

Title V

Model General Permit Template

SERIES 19 Tanks

Template # SJV-TK-19-0

Fixed roof tank

Storage capacity Greater than 1,100 gallons but less than 39,600 gallons

Tank used at drilling and production facility prior to custody transfer

Stores a volatile organic liquid which has a true vapor pressure of greater than 0.5 psia but less than 11 psia for tanks with a storage capacity greater than or equal to 1,100 gallons but not exceeding 39,600 gallons, or

Stores a volatile organic liquid which has a true vapor pressure of greater than or equal to 0.5 psia but less than 1.5 psia for tanks with a storage capacity greater than 19,800 gallons but not exceeding 39,600 gallons

San Joaquin Valley Unified Air Pollution Control District

Final
Title V Model General Permit Template
Series 1 Tanks

Template No: SJV-TK-19-0

PREPARED BY:

Sheraz Gill
Air Quality Engineer

REVIEWED BY:

Rick McVaigh
Permit Services Manager

APPROVED BY:

Seyed Sadredin
Director of Permit Services

FINAL DECISION DATE:

February 14, 2003

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

TITLE V GENERAL PERMIT TEMPLATE SJV-TK-1-1

ENGINEERING EVALUATION

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
I. PURPOSE		1
II. TEMPLATE APPLICABILITY		1
III. APPLICABLE REQUIREMENTS		1
IV. COMPLIANCE		3
V. PERMIT SHIELD		3
VI. PERMIT CONDITIONS		4
APPENDIX A	EPA COMMENTS / DISTRICT RESPONSE	A-1
APPENDIX B	Comparison of District Rule 4623 (amended 12/20/01) and current SIP approved version (amended 12/17/92)	B-1
APPENDIX C	Template Qualification Form	TQF-1

Template SJV-TK-19-0

I. Purpose

The purpose of the proposed template is to streamline the Title V permitting process and reduce the time required by the applicant and the District by identifying the federally applicable requirements for tanks and establishing permit conditions which will ensure compliance with such requirements. These conditions will be incorporated into the Title V permit of any facility choosing to make use of the template.

II. Template Applicability

The template applies to any fixed roof tank which:

Fixed roof tank, used for petroleum or condensate stored, processed and/or treated at drilling and production facility prior to custody transfer.

Has a storage capacity greater than 1,100 gallons but less than 39,600 gallons, and

a) Stores a volatile organic liquid which has a true vapor pressure of greater than 0.5 psia but less than 11 psia for tanks with a storage capacity greater than or equal to 1,100 gallons but not exceeding 39,600 gallons, or

b) Stores a volatile organic liquid which has a true vapor pressure of greater than or equal to 0.5 psia but less than 1.5 psia for tanks with a storage capacity greater than 19,800 gallons but not exceeding 39,600 gallons.

The applicability of this template is determined by completion of the Template Qualification Form (TQF) attached as Appendix C. The completed and signed TQF for each qualifying unit must be submitted with the Title V application.

III. Applicable Requirements

Units may be subject to “federally enforceable” requirements as well as requirements that are enforceable by the “District-only”. Federally enforceable requirements will be enforceable by the EPA, the District, and the public through Title V permit conditions identified as federally enforceable. District-only requirements represent local or state regulations for which the EPA has no direct enforcement authority. The final Title V permits issued by the District will contain both federally enforceable and District-only requirements.

Template SJV-TK-19-0

District-only requirements are not addressed in this template except for those used in streamlining of multiple requirements. District-only requirements used in streamlining of multiple requirements will become federally enforceable. Table 1, Applicable Requirements, does not necessarily include all federally enforceable requirements that apply to tanks qualifying to use this template, and it is the source's responsibility to determine any and all applicable requirements to which the source is subject. Generally, requirements not addressed by this template are those that require a source-specific analysis, or are covered by other templates.

Table 1 Applicable Requirements

Rule Category	Rule/Regulation	Citation	Description
A	SJVUAPCD Reg. IV	4623	Storage of Organic Liquids
A	SJVUAPCD Reg. II	2520, 9.4.2	Federally Mandated Operating Permits
B	SJVUAPCD Reg. II	2201	New Source Review Rule
B	SJVUAPCD Reg. II	2520	Federally Mandated Operating Permits
B	SJVUAPCD Reg. IV	4101	Visible Emissions
B	NESHAP, Subpart CC	40CFR 63	Petroleum Refineries
B	NESHAP, Subpart F	40CFR 63	Synthetic Organic Chemical Manufacturing Industry
B	NESHAP, Subpart I	40CFR 63	Certain Processes Subject to the Negotiated Regulation for Equipment Leaks
C	SJVUAPCD Reg. IV	4661	Organic Solvents
C	SJVUAPCD Reg. IV	4801	Sulfur Compounds
C	NSPS Subpart K	40CFR 60 60.110	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978
C	NSPS Subpart Ka	40CFR 60 60.110a	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 , and Prior to July 23, 1984
C	NSPS Subpart Kb	40CFR 60 60.110b	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification commenced after July 23, 1984

Category "A" rules contain requirements that are directly applicable to the qualifying units; compliance with these applicable requirements will be demonstrated in this engineering evaluation and assured by the template permit conditions. In section IV, Compliance, the federally-enforceable requirements from category "A" rules are listed with a discussion of how compliance with these requirements is achieved.

Category "B" rules contain federally enforceable requirements that were not addressed in this template. These may not be all of the federally enforceable requirements for this unit. Requirements from these rules must be addressed by the applicant outside of this template within the Title V application Compliance

Template SJV-TK-19-0

Plan form (TVFORM-004). Category "B" listing is included in this table as an informational item to assist applicants in this effort.

Category "C" rules contain requirements which have been determined not to be applicable to qualifying units. A permit shield is proposed for the category "C" rules. An explanation of the determination of non-applicability of category "C" rules is included in the permit shield section of this evaluation.

IV. Compliance

This section contains a discussion of how compliance is assured with each requirement addressed in this template.

District Rule 4623

Section 2.0 states that this rule is only applicable to equipment used to store organic liquids, including crude oil and petroleum distillates, with a true vapor pressure of greater than 0.5 psia.

Section 5.1 states that except for small producers who are required to comply with the VOC control system requirements in Section 5.1.2, an operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system identified as following:

Tank with capacity 1,100 gallons to 19,800 gallons used to store organic liquid with the TVP of 0.5 psia to < 11 psia shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system

Tank with capacity 1,100 gallons to 19,800 gallons used to store organic liquid with the TVP of > 11 psia shall be equipped with Pressure vessel or vapor recovery system.

Tank with capacity >19,800 gallons to 39,600 gallons used to store organic liquid with the TVP of 0.5 psia to < 1.5 psia shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system.

Units covered by this template control VOC emissions by the use of a pressure-vacuum relief valve.

Section 5.2 states that the tank shall be in a gas-tight condition. The pressure-vacuum (PV) relief valve shall be set to within 10% of the maximum allowable working pressure of the tank. The PV relief valve shall be permanently labeled with the operating pressure settings. The PV relief valve shall be properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. See template condition 1.

Template SJV-TK-19-0

Section 6.0 requires periodic monitoring, testing and recordkeeping of tanks covered by this template including true vapor pressure (TVP) testing of the organic liquid stored in the tank at least once every 24 months during summer (July – September), and/or whenever there is a change in the source or type of organic liquid stored in the tank. Periodic monitoring such as maintaining a record of the liquid stored, the storage temperature, the true vapor pressure of that liquid during the respective storage period, and associated testing will be required. See template permit conditions 3-12.

District Rule 2520, 9.4.2

Section 9.4.2 requires all records be maintained for at least five years. Template permit condition 12 requires that all records be maintained for at least five years.

V. Permit Shield

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Title V permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed. A permit shield is requested in template permit condition 13.

A permit shield will also be granted for 40CFR 60 Subpart K, Ka and Kb because units qualifying to use this template have a storage capacity less than 420,000 gallons and are used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. These rules only apply to units that are not used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. A permit shield is granted from these requirements in template permit condition 14.

VI. Permit Conditions

The following conditions will be incorporated into the Title V permit of any facility choosing to make use of template #SJV-TK-19-0:

1. The tank shall be in a gas-tight condition. The pressure-vacuum (PV) relief valve shall be set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2]
2. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured

Template SJV-TK-19-0

by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.9 and 6.4.8]

3. Effective November 15, 2003, permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]

4. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. If the tank stores crude oil or petroleum distillates, the permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.1.4]

5. In lieu of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP testing of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. [District Rule 4623, 6.2.1]

6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2]

3. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4]

4. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3]

9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid,

Template SJV-TK-19-0

TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6]

10. As used in this permit, the term "source or type" shall mean liquids with similar characteristics. The operator shall maintain records of API gravity of petroleum liquids stored in this unit to determine which are from common source.
11. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623, 6.3.1]
12. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2]
13. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4623 (Amended December 20, 2001). A permit shield is granted from this requirement. [District Rule 2520, 13.2]
14. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

APPENDIX A

EPA COMMENTS / DISTRICT RESPONSE

FOR

TEMPLATE # SJV-TK-19-0

Template SJV-TK-19-0

EPA COMMENTS /DISTRICT RESPONSE

No Comments were received regarding this template.

APPENDIX B

**4623 (Amended December 17, 1992) DISTRICT RULE /
4623 (Amended December 20, 2001) DISTRICT RULE
COMPARISON
FOR
TEMPLATE # SJV-TK-19-0**

Comparison of the latest amended version (amended December 20, 2001) of District Rule 4623 and the current SIP approved version, amended December 17, 1992

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
APPLICABILITY		
This rule applies to any tank with a design capacity of 1,100 gallons or greater used to store organic liquid with a true vapor pressure (TVP) of 0.5 psia or greater.		X
This rule applies to any tank with a design capacity of 19,800 gallons or greater used to store organic liquid with a true vapor pressure (TVP) of 1.5 psia or greater.	X	X
EXEMPTIONS		
The requirements of this rule shall not apply to;		
For any tank designated for emergency standby, in existence prior to May 1, 1979, and which stores exclusively petroleum distillate or crude oil. Prior to return to emergency standby status, each tank shall be thoroughly drained. After a tank has been used (filled or partially filled) and draining of the tank has begun, any further filling of the tank shall constitute a separate use of the tank. The tank shall be equipped with a pressure relief device set to within ten (10) percent of the maximum allowable working pressure of the tank.	X	X
Temporary tanks, with capacities of 21,000 gallons (500 barrels) or less, left on site for six months or less.	X	X
If the unit is a tank with a capacity of less than 84,000 gallons or less of a small producer with a daily throughput of less than 6,300 gallons per day, and equipped with a pressure relief device set to within 10 percent of the maximum allowable working pressure of the tank.	X	
Until November 14, 2003, any tank of a small producer with a capacity of 84,000 gallons (2,000 barrels) or less, unless otherwise subject to Section 4.4, shall be exempted from this rule, except for complying with Sections 6.2.1, 6.3.4, 6.3.6, 7.1, and 7.3, provided the daily throughput of the tank is less than 6,300 gallons (150 barrels) of crude oil, and the tank is equipped with a pressure relief device set to within ten (10) percent of the maximum allowable working pressure of the tank. On and after November 15, 2003, small producers' tanks that are not subject to Section 4.4 shall be in compliance with all the requirements of this rule.		X
Effective on and after November 15, 2003, except for complying with Sections 6.3.4 and 7.3, a small producer's tank with a throughput of 50 barrels of crude oil per day or less is exempt from the requirements of this rule. All other small producer's tanks that do not qualify for exemption under Section 4.4 shall comply with all the requirements of this rule.		X
Tanks, reservoirs or other containers which are pressure vessels maintaining working pressures sufficient at all times to prevent organic liquid loss or VOC loss to the atmosphere.	X	X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
If a new incineration device is required solely to comply with the requirements of this rule for existing tanks such device shall not be subject to the requirements of the New and Modified Stationary Source Review Rule provided the device includes BACT provisions for all air contaminants and the device is under District permit.	X	X
REQUIREMENTS		
Except for small producers who are required to comply with the VOC control system requirements in Section 5.1.2, an operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system identified as following:		
Tank with capacity 1,100 gallons to 19,800 gallons used to store organic liquid with the TVP of 0.5 psia to < 1.5 psia shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity 1,100 gallons to 19,800 gallons used to store organic liquid with the TVP of 1.5 psia to < 11 psia shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity 1,100 gallons to 19,800 gallons used to store organic liquid with the TVP of > 11 psia shall be equipped with Pressure vessel or vapor recovery system.		X
Tank with capacity >19,800 gallons to 39,600 gallons used to store organic liquid with the TVP of 0.5 psia to < 1.5 psia shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity >19,800 gallons to 39,600 gallons used to store organic liquid with the TVP of 1.5 psia to < 11 psia shall be equipped with internal floating roof, or external floating roof, or vapor recovery system.	X	X
Tank with capacity >19,800 gallons to 39,600 gallons used to store organic liquid with the TVP of > 11 psia shall be equipped with Pressure vessel or vapor recovery system.	X	X
Tank with capacity > 39,600 gallons used to store organic liquid with the TVP of 0.5 psia to < 1.5 psia shall be equipped with internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity >39,600 gallons used to store organic liquid with the TVP of 1.5 psia to < 11 psia shall be equipped with internal floating roof, or external floating roof, or vapor recovery system.	X	X
Tank with capacity >39,600 gallons used to store organic liquid with the TVP of > 11 psia shall be equipped with Pressure vessel or vapor recovery system.	X	X
A small producer shall not place, hold, or store crude oil in any tank unless such tank is equipped with a VOC control system identified as follow:		
Tank with capacity 1,100 gallons to 39,600 gallons used to store crude oil with the TVP of 0.5 psia to < 1.5 psia and a tank throughput of >50 to <150 barrels of crude oil per day shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity 1,100 gallons to 39,600 gallons used to store crude oil with the TVP of 1.5 psia to < 11 psia and a throughput of > 150 barrels per day shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity 1,100 gallons to 39,600 gallons used to store crude oil with the TVP of > 11 psia shall be equipped with Pressure vessel or vapor recovery system.		X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
Tank with capacity > 39,600 gallons used to store crude oil with the TVP of 0.5 psia to < 1.5 psia and a tank throughput of > 50 to < 150 barrels of crude oil per day shall be equipped with Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity > 39,600 gallons used to store organic liquid with the TVP of 1.5 psia to < 11 psia and a tank throughput of > 150 barrels of crude oil per day shall be equipped with internal floating roof, or external floating roof, or vapor recovery system.		X
Tank with capacity > 39,600 gallons used to store organic liquid with the TVP of > 11 psia shall be equipped with Pressure vessel or vapor recovery system.		X
<u>External Floating Roof</u>		
The external floating roof shall float on the surface of the stored liquid at all times (i.e., off the roof leg supports) except during the initial fill until the roof is lifted off the leg supports and when the tank is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five calendar days prior to performing the work.		X
Seal designs shall be submitted to the APCO and shall not be installed or used unless they are approved by the APCO as meeting the criteria set forth in the following.	X	X
Metallic-shoe-type, welded tanks;		
No gap between the tank and primary seal shall not exceed 1 1/2 inches. The cumulative length of all gaps greater than 1/2 inch shall not exceed 10% of the circumference of the tank. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of tank circumference. No continuous gap greater than 1/8 inch shall exceed 10% of the tank circumference.	X	X
No gap in the secondary seal shall exceed 1/2 inch. The cumulative length of all gaps greater than 1/8 inch shall not exceed 5% of the tank circumference.	X	X
If the primary seal is a metallic shoe, one end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 24 inches above the stored liquid surface.	X	X
If the primary seal is a metallic-shoe-type seal, then the geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least eighteen inches in the vertical plane above the liquid surface.	X	X
The secondary seal shall allow easy insertion of probes up to one and one-half (1-1/2) inches in width in order to measure gaps in the primary seal.	X	X
Secondary seal shall extend from the roof of the tank to the shell and not be attached to the primary seal.	X	X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
<p>Metallic-shoe-type seal, riveted tank;</p> <p>No gap between the tank and primary seal shall not exceed 2 1/2 inches. The cumulative length of all gaps greater than 1 1/2 inch shall not exceed 10% of the circumference of the tank. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of tank circumference. No continuous gap greater than 1/8 inch shall exceed 10% of the tank circumference.</p> <p>No gap in the secondary seal shall exceed 1/2 inch. The cumulative length of all gaps greater than 1/8 inch shall not exceed 5% of the tank circumference.</p> <p>If the primary seal is a metallic shoe, one end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 24 inches above the stored liquid surface. If the primary seal is a metallic-shoe-type seal, then the geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least 18 inches in the vertical plane above the liquid surface.</p> <p>There shall be no holes or tears in, or openings in the envelope surroundings the annular vapor space enclosed by the roof edge, stored liquid surface, shoe, and seal fabric.</p> <p>The secondary seal shall allow easy insertion of probes up to one and one-half (2-1/2) inches in width in order to measure gaps in the primary seal.</p> <p>Secondary seal shall extend from the roof of the tank to the shell and not be attached to the primary seal.</p>	X	X
<p>Resilient toroid type seal;</p> <p>On and after November 15, 2003, the primary resilient toroid seal shall be mounted on the perimeter of the roof such that it is in contact with the tank's liquid contents at all times while the roof is floating.</p> <p>No gap between the tank and primary seal shall not exceed 1/2 inch. The cumulative length of all gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. No continuous gap greater than 1/8 inch shall exceed 10% of the tank circumference</p> <p>On and after November 15, 2003, the cumulative length of all primary seal gaps greater than one-eighth (1/8) inch shall not exceed five (5) percent of the tank circumference.</p> <p>No gap in the secondary seal shall exceed 1/2 inch. The cumulative length of all gaps greater than 1/8 inch shall not exceed 5% of the tank circumference.</p> <p>There shall be no holes or tears in, or openings in the envelope surroundings the annular vapor space enclosed by the roof edge, stored liquid surface, shoe, and seal fabric.</p>	X	X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
The secondary seal shall allow easy insertion of probes up to one and one-half (1/2) inches in width in order to measure gaps in the primary seal.	X	X
Secondary seal shall extend from the roof of the tank to the shell and not be attached to the primary seal.	X	X
The primary seal envelope shall be made available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of 8 locations shall be made available; in other cases a minimum of 4 locations shall be made available. If the APCO suspects a violation may exist the APCO may be necessary to determine the seal condition for its entire circumference.	X	
All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal, or lid. The cover, seal, or lid shall at all times be in a closed position, with no visible gaps and be gas-tight, except when the device or appurtenance is in use. Gas-tight shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source in accordance with EPA Method 21. Emissions from gauging or sampling device covers in excess of this limit shall be considered a leak.	X	X
Each roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.	X	X
<u>Fixed roof tanks with internal floating roof</u>		
Internal floating roof tanks shall be equipped with seals that meet the criteria set forth for the external floating roof seals above.	X	X
The metallic shoe-type seal shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface.		X
<u>Fixed roof tanks with vapor recovery system</u>		
No person shall place, store or hold in any floating roof tank of 19,800 gallons or greater, any organic liquid, light crude oil or petroleum distillate unless the tank is equipped with a vapor loss prevention system, consisting of a system capable of collecting all VOC's, and a system for processing and for return to the storage or disposal of VOC's, so as to prevent their emission to the atmosphere at an efficiency of at least 95% by weight.	X	X
Any tank gauging or sampling device on a tank vented to the vapor recovery shall have gas-tight covers and closed at all times except during gauging or sampling.	X	X
All piping, valves and fittings shall be constructed and maintained	X	X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
Storage in any above-ground tank of 19,800 gallons or less of gasoline unless tank is equipped with a pressure relief device set to within 10% of the maximum allowable working pressure of the container or is equipped with a vapor loss control device which complies with the requirements of the above rules.	X	X
Floating Roof Deck Fitting Requirements		
All openings in the roof used for sampling or gauging, except pressure-vacuum valves which shall be set to within ten (10) percent of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal, or lid. The cover, seal, or lid shall at all times be in a closed position, with no visible gaps and be gastight, except when the device or appurtenance is in use.	X	X
Effective on and after November 15, 2003, the operator shall meet the following requirements		
Requirements for Internal Floating Roof Deck Fittings;		
Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents shall provide a projection below the liquid surface.	X	
Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e., no visible gap) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use.	X	
Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports.	X	
Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.	X	
Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable.	X	
Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable.	X	
Requirements for External Floating Roof Deck Fittings		
Except for automatic bleeder vents and rim vents and pressure vacuum relief vents, each opening in a non-contact external floating roof shall provide a projection below the liquid surface.	X	

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
Except for automatic bleeder vents and rim vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid that shall be maintained in a closed position at all times (i.e., no visible gap) except when in actual use.		
Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.		X
Rim vents shall be equipped with a gasket and shall be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.		X
Each emergency roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. The fabric cover must be impermeable if the liquid is drained into the contents of the tanks.		X
External floating roof legs shall be equipped with vapor socks or vapor barriers in order to maintain a gas-tight condition so as to prevent VOC emissions from escaping through the roof leg opening.		X
Solid Guidepole – Solid sampling or gauging wells, and similar fixed projections through a floating roof such as an anti-rotational pipe, shall meet the following requirements:		
The well shall provide a projection below the liquid surface.		X
The well shall be equipped with a pole wiper and a gasketed cover, seal or lid which shall be in a closed position at all times (i.e., no visible gap) except when the well is in use.		X
The gap between the pole wiper and the guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed one-half (1/2) inch.		X
Slotted Guidepole – Slotted sampling or gauging wells shall meet the following requirements:		
The well shall provide a projection below the liquid surface.		X
The well on external floating roof shall be equipped with the following: a sliding cover, a well gasket, a pole sleeve, a pole wiper, and an internal float and float wiper designed to minimize the gap between the float and the well, and provided the gap shall not exceed one-eighth (1/8) inch; or shall be equipped with a well gasket, a zero gap pole wiper seal and a pole sleeve that projects below the liquid surface.		X
The gap between the pole wiper and the guidepole shall be added to the gaps measured to determine compliance with the secondary seal requirement, and in no case shall exceed one-eighth (1/8) inch.		X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
<p><u>Specifications for Vapor Recovery Systems</u></p> <p>Fixed roof tanks shall be fully enclosed and shall be maintained in a gastight condition. An APCO-approved vapor recovery system shall consist of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be maintained in a gas-tight condition. The VOC control device shall be one of the following: a vapor return or condensation system that connects to a gas pipeline distribution; or a VOC destruction device that reduces the inlet VOC emissions by at least 95 percent by weight.</p> <p>Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling.</p> <p>All piping, valves, and fittings shall be constructed and maintained in a gas-tight condition.</p>	X	X
<p><u>Voluntary Tank Preventive Inspection and Maintenance, and Tank Interior Cleaning Program</u></p> <p>Effective on and after December 20, 2001, only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 6 of this rule. To participate in this program, the operator shall comply with the following requirements</p> <p>Submit a letter to the APCO prior to conducting inspections, maintenance, and cleaning of tanks. The letter shall contain a list of each tank that will be subject to this program. The list shall include the tank identification number and location, and/or Permit to Operate numbers.</p> <p>Keep in their facility at all times a copy of the letter sent to the APCO and maintain the records of annual tank inspections, maintenance, and cleaning to document the participation in the program.</p> <p>The absence of a copy of the letter and/or failure to maintain appropriate tank inspection records shall be deemed as a non-participation in the program, and therefore the operator will not be eligible to use the provisions specified in Tables 3 to 6. Those who have not voluntarily participated in the program but are found to be using the provisions of Tables 3 to 6 shall be deemed to be in violation of this rule.</p> <p>Operators who elect to participate in this program but who fail to comply with all of the requirements specified in Tables 3 to 6 shall be deemed to be a violation of the provisions of this rule.</p>	X	X
ADMINISTRATIVE REQUIREMENTS		

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
<u>Inspection of Floating Roof Tanks</u> The operator of external floating roof tanks shall make the primary seal envelope available for unobstructed inspection by the APCO on an annual basis at locations selected along its circumference at random by the APCO. In the case of riveted tanks with toroid-type seals, a minimum of eight (8) locations shall be made available; in all other cases, a minimum of four (4) locations shall be made available. If the APCO suspects a violation may exist the APCO may require such further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. The operator of floating roof tanks shall submit a tank inspection plan to the APCO for approval. The plan shall include an inventory of the tanks subject to this rule and a tank inspection schedule. A copy of the operator's tank safety procedures shall be made available to the APCO upon request. The tank inventory shall include tank's identification number, Permit to Operate number, maximum tank design capacity, dimensions of tank (height and diameter), organic liquid stored, type of primary and secondary seal, type of floating roof (internal or external floating roof), construction date of tank, and location of tank. Any revision to a previously approved tank inspection schedule shall be submitted to the APCO for approval prior to conducting an inspection. Effective on and after November 15, 2003, an operator of floating roof tanks shall comply with the following requirements: External Floating Roof Tank Inspection; Inspect all floating tanks at least once every 12 months to determine compliance with the requirements of this rule. The actual gap measurements of the floating roof primary and secondary seals shall be recorded. The inspection results shall be submitted to the APCO as specified in Section 6.3.5. Inspect the primary and secondary seals for compliance with the requirements of this rule every time a tank is emptied or degassed. Actual gap measurements shall be performed when the liquid level is static but not more than 24 hours after the tank roof is refloated.	X	X
Internal Floating Roof Tank Inspection;		X
For newly constructed, repaired, or rebuilt internal floating roof tanks, visually inspect the internal floating roof and its appurtenant parts, fittings, etc., and measure the gaps of the primary seal and/or secondary seal prior to filling the tank. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., the operator shall repair the defects before filling the tank.		X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
Visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule.		X
Conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months.		X
TVP and API Gravity Testing of Stored Organic Liquid in Uncontrolled Fixed Roof Tanks		
Sections 6.2.1 and 6.2.2 shall not apply to tanks that store organic liquids listed in Appendix A exclusively, provided the storage temperature indicated in Appendix A is not exceeded at any time. An operator shall comply with Section 6.3.6 if the information in Appendix A is used to demonstrate the TVP and/or API gravity of the stored liquid.		
Initial TVP and API Gravity Testing:		
An operator shall conduct an initial TVP testing of each uncontrolled fixed roof tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank.	X	
The selection of representative, uncontrolled fixed roof tanks is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test.	X	
One uncontrolled fixed roof tank represents some or all of the tanks in a tank battery (defined in Section 3.27).	X	
For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the first line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells.	X	
The stored organic liquid in each of the represented tanks is the same and came from the same source.	X	
The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent.	X	
The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. If the tank stores crude oil or petroleum distillates, the operator shall also conduct an API gravity testing.	X	
An operator shall submit a complete application for an Authority to Construct to install and operate on each uncontrolled fixed roof tank the appropriate VOC control system.	X	

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
<p>Periodic TVP and API Gravity Testing;</p> <p>Effective on and after November 15, 2003, an operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July – September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met.</p>		X
<u>TEST METHODS</u>		
<p>True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323-82 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100°F true vapor pressure shall be determined by Reid vapor pressure at 100°F and ARB approved calculations.</p>	X	
<p>True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30°, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990.</p>	X	
<p>Except for crude oil subject to Section 6.4.4, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature.</p>		X
<p>The conversion of RVP to TVP shall be done in accordance with the procedures in Appendix B. Appendix B is an excerpt from the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588", dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 20° up to 30° may be determined by using other equivalent test methods approved by APCO, ARB and EPA.</p>		X
<p>Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device.</p>	X	X
<p>The efficiency of any VOC destruction device shall be measured by EPA Method 25, 25a, or 25b, and analysis of halogenated exempt compounds shall be analyzed by ARB Method 422.</p>	X	

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
The efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by 40 CFR 60, Appendix A, Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used, and analysis of halogenated exempt compounds shall be analyzed by EPA Method 18 or ARB Method 422 "Determination of Volatile Organic Compounds in Emission from Stationary Sources".		X
Analysis of halogenated exempt compounds shall be by ARB Method 432.		X
The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products".		X
The latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA, shall be used to determine the TVP of crude oil with an API gravity of 20° or less, or for any API gravity that is specified in this test method.		X
An operator may use the information in Appendix A to determine the TVP of the stored organic liquid in a tank provided the storage temperature listed in Appendix A is not exceeded at any time.		X
A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21.	X	X
RECORDKEEPING		
Keep an accurate record of liquids stored in each container, storage temperature of the Reid vapor pressure of such liquids.	X	X
Emergency standby tanks are exempt from the requirements of the requirements of the rule for floating roof tanks. Records shall be maintained as required by the rule and the date(s) liquid is first introduced to each tank and date(s) tank is fully drained. Such records shall be submitted to the APCO 60 days prior to permit renewal.	X	X
for tanks exempt to this rule the owner shall maintain monthly records of average daily throughout and shall submit such information to the APCO 30 day prior to annual permit renewal.	X	
An operator shall maintain accurate records required by this rule for a period of five years.		X
An operator shall maintain records showing the tank capacity and duration of time that the tank is used for temporary tanks.		X

Template SJV-TK-19-0

District Rule 4623 Requirements	Amended 12/17/92	Amended 12/20/01
Small producers shall maintain monthly records of average daily crude oil production, and shall submit such information to the APCO 30 days prior to the expiration date indicated in the Permit to Operate. The monthly crude oil production records required by the California Division of Oil, Gas, and Geothermal Resources may be used to comply with the requirement of this rule. Small producers shall also maintain monthly records of the average daily crude oil throughput of each tank to demonstrate compliance with the requirements for small producers.		X
An operator shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of control devices specifications.		X
The inspection report for tanks that have been determined to be in compliance with the requirements of control devices specifications need not be submitted to the APCO, but the inspection report shall be kept on-site and shall be made available upon request by the APCO. The inspection report shall contain all necessary information demonstrate compliance with the provisions of this rule, including: 1) Date of inspection and names and titles of company personnel doing the inspection, 2) Tank identification numbers and Permits to Operate (PTO) number, 3) Measurements of the gaps between the tank shell and primary and secondary seals, 4) Gas-tight status of tanks and floating roof deck fittings. Records of gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv), 5) Data, supported by calculations, demonstrating compliance with the requirements of this rule, and 6) Any corrective actions or repairs performed on the tank in order to comply with this rule and the date such actions were taken.		X
An operator shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results.		X
An operator who uses the information in Appendix A to demonstrate the TVP and/or API gravity of the stored organic liquid shall submit information to the APCO within 45 days after the date that the type of organic liquid stored in the tank has been determined.		X
An operator shall maintain the records of the external floating roof or internal floating roof landing activities that are performed pursuant to Sections 5.3.1.3 and 5.4.3. The records shall include information on the TVP, API gravity, and type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank.		X

APPENDIX C

**TEMPLATE QUALIFICATION FORM
FOR
TEMPLATE # SJV-TK-19-0**

Template SJV-TK-19-0

Title V General Permit Template Qualification Form

District Permit # _____

Please answer the questions in the table below. A fixed roof tank (unit) which meets the criteria of this table is qualified to use this template as part of a Title V application. To use this template, remove this sheet and attach to application.

Yes	No	Description of Qualifying Units
		Is this unit a fixed roof tank without a vapor recovery system used for the storage of organic liquids? [District Rule 4623, 5.1] If "yes", continue to next question; otherwise STOP - you cannot use this template.
		Does this unit store organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents? [District Rule 4661, 2.0] If "no", continue to next question; otherwise STOP - you cannot use this template.
		Is this unit located at a heavy oil test station in Kern County? [District Rule 4404] If "no", continue to next question; otherwise STOP - you cannot use this template.
		Is this a temporary tank, with a capacity of 21,000 gallons or less, left on site for six months or less? [District Rule 4623, 4.2.3] If "no", continue to next question; otherwise STOP - you cannot use this template.
		Is this a small producer with a daily throughput of less than 2,100 gallons per day? If "no", continue to next question; otherwise STOP - you cannot use this template.
		Is this unit an emergency standby tank, storage not exceeding 60 days at a time, in existence prior to May 1, 1979, which stores exclusively petroleum distillates or crude oil? [District Rule 4623, 4.2.1] If "no", continue to next question; otherwise STOP - you cannot use this template.
		Is this storage vessel used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer? [40 CFR 60.110(b)] If "yes", continue to next question; otherwise STOP - you cannot use this template.
		Does this unit store a volatile organic liquid which has a true vapor pressure of greater than 0.5 psia but less than 11 psia for tanks with a storage capacity greater than or equal to 1,100 gallons but not exceeding 39,600 gallons, or stores a volatile organic liquid which has a true vapor pressure of greater than or equal to 0.5 psia but less than 1.5 psia for tanks with a storage capacity greater than 19,800 gallons but not exceeding 39,600 gallons? [District Rule 4623, 5.1] If "yes", you qualify to use this template; otherwise STOP - you cannot use this template

Based on information and belief formed after reasonable inquiry 1) the information on this form is true and correct and 2) the facility certifies compliance with this template's permit conditions:

Signature of Responsible Official

Date

Name of Responsible Official (Please Print)