPE BACK TO THE TANKS WITH A

MINIMUM 1/8" PER LINEAR FOOT.

NOTE: INTERSTITIAL SPACE OF UNDERGROUND TANK AND DOUBLE
WALL SUMPS SHALL BE FILLED WITH A BRINE SOLUTION PROVIDED BY

THE TANK MANUFACTURER. UDC'S SHALL BE FILLED WITH PROPYLENE

NOTE: ALL WORK WILL BE PERFORMED AS PER MANUFACTURER'S

SPECIFICATIONS.

- Tank System(S) shall be inspected by all required agencies at three (3) separate construction

periods from the ICC, indicating that the individual has passed the California UST Service

License Examination, provided by the California Department of Consumer Affairs.

- The service technician shall possess or work under direct and personal supervision of an individual physically

present at the worksite who meets the following requirements:

- An individual(s) installing UST components shall meet the following requirements, or work under

the direct and personal supervision of an individual physically present at the worksite who meets

the following requirements:

- The individual shall possess a current UST system installer certificate from the ICC.

- The individual has been adequately trained as evidenced by a current certificate.

- Final inspection, including all portions of the leak detection system.

- The service technician shall perform a monitoring system certification.

- New Piping is NOV (Smith Fibercast), New piping will meet the revised UL 971

standard and shall be installed per manufacturer's specifications.

- New Product Piping is NOV, New piping will meet the revised UL 971

standard and shall be installed per manufacturer's specifications.

- Tank System(S) shall be inspected by all required agencies at three (3) separate construction

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- Final inspection, including all portions of the leak detection system.

- The service technician shall perform a monitoring system certification.
12K REG UNLEADED UNDERGROUND TANK PLAN VIEW

12K REG UNLEADED UNDERGROUND TANK SECTION DETAIL
10,000 GALLON CAPACITY

NOTES: UST INSTALLATION

1. North eastern corner dimension to be used as a reference point for all installation
2. All distances to be measured from the north eastern corner.
3. Installation of boats and accessories will be accomplished from the inside of the tank.
4. Use of rebar will be approved by the manufacturer's & owner's field representative.
5. Use of fiber reinforcement is mandatory. Premix uniformly throughout concrete.
6. Slope concrete away from all manholes 1" rise over 12" run.
7. Use pea gravel consisting of naturally rounded aggregate, min 0.7" & max of 3.4" in size, free of clay, slag, cinders, or debris. All substitutes must be approved by manufacturer's & owner's field representative.
8. Tank pads minimum 2'-0" off outside walls of tanks, and must cover the footprint of the tanks. Required to provide for proper tank hold down, and to prevent accidental drilling into tank.
9. Tank shall be set dead level.
10. Tank bottom protector is required.
11. Crude oil tank capacity is 31' - 6 1/2".
12. Tank level gauge alarm at 90% capacity.
13. Dual float hydrostatic monitoring sensor.
14. Fill sump (see DT-4).
15. Trapper screen.
16. 5" pea gravel min. to prevent load transfer to top of tank.
17. Minimum bury depth 2' min.
18. Slope sides of tank hole or use shoring for all tank excavations in accordance with OSHA 1926 Subpart P, OSHA Standards - Excavations; Final Rule October 1, 1989.
SECTION VIEW - STP SUMP (E85)

NOTE: D.W. SUMPS TO BE FILLED WITH MANUFACTURER APPROVED BRINE SOLUTION.

SECTION VIEW - STP SUMP (DIESEL)

NOTE: D.W. SUMPS TO BE FILLED WITH MANUFACTURER APPROVED BRINE SOLUTION.

SECTION VIEW - STP SUMP (E85)

NOTE: D.W. SUMPS TO BE FILLED WITH MANUFACTURER APPROVED BRINE SOLUTION.

SECTION VIEW - STP SUMP (DIESEL)

NOTE: D.W. SUMPS TO BE FILLED WITH MANUFACTURER APPROVED BRINE SOLUTION.
CONTRACTOR: DESIGN: PEA GRAVEL BACKFILL (TYP.)

SECTION VIEW - FILL SIDE SUMP (DIESEL)
PLAN VIEW - FILL SIDE SUMP (DIESEL)

SECTION VIEW - FILL SIDE SUMP (REG AND PREM)
PLAN VIEW - FILL SIDE SUMP (REG AND PREM)

INSTALL PLYWOOD SKIRT OF FILL BOX
CONTRACTOR TO FORM AROUND MINI HYDROSTATIC SUMP

3/4" DOUBLE ENTRY (TYP.)
42" DOUBLE WALL POLYGON SUMP
3/4" D.W. FIBERGLASS ENTRY FITTING

3/4" D.W. FIBERGLASS BODY (12) 11" FLAT PANELS
ENTRY FITTING
SUMP MONITOR LIQUID SENSOR

BOOT (TYP.)
5 GALLON SPILL BUCKET
DROP TUBE W/ FLAPPER
W/ DRAIN VALVE
5 GALLON SPILL BUCKET
JUNCTION

CONTAINMENT SUMP (TYP.)
42" DIA. BRINE MONITORED DOUBLE WALL & RING
3/4" MONITORING CONDUIT (TYP.)
VEEDER ROOT .1 GPH MAGNOSTRICTIVE

PROBE TANK LEVEL PROBE W/ TLS CAP &
VEEDER ROOT .1 GPH MAGNOSTRICTIVE

18" MIN. CAPACITY. USE 2" FLOAT IN INSTALL KIT RING. OVERFILL ALARM SET @ 90%

1'-4" MIN. (TYP.) CONCRETE AROUND SKIRT OF FILL BOX
FORM AROUND MINI HYDROSTATIC SUMP SUMP FOR

42" MULTI- PORT MANWAY 16
14
6
11
12
120 120
15
9
7
11
9
1312
MINI HYDROSTATIC SENSOR IN BRINE FACTORY SUPPLIED RESERVOIR
2" INSIDE 3" DOUBLE WALL FRP VAPOR PIPING (VACUUM MONITORED)
1/4" DRAIN/TEST BUSHING.
FACTORY INSTALLED COLLAR BONDED TO TANK
127
80 PLLD
81
GAS STP SUMP DETAILS

LOOP VACUUM TUBING FROM PRODUCT Piping TO VAC SENSOR
SENSOR CABLE LOOPED TO TURBINE SUMP BRINE RESERVOIR
NOTE: THE LAST 2 FEET (MINIMUM) OF CONDUITS THAT ENTER THE DOUBLE WALL SUMP SHALL BE PVC COATED RIGID.

SECTION VIEW - STP SUMP (REG AND PREM UNLEADED)

PLAN VIEW - STP SUMP (REG AND PREM UNLEADED)

DOUBLE WALL TURBINE SUMP RISER

CONTRACTOR TO ADDITIONALLY GLASS WRAP & LAMINATE AT CONNECTION FOLLOWING CURING OF ADHESIVE. SPECIFIC ATTENTION MUST BE GIVEN TO SURFACE PREP AS TESTING REQUIREMENTS WILL DETECT THE SMALLEST OF FLAWS. ALL MATERIALS MUST BE COMPATIBLE WITH GASOLINE, GASOLINE WITH 15% MTBE (METHYL TERTIARY-BUTYL ETHER), OR GASOLINE WITH 10% ETOH (ETHANOL). FIBERGLASS AND RESIN MUST EXTEND 1/2" BEYOND COVERAGE OF ADHESIVE.

NOTE: THE LAST 2 FEET (MINIMUM) OF CONDUITS THAT ENTER THE DOUBLE WALL SUMP SHALL BE PVC COATED RIGID.

CONTRACTOR SHALL BE HELD RESPONSIBLE FOR PROPER INSTALLATION & PREPARATION PER MANUFACTURERS INSTRUCTIONS AND SHALL REINSTALL SUMPS IF HYDROSTATIC TESTING SHOWS LEAKING IN THIS AREA OF THE SUMP.
DOUBLE WALL FILL SUMP RISER

B. BURNS
CONTRACTOR: DESIGN:
CHEVRON
451 HEGENBERGER RD
OAKLAND, CA 94621
451HEGENBERGER
BMBDESIGN77@GMAIL.COM
(909) 702-9004
DESIGN SERVICES
BMB
11/29/2019
N.T.S.

ANNULAR DETAILS / SUMP NOTES

- 4"
- 2'-0"
- 2'-0"
- 19"
- 10"
- 6"
- 5'-4"
- 3/8 X 1/4 SS BUSHING INSTALLED AT FACTORY
- 1/4" DRAIN/TEST BUSHING. FACTORY INSTALLED
- FACTORY SUPPLIED HYDROSTATIC RESERVOIR
- FACTORY BONDED JOINT (TYP.)
- SLIP ON RISER
- FACTORY LAY-UP
- FIELD SEALED JOINT. (ADHESIVE SUPPLIED W/ KIT)
- DW COLLAR BONDED TO TANK
- 42" DIA. POLYGON SUMP BODY
- (12) 11 3/4" FLAT PANELS

CONTRACTOR TO ADDITIONALLY GLASS WRAP & LAMINATE AT CONNECTION FOLLOWING CURING OF ADHESIVE. SPECIFIC ATTENTION MUST BE GIVEN TO SURFACE PREP AS TESTING REQUIREMENTS WILL DETECT THE SMALLEST OF FLAWS. ALL MATERIALS MUST BE COMPATIBLE WITH GASOLINE, GASOLINE WITH 15% MTBE (METHYL TERTIARY-BUTYL ETHER), OR GASOLINE WITH 10% ETOH (ETHANOL). FIBERGLASS AND RESIN MUST EXTEND 1/2" BEYOND COVERAGE OF ADHESIVE.

THE STRAP CHANNEL IF PRESENT ON THE FILL SIDE SUMP DOES NOT "COMMUNICATE" WITH THE INSIDE OF THE SUMP. CONTRACTOR TO BE SURE TO LEAVE UNOBSRUCTED PATH FOR STRAP TO PENETRATE INTO THE CHANNEL SO THAT TANKS MAY BE PROPERLY ANCHORED.

- CROSSING FLEX CONNECTORS MUST MAINTAIN A MINIMUM OF 2 INCH CLEARANCE OR THE USE OF AN ANTI CHAFING DEVICE MUST BE INSTALLED.

- ONE 3/4" STANDARD MONITORING HOME RUN CONDUIT TO EACH TANK AND ONE 3/4" VACUUM MONITORING HOME RUN CONDUIT TO EACH TANK. FOR STANDARD MONITORING DEVICES, LOOP CONTAINMENT SUMP SENSORS, PLLD & TANK GAUGE TO TANK INTERSTITIAL SENSOR LOCATION AND HOME RUN TO BLDG. FOR VACUUM MONITORING LOCATIONS ROUTE CROSSOVER CONDUITS CONTAINING VACUUM TUBING BETWEEN FILL AND TURBINE SUMP. A SEPARATE CONDUIT FROM TURBINE SUMP IS USED FOR VACUUM SENSORS TO BUILDING. PROVIDE SEAL-OFFS IN BUILDING & PRIOR TO LEAVING HAZARDOUS AREA. ROUTE TO INTRINSICALLY SAFE TROUGH IN BUILDING.
- CONDUITS SHALL CONTAIN ONLY LOW VOLTAGE WIRING FOR SENSORS. LAST TWO FEET TO SUMPS SHALL BE PVC COATED RIGID.

- REAM ALL RISERS FOR FULL PIPE BORE IF REQUIRED.
- COAT ALL BURIED GALVANIZED STEEL WITH COAL TAR EPOXY.
- INSTALL TANK ID MARKERS IN THE SPILL CONTAINMENT MANHOLE. COVERS SHALL BE PRIMED AND PAINTED ACCORDING TO SPECIFICATIONS.
- FIBER REINFORCEMENT TO BE USED. PRE-MIX UNIFORMLY THROUGHOUT CONCRETE. REINFORCING BARS TO BE NO LESS THAN 2" AND NO MORE THAN 4" FROM SURFACE. SLOPE CONCRETE AWAY FROM ALL MANHOLES 1" RISE OVER 12" RUN

- PIPING SHALL BE LAID AND CONTINUOUSLY SUPPORTED ON A 6" COMPACTED PEA GRAVEL BEDDING. PIPING SHALL NOT BE SUPPORTED BY BLOCKS, PLANKS, OR OTHER DEBRIS.
- ALL ENTRIES TO BE PERPENDICULAR TO CONTAINMENT SUMP. OFFLINE INSTALLATION SHALL BE PERMITTED WHEN USING FLEXIBLE ENTRY BOOTS
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- CROSSOVER PL CONDUITS MUST MAINTAIN A MINIMUM OF 2 INCH CLEARANCE OR THE USE OF AN ANTI CHAFING DEVICE MUST BE INSTALLED.

- PEAKING CONCRETE MAY PROXIMALLY VINDEED 3" BESIDE 1/2" PAV.
- FIBER REINFORCEMENT TO BE USED. PRE-MIX CONFIRMDLY THROUGHOUT CONCRETE
- MATERIALS MUST BE APPROVED BY MANUFACTURERS
- BG PL ARE TO BE INSTALLED IN THE W & STAGE II PIPING DRAINS & ENTER INTO REGULAR UNLEADED TANK FIRST W/ 3" CONNECTIONS, AND CONTINUE 3" TO OTHER TANKS.
- SECONDARY CONTAINMENT IS REQUIRED FOR ALL VENT AND STAGE II VAPOR RECOVERY PIPING.
- COAT ALL BURIED GALVANIZED STEEL WITH COAL TAR EPOXY.
- INSTALL TANK ID MARKERS IN THE SPILL CONTAINMENT MANHOLE. COVERS SHALL BE PRIMED AND PAINTED ACCORDING TO SPECIFICATIONS.
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- CROSSOVER PL CONDUITS MUST MAINTAIN A MINIMUM OF 2 INCH CLEARANCE OR THE USE OF AN ANTI CHAFING DEVICE MUST BE INSTALLED.
SIDE ELEVATION

FRONT ELEVATION...DISPENSER

ELEVATION DETAIL @ 3+1 DISPENSER (GAS/DSL)

SIDE VIEW @ 3+1 DISPENSER (GAS/DSL)

DISPENSER AT ISLAND INSTALLATION DETAILS

NOTE: FOR ALL NON-VPH ENTRY/TEST FITTING: DRAIN VALVE TO BE INSTALLED POINTING DOWNWARDS, AT THE 6'O CLOCK POSITION

NOTE: ONLY MANUFACTURER APPROVED PROPYLENE GYCOL SOLUTION CAN BE USED TO FILL UDC INTERSTITIALS

DISPENSER CONTAINMENT SUMP CONDUIT ROUTING DETAIL

NOTE: ONLY MANUFACTURER APPROVED PROPYLENE GYCOL SOLUTION CAN BE USED TO FILL UDC INTERSTITIALS
NOTES:

- The Canister will be monitored by a Veeder Root TLS-350 Plus control panel with version 29 or higher software.
- Canister will be mounted to Independent offset Support System designed to support the weight of the canister.
- A 1" flexible connector shall installed at the inlet piping's connection to the vent riser for seismic allowance.
- Bollards shall be provided 18" from the support system as need for crash protection.
- The Canister may be installed with no building setbacks adjacent to a 4-hour fire rated building wall with no openings in accordance with NFPA 5-3.1.2.
- The centerline of the Canister mounting bracket's lowest U-bolt shall be a min. of 110" above grade to provide the minimum 12' canister outlet height.
- The Canister shall bear the "warning markings" as required by the State Fire Marshal's certification letter dated October 16, 2008.
- The Canister shall be attached to the vent riser / support post using Veeder Root supplied mounting hardware.
- The Canister’s vapor valve shall not terminate beneath eaves, overhangs or canopies and shall comply with all Class-I Div-I, Div-II clearance requirements.
- The Canister’s vapor valve shall terminate a min. of 12' above grade and 18" above roofs or parapets, per CFC section 3406.8.1 and NFPA 30A 4-5.9.
- The Canister shall be located a minimum of 5' from buildings and adjacent property lines that can be built upon; per NFPA 30 table-5.3.1.1, and CFC table 3405.3.4 (2).
- A 7 input smart sensor module will be installed in existing Veeder Root TLS-350 control panel which has printout capability.
- The Canister’s vapor valve shall be located a min. of 5' from openings in buildings in accordance with CFC 3404.27.5.2.

DOUBLE WALL VENT SUMP @ VENT RISER SECTION VIEW

DOUBLE WALL VENT SUMP @ VENT RISER SECTION VIEW

(Note: The diagram shows various components and annotations, including venting systems, connectors, and sensors. The text provides detailed descriptions of the installation requirements and specifications for the venting system.)
**GENERAL NOTES:**

- **ELECTRICAL CLOSET:**
  - Tank Area Vent Area
  - Tank Area - Sump Area
  - Tank Area - Turbine Power - E85
  - Tank Area - Turbine Power - Reg Gas

- **MANAGERS OFFICE:**
  - Power 6x6 Wireway

- **DRAWN BY:**... N.T.S.

- **CHECKED BY:** B. BURNS

- **DESIGN SERVICES:**
  - BMB DESIGN 77@GMAIL.COM

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**CONDUIT SCHEDULE**

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**CONDUIT LEGEND:**

- Power 6x6 Wireway
- 1" RGS Conduit
- 1.5" RGS Conduit
- 2" RGS Conduit
- 3" RGS Conduit
- 4" RGS Conduit
- 6" RGS Conduit
- 8" RGS Conduit
- 10" RGS Conduit

**INTERCOM AT MANAGER'S OFFICE INSTALLED AND TIED TOGETHER W/#4 BARE COPPER WIRE.**

**ALL CONDUITS SHALL HAVE INSULATED GROUNDING BUSHINGS ENTERING AND LEAVING AN EXPLOSION PROOF JUNCTION BOX.**

**ALL CONDUCTORS SHALL BE STRANDED COPPER WITH 75°C THWN OR THHN.**
NOTES

1. All vacuum tubing must be Veeder-Root tubing.
2. An external siphon check valve (Veeder-Root #3188-241-5) must be used when making a vacuum source connection between the JDOE system sensors and the siphon port cartridge for E85 turbine.
3. Double wall of all E85 tank product and vent piping to be vacuum monitored.
4. Double wall of E85 turbine sump, fill sump, UDCs, and vent sump to be hydrostatic monitored.
5. Double wall of E85 UST to be hydrostatic monitored.
6. No vacuum monitoring in fill sump, UDC's, or vent sump.

VEEDER ROOT VACUUM ZONE TABLE

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>ZONE</th>
<th>PIPE</th>
<th>LENGTH (FT)</th>
<th>VOLUME (GALLONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL (3&quot;X2&quot; Smith pipe = 0.23 GAL/FT)</td>
<td>4</td>
<td>VENT</td>
<td>33</td>
<td>7.6</td>
</tr>
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- Fire department final inspection required. Schedule inspection at least two days in advance. 
- After the emergency shutdown devices shall stop the transfer of fuel to the dispensers and close all valves that supply fuel to the dispensers.
- Emergency shutdown devices shall be distinctly labeled "EMERGENCY FUEL SHUTDOWN DEVICE."
- The dispensing of fuel into the fuel tanks of motor vehicles or portable containers shall be under the supervision of a qualified attendant at all times, except of unapproved unsecured locations.
- Piping and combustible liquids and petroleum waste products shall not be discharged into sewers, streets, highways, drainage canals, ditches, storm sewers, flood-control channels, lakes, rivers, deep waterways, etc.
- Pressure gauge shall be to be located, visible, accessible, and control of dispensing of fuel. The attendant shall prevent the dispensing of flammable and combustible liquids into containers not in compliance with code, control, or control of dispensing by means of communicating with the fire department shall be provided for the attendant.
- Electrical equipment in accordance with the 2018 California Code.
- Signs prohibiting smoking, prohibiting dispensing into unsecured containers, and requiring vehicle engines to be stopped during fueling shall be conspicuously posted within sight of each dispenser.
- No signs, glass, trash, and other combustible materials shall be kept less than ten feet from fuel storage vessels and fuel-handling equipment.
- Fire protection in compliance with Section 505 of the CFC, with a minimum rating of 1/2-20-1/2-1/C shall be provided and not more than 75 feet from any pump, dispensing, or storage tank field piping openings. CFC 2306.5
- Piping and nonmetallic piping shall be designed for maximum temperature. Reinforcement of the pipe, shall be provided with a liquidtight cap or cover. CFC 5703.6.9.1
- Piping does not exceed four inches in diameter; and
- If necessary due to grade, condensate tanks are allowed in vapor-return piping. Condensate tanks shall be designed and installed so that they will drain toward the tank without sags or traps in which liquid can collect. Vent pipes shall be installed in such a manner as to effect the following:
- Build pipes should be designed and constructed in accordance with Article 5703.6 of the CFC. Large vent pipes shall be installed such that they will drain before the tank without sag or trap in which liquid can collect. Build pipes should be designed in such a manner as to prevent contamination and possible changes in classification of the less volatile liquid. CFC 5704.2.7.3.5
- For underground tanks, manifolded vent pipes shall be sized to prevent system pressure limits from being exceeded when manifolded tanks are filled simultaneously. CFC 5704.2.7.3.5
- Use of flame arrester in piping systems shall be in accordance with API 2000. CFC 5704.2.7.3.2
- Tank vent piping shall not be manifolded unless required for special purposes such as vapor-recovery, vapor conservation or air pollution control. CFC 5704.2.7.2.3
- Vent pipes for tanks storing Class B or C liquids shall not be manifolded with vent pipes for tanks storing Class II or III liquids unless positive means are provided to prevent contamination and possible changes in classification of the less volatile liquid. CFC 5704.2.7.3.5
- For underground tanks, manifolded vent pipes shall be sized to prevent system pressure limits from being exceeded when manifolded tanks are filled simultaneously. CFC 5704.2.7.3.5
- Use of flame arrester in piping systems shall be in accordance with API 2000. CFC 5704.2.7.3.2
- Tank vent piping shall not be manifolded unless required for special purposes such as vapor-recovery, vapor conservation or air pollution control. CFC 5704.2.7.2.3
- Vent pipes for tanks storing Class II or III liquids shall not be manifolded with vent pipes for tanks storing Class I liquids unless positive means are provided to prevent contamination and possible changes in classification of the less volatile liquid. CFC 5704.2.7.3.5
- Tank and pressure vessels storing Class B or C liquids shall be equipped with venting devices which shall be normally closed except when venting under pressure or vacuum conditions, with listed flame arrester. The vents shall be installed and maintained in accordance with Section 4.2.5.1 of NFPA 30 at all API. CFC 5704.2.7.3.2
- Vapor Recovery Vapor Recovery systems comply with CFC 2306.7.3.2.2. A. Dispersing devices incorporating provisions for vapor recovery shall be installed and labeled. CFC 2306.7.2.1
- B. Means shall be provided to shut down fluid dispensing in the event the vapor recovery line becomes blocked. CFC 2306.7.1.1
- C. An approved valve shall be provided to close off the vapor-recovery line from dispensers when the product is not being dispensed. CFC 2306.7.1.2
- D. Nonmetallic piping shall be installed in accordance with the manufacturer’s installation instructions. CFC 2306.7.1.3
- E. An approved shunt valve shall be supplied and connected to a vent on the vapor-recovery piping at the location of each dispensing device. The shunt valve shall be mounted flush with the top of the surface on which the dispenser is included. CFC 2306.7.1.4
- F. Flexible joints shall be listed and approved and shall be installed on underground liquid, vapor, and vent piping in the following locations:
- 1) Where piping ends at pump vaults and vent vaults, and
- 2) At points where directional movement can occur. CFC 5703.6.9
- G. Fiberglass-reinforced plastic piping need not be provided with flexible joints in locations where both of the following conditions are present:
- 1) Piping does not exceed four inches in diameter; and
- 2) Piping has a straight run of not less than four feet on one side of the connecting which causes a change of direction. In lieu of the minimum four-foot straight run length, approved and listed flexible joints are allowed to be used under dispensers and suction pumps, at submerged pumps and tanks, and in vessels without aboveground. CFC 5703.6.9.1
- H. Vapor-processing systems that introduce air into the underground piping or storage tanks shall be provided with equipment for prevention of flammable vapors from entering buildings or tanks located at or above 10 feet below the surface. These systems shall be designed, sized and tested as suitable for the intended use. CFC 2306.7.3
- I. Vapor-processing equipment shall be located at or above grade. Sources of ignition shall be located not less than 50 feet from any fuel-dispensing area.
- J. Vapor-processing equipment shall be located at or above grade. Sources of ignition shall be located not less than 50 feet from any fuel-dispensing area.
- K. Vapor-processing equipment shall be located at a minimum of 20 feet from dispensing devices. Processing equipment shall be provided against physical damage by guardrails, curbs, protective closures or fencing. Where approved protective enclosures are used, approved means are provided to prevent the volume within the enclosure to prevent the presence of flameable vapor. CFC 2306.7.2.3
- L. Where a down slope exists towards the location of the vapor-processing unit from a fire-control area, the fire code shall be authorized to require additional vapor control equipment by distance and height. CFC 2306.7.2.3
- M. Vapor-processing units shall be securely mounted on concrete, masonry, or structural steel supports on concrete or other noncombustible foundations. CFC 2306.7.2.3
- N. Vapor-recovery and vapor-processing equipment shall be installed to be roamed on roofs when approved. CFC 2306.7.2.3
- O. Vapor-recovery lines shall be installed in a manner that drains back to the tank, without sags or traps in which liquid can become trapped. CFC 2306.7.3.2.2
- P. Equipment in vapor-processing systems, including hose nozzles, vapor pumps, flame arrester, the checks or systems for prevention of flame-propagation and controls and shall be individually listed for the intended use in a specific manner. CFC 2306.7.2.3.1
- Q. An approved vapor-recovery equipment recovery shall be directly connected to and controlled by the emergency pump switch. CFC 2306.7.6
- Electrical equipment including heat-producing appliances must be approved for the particular hazards anticipated at the facility and shall be properly installed and maintained in accordance with NFPA 30 at all API. CFC 5704.2.7.3.2