SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL DISTRICT
COMPLIANCE DEPARTMENT

COM 2045

APPROVED: **SIGNED** **DATE:** **October 4, 2006**

Jon Adams
Director of Compliance

TITLE: **RULE 2020 – EXEMPTIONS**

SUBJECT: **UNPERMITTED EQUIPMENT**

OBJECTIVE:

This policy has been developed to insure that all appropriate stationary source equipment is properly permitted.

PURPOSE:

It is important that the District inspect for unpermitted equipment uniformly and consistently. To this end, this policy provides guidance to staff on how to determine if equipment needs permits and a mechanism by which equipment types are consistently and fairly permitted.

The policy will also discuss permitted equipment in the District and provide examples. By knowing what is permitted, staff will be better able to understand what does not need to be permitted.

POLICY STATEMENT:

It is imperative that all stationary source equipment is properly permitted. By permitting equipment, conditions can be placed on the sources that insure compliance with District requirements. Permitting equipment allows for the identification of equipment within the District, which allows for an accurate emission inventory database and assists the District in writing appropriate rules and plans. Lastly, sources that operate without proper permits share an unfair business advantage over those that do. While this policy is titled, "Permit Exemptions," the goal of the policy is to insure all equipment is properly permitted.

UNPERMITED EQUIPMENT:

Rule 2010 states any piece of equipment or operation that increases or reduces air contaminants shall be permitted, and Rule 2020 provides for exemptions to Rule 2010. To be able to find unpermitted equipment, one must have a clear understanding of Rules 2010 and 2020. A key to any District's success is having an accurate and complete listing of permitted equipment.

The ability for the District to permit equipment and require sources to comply with conditions of operation is a cornerstone to all we do. By permitting equipment, we will consistently regulate sources so that air quality standards are attained. By permitting all equipment, the District has an accurate database of equipment, which insures an accurate emission inventory database can be maintained. An accurate emission inventory database ensures rules can be written that minimize emissions to the maximum extent and that are cost effective for the sources affected by them. Finally, having all equipment permitted provides for a level playing field for all regulated sources.

An inspector may encounter a facility that needs permits but lacks them. If it is a type of operation that historically has never been permitted, and there may be similar operations district-wide, it might be more appropriate to address the situation at the District level and not on a facility-by-facility basis. In these situations, a District-wide search is made to identify all such facilities, which will allow applications and instructions to be sent at the same time. Such procedures insure consistency and all sources are treated equitably. Discuss this type of scenario with your supervisor prior to taking any action.

For a facility that lacks permits and the District historically requires permits its type of operation, the inspector shall follow the NTC/NOV policy.

FUNDAMENTALS FOR DETERMINING IF A PERMIT IS REQUIRED:

1. The inspector must have a clear understanding of Rules 2010 and 2020.

2. The inspector must not assume that a piece of equipment is permit-exempt, because a previous engineering analysis or inspection did not require it to be permitted. There are a number of reasons why a piece of equipment should be permitted and inadvertently is not. You must independently look at a source's equipment and question whether permits should be required.

3. The inspector must keep the types of equipment that are listed in Rule 2020 in mind when determining if permits are required.

4. Because a piece of equipment is exempt from permits, it does not mean it is exempt from all District rules. For example, a permit-exempt boiler is subject to Rule 4101, Visible Emissions.

5. While a facility has permit-exempt equipment, in some situations, they can apply for and receive a permit (Rule 2020, section 5.4).

6. It is also important to note that equipment that is permit exempt may be included on a permit for a facility-wide operation.

7. In some cases, a permit may be required for otherwise permit exempt equipment pursuant to section 5.3 of Rule 2020, because the District determines the source may be a nuisance without a permit (example, hydrochloric acid tank with fume scrubber).

TOOLS TO LOCATE UNPERMITTED EQUIPMENT:

1. Utilize information from local building and planning departments

2. Review the business sections of local newspapers

3. Communicate with development organizations chambers of commerce, business organizations, and trade associations

4. Utilize compliance assistance bulletins by mail or in person

5. Conduct surveillance of your assigned area

RULE 2020 EXEMPTIONS AND DISCUSSION OF PERMITTED EQUIPMENT:

Section 4.0 (Precluded Source Categories)-

1. Section 4.1- this section exempts structures with not more than four families and any associated incinerator.

2. Section 4.2-non-commercial barbeque equipment. Be on the lookout for commercial barbeque equipment, as it is not exempt from permits.

3. Motor vehicles but not any equipment mounted on such vehicle that would otherwise require a permit. Examples of this include engines mounted to the back of rigs that are intended for work, such as oil well work over rigs. Equipment on the back of rigs is generally registered and not permitted.

Locomotives, airplanes, and watercraft used to transport people or freight. While locomotives are exempt from permits, they are not exempt from visible emission requirements. This exemption does not apply to dredging of waterways or pile driving equipment. This type of equipment is generally registered and not permitted.

Section 5.0 (District Permit Exemptions) - If any of the circumstances below are true, an individual or source is not entitled to a District exemption under sections 6.0 or 7.0 NSPS Sources- When a source is subject to NSPS it is required to have a permit regardless of exemptions found in Sections 6 and 7 of Rule 2020. Currently there are 132 NSPS sources within the District. Of these sources, there are 23 aggregate plants, 10 agricultural processing plants, 24 asphalt-related facilities, 23 electrical generation plants, 11 food-processing plants, and 29 petroleum-related facilities subject to NSPS.

Hazardous Air Pollutants (HAPS) sources- HAPS sources are ones that both: 1) emit at least one hazardous air pollutant and 2) are subject to at least one local, state, or federal rule aimed at controlling those emissions. A small chrome plater, for example, may have almost no criteria pollutant emissions, and would otherwise be exempt from permitting. However, because chrome platers emit a HAP (hexavalent chromium) and are subject to rules aimed at limiting chromium emissions (Rule 7011), chrome plating operations require District permits.

The District can also require a permit for equipment that may not be in compliance with District rules. One example is when a source has been confirmed as creating a public nuisance, such as coating operations near residential developments.

The owner specifically requests a permit. This rarely happens.

Section 6.0 (District Exempt Source Categories), except as required by this Section 5.0, states no ATC or PTO is required for an emission unit specified in this section. All other equipment needs a permit.

There is a very important concept in Section 6.0 that needs to be understood. If you have a unit that is included in the equipment categories in Sections 6.1 thru 6.18 and does not meet the exemption requirement, it needs a permit. A source cannot apply another source category to obtain an exemption. For example, a boiler rated at 5.6 million Btu/hr falls under Section 6.1.1, because boilers are included in that section. Because its input rating exceeds 5.0-million Btu/hr, it needs a permit. The source cannot enjoy the exemption in Section 6.19, low emitting unit, as boilers are included in Section 6.1.1.

6.1 Combustion and Heat Transfer Systems

6.1.1 Boilers, heaters, steam cleaners, and closed indirect heat transfer systems with a maximum input rating of 5-million Btu/hr or less that are fired on natural gas or natural gas liquids. An indirect heat transfer system is where the material to be heated does not come in direct contact with the heat source, generally a flame. The burner will generally have an identification plate that includes the maximum Btu rating. This section only applies to indirect sources and not direct heat transfer systems. A direct heat transfer system is where the heat source comes in direct contact with the material to be heated.

A source needs to permit a combustion unit rated greater than 5-million Btu/hr, even though it is never operated above 5-million Btu/hr. A source can make the unit exempt from permits if the manufacturer of the burner or a third party performs a permanent modification to the burner that renders its rating at or below 5-million Btu/hr. If the equipment currently has a permit, the facility must apply for and receive an ATC prior to performing the work. The manufacturer or third party will need to install a new plate on the burner reflecting the change in the rating. Such a modification is called “re-rating.” In order for a source to exempt a unit by re-rating, they must have the manufacturer or third party permanently re-rate the unit, place a new plate on the burner, and write a letter to the District requesting the permit be cancelled. The letter must include the certification from

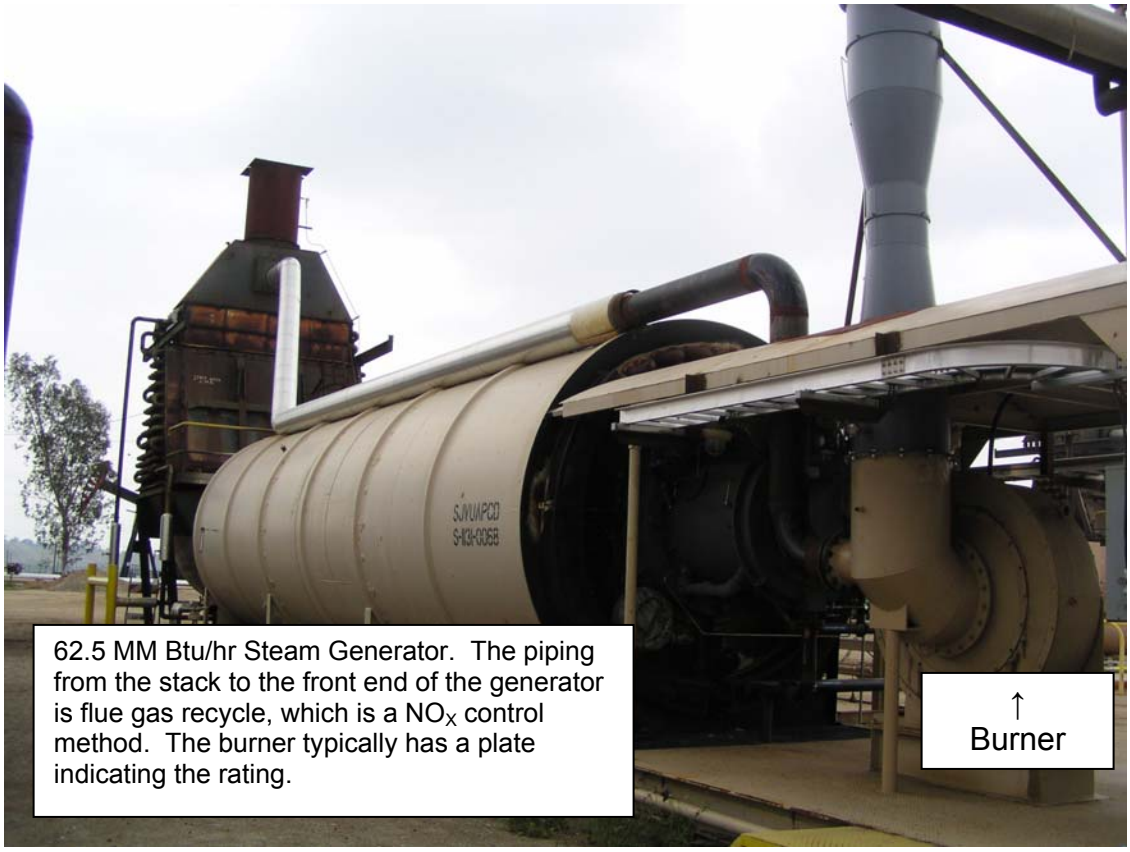
the manufacturer or third party. Contact permitting for detailed requirements for re-rating units.

A source may also de-rate an engine to less than to 5-million Btu/hr, which will exempt them from Rule 4306 requirements. It won't, however exempt them from a permit. "De-rating" is not the equivalent to "re-rating". De-rating does not have to be performed by the manufacturer. In the past sources have limited the fuel flow rate or utilized a governor to reduce the burner rating. Such modifications must receive prior District approval through the application process and conditions placed on the permit that limit the unit's capacity.

As of January 2006, there are a total of 1328 active permits for combustion units:

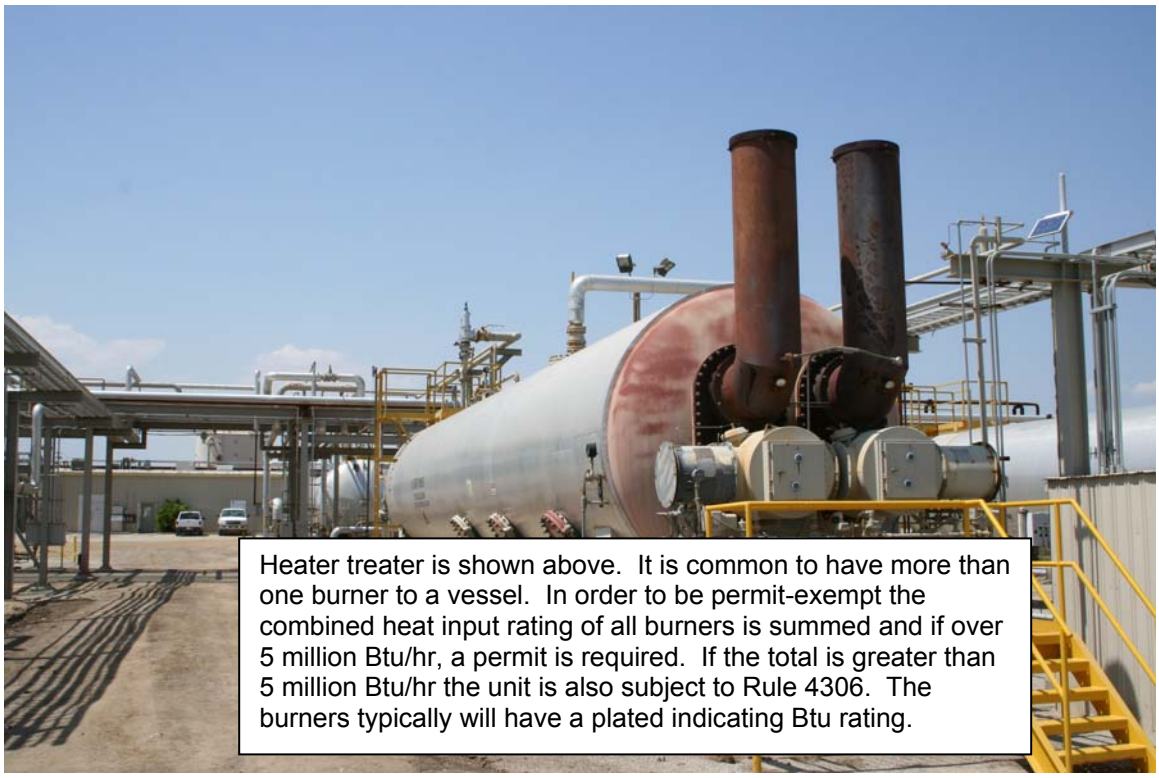
TYPE OF EQUIPMENT BY ACTIVE PERMIT	NORTH	CENTRAL	SOUTH
BOILERS	245	182	164
HEATERS	6	21	146
STEAM GENERATORS	0	46	522
HEATER TREATERS	0	4	66
FLARES	12	20	119

Oil/Gas Production Flare



62.5 MM Btu/hr Steam Generator. The piping from the stack to the front end of the generator is flue gas recycle, which is a NO_X control method. The burner typically has a plate indicating the rating.

↑
Burner



Heater treater is shown above. It is common to have more than one burner to a vessel. In order to be permit-exempt the combined heat input rating of all burners is summed and if over 5 million Btu/hr, a permit is required. If the total is greater than 5 million Btu/hr the unit is also subject to Rule 4306. The burners typically will have a plated indicating Btu rating.

CONDITIONS FOR PERMIT S-1129-115-3

EXPIRATION DATE: 02/28/2007

INSPECTION WORKSHEET

LEGAL OWNER OR OPERATOR: CHEVRON U S A INC
MAILING ADDRESS: P O BOX 1392
BAKERSFIELD, CA 93302

LOCATION: HEAVY OIL WESTERN
CA

SECTION: NW02 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:
7.4 MMBTU/HR GAS-FIRED HEATER TREATER WITH THREE BURNERS EACH RATED AT 1.8 MMBTU/HR AND ONE BURNER RATED AT 2.0 MMBTU/HR - NORTH MIDWAY

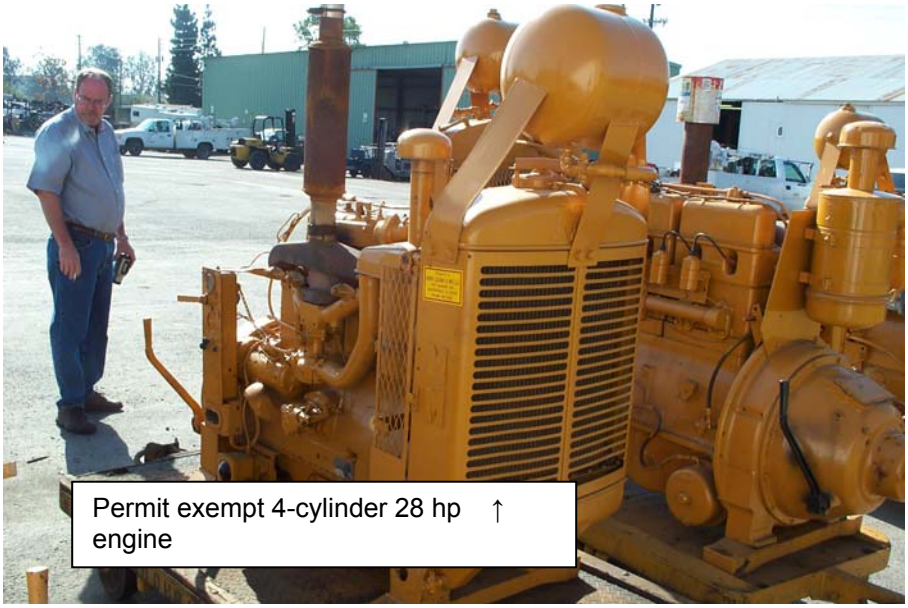
Above is an example of heater treater with four burners, each under 5-million Btu/hr, but with a combined total greater than 5-million Btu/hr (7.4 MM Btu/hr). This unit needs to be permitted, and is subject to Rule 4306 requirements.

The stack on the right of the picture serves an 8.2 MMBTU/Hr, natural gas-fired boiler at a laundry. The natural gas-fired boiler on the left is rated at 6.7 MMBTU/Hr. Both require a permit to operate and are subject to Rule 4306. These boilers comply with that rule by limiting annual operation.

In order to be eligible for the exemption in Section 6.1.1 the fuel must contain no more than 5% by weight of hydrocarbons heaver than butane and no more than 0.75 grains of total sulfur per 100 standard cubic feet (scf) of gas. The hydrocarbon speciation requirement basically limits this section to gas-fired units, as when you look at fuels with significant contributions of hydrocarbons greater than 5% butane you are generally looking at liquid fuels. 0.75 grains of total sulfur per 100 scf is roughly equivalent to 12-ppmv total sulfur in the gas. Sources that produce gas such as oil producers and landfills may not be afforded this exemption, as they often times have considerable amounts of sulfur in the fuel stream. Heavy oil producers that steam the production strata can see sulfur concentrations reach several thousand ppm. Note: Although Permit Services uses a standard value of 1.0 grain S/100 dscf (~ 16 ppmv) for commercial natural gas (e.g. PG&E) when assessing sulfur oxide emissions, it is recognized that commercial natural gas meets the sulfur requirement of this permit exemption. See Permit Services policy APR 1720 for details.

6.1.2 Piston-type internal combustion engines that have a maximum continuous rating of 50 bhp or less are exempt from permit regardless of the fuel burned. The best way to start determining whether an engine needs a permit is count the number of cylinders. As the number of cylinders increases so generally does the hp. There are some four-cylinder engines rated at greater than 50 hp. Also, as the overall size of the engine increases, so generally does the engine hp.

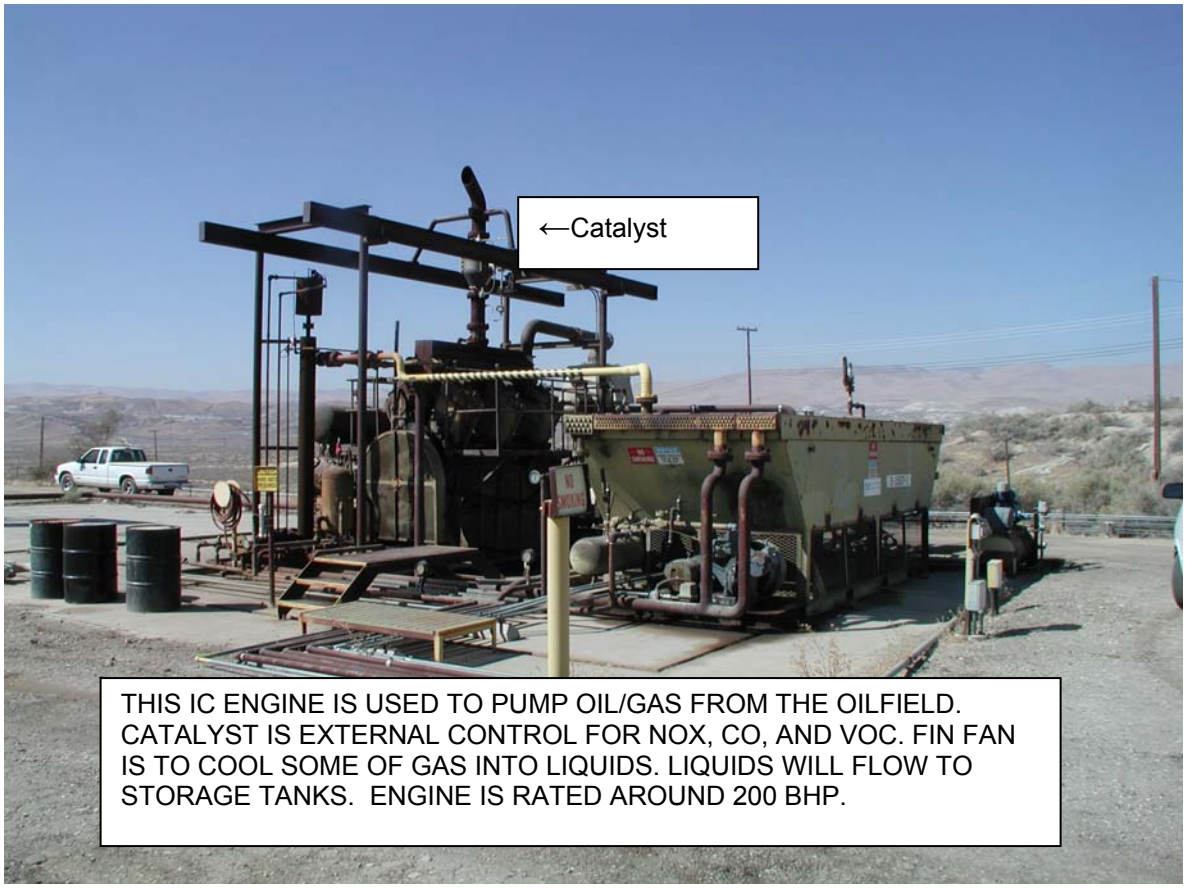
PERMITTED IC ENGINES			
DESCRIPTION	NORTH	CENTRAL	SOUTH
AG ENGINES	135	1054	562
NON-AG ENGINES	881	981	1001
TOTAL	1016	2035	1563



Permit exempt 4-cylinder 28 hp ↑ engine

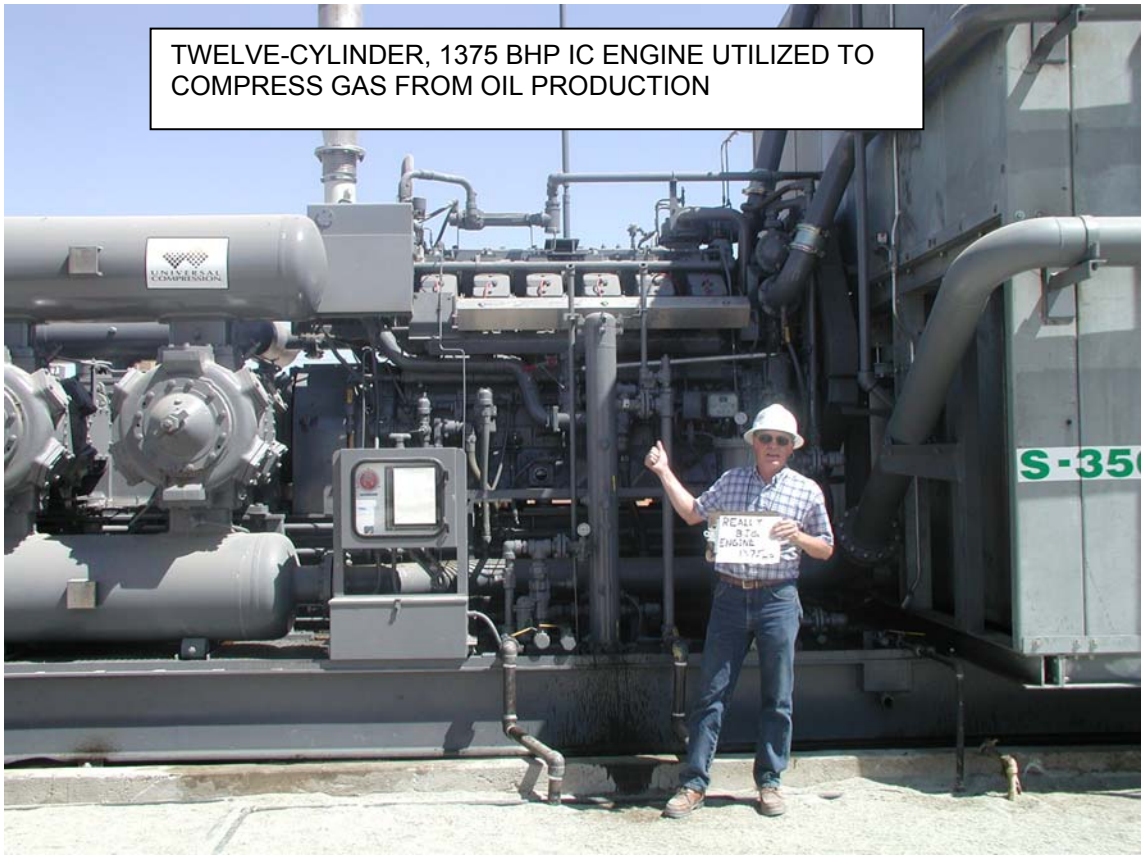
Six-cylinder 80-Hp M & M engine re-rated to less than 50 bHp

THIS AG ENGINE IS FOR PUMPING IRRIGATION WATER. IC ENGINE IS RATED AT AROUND 75 BHP



←Catalyst

THIS IC ENGINE IS USED TO PUMP OIL/GAS FROM THE OILFIELD. CATALYST IS EXTERNAL CONTROL FOR NOX, CO, AND VOC. FIN FAN IS TO COOL SOME OF GAS INTO LIQUIDS. LIQUIDS WILL FLOW TO STORAGE TANKS. ENGINE IS RATED AROUND 200 BHP.

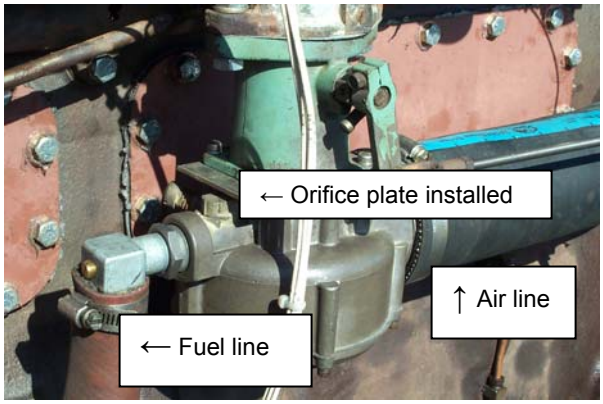


Attached below is a sheet that lists commonly found Waukesha and Minneapolis Moline (M & M) engines, including their model number, horsepower (hp) rating, and the size orifice plate needed to be rated less than 50 hp.

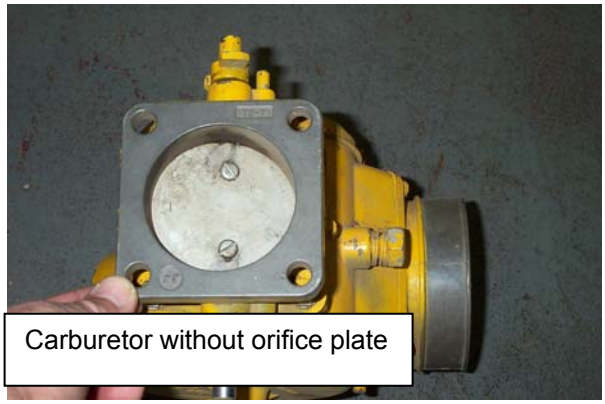
Re-rating should not be confused with "de-rating," which is where a source restricts a combustion unit operating parameters. Examples include limiting fuel rate or the RPM of an engine. A source can avoid certain rule requirements such as Rule 4702 by de-rating a unit, but they will still need a permit. To avoid requirements of a Prohibition IV rule, the source will have to apply to modify their permit and conditions restricting fuel, RPMs, or some other parameter to be placed on the permit.

Many engines have been re-rated over the years by installing an orifice plate permanently in the intake stream, at the intake manifold. An orifice plate is basically a steel plate with a hole bored thru the middle of it. The drilled hole is much smaller than the size of the intake, which restricts air fuel flow and will lower the horsepower rating. The manufacturer or third party will have to prove to the district what the horsepower rating is as a result of installing the orifice plate on each engine and place a plate on the engine. Some third parties, such as Pomeco, have a specification sheet for several different sized engines that lists the required-sized orifice plate to bring a unit to 50 bhp or less.

Six-cylinder Hp Waukesha Engine



Different sized orifice plates are utilized to lower hp ratings to specific ratings.



Carburetor without orifice plate

Same carburetor with orifice plate

Attached below is a sheet that lists commonly found Waukesha and Minneapolis Moline (M& M) engines, including their model number, horsepower (Hp) rating, and size orifice plate needed to be rated less than 50 hp.

IC Engine Rating Sheets 10/12/94

	APCD Rating		Derated with orifices		
	BHP	RPM	orifice size	BHP	RPM
Waukesha					
F1197 & WAK	195	1600	0.98	49.6	800
817G & 145GZ	131	1600	1.10	67.0	1500
817G & 145GZ	131	1600	0.92	49.5	1000
140 GZ	103	1500	0.98	49.5	1500
135GZU	90	1800	1.15	47.8	1800
195GKU	79	2200	1.65	41.8	2200
195GKU	79	2200	0.70	19.9	1300
VRG330	74	2200	1.08	44.7	2000
VRG310	67	2000	1.12	47.2	2000
VRG310	67	2000	0.60	18.2	1200
MM					
283	25	1200	0.60	19.2	1100
403	32	1000	0.56	19.1	800
425	39	1200	0.62	19.0	800
605A	46	1000	0.58	18.8	800
605A	46	1000	0.72	29.8	1000
605A	46	1000	0.85	39.6	1000
336	67	1600	0.58	18.2	900
336	67	1600	1.30	46.3	1600
504	108	1800	0.57	18.6	800
504	108	1800	0.94	48.9	1600
800	175	1800	0.85	48.0	1000

To be exempt from Rule 4701 requirements some sources have installed non-permanent orifice plates or restricted the RPMs of the engine (de-rating). Such modifications must receive prior authorization (ATC application) and have applicable conditions placed on the permits.

6.1.3 Gas turbine engines with a maximum heat input rating of 3 million Btu/hr are exempted regardless of the fuel burned. The District has many turbine engines that are over this threshold exemption. As of January 2006, there are 141 permitted gas-fired turbines district-wide. There are 89 gas turbines in the South, 36 in the Central, and 16 in the North. All but ten are for producing electricity. The second greatest use of turbines is for gas compression.

6.1.4 Equipment utilized for space heating, other than boilers. Boilers are utilized for large facilities. Furnaces are generally utilized in private residences and small buildings. Exemptions for space heating equipment are not limited to gas-fired units. Liquid and solid fuel heating equipment would be exempt as well. However, absorption chillers, typically gas-fired, are not permit exempt if they

are over 5 MMBTU/hr, per section 6.1.1. Absorption chillers are typically used for building cooling.

6.1.5 Multiple chambered or equivalent incinerators used to destroy diseased animals in a wildlife habitat. A multiple chambered incinerator has three or more separated furnaces in series. To date, there is one known such incinerator, and it is located in the Northern Region in Turlock.

6.2 Cooling Towers with a circulation rate of less than 10,000 gallons per minute provided they don't cool process water, water from barometric jets, or water from barometric condensers.

Barometric Condensers

Water Driven *(Pumping Vapor at Vacuum)*

Barometric Condensers are employed in a variety of industries as a means of removing air, exhausting steam or other vapors from vacuum equipment. You can find Condensers in almost every area of the chemical, food and process industries that use vacuum stills, calandria pans, multiple effect evaporators, and high-vacuum.

Drawing of barometric condensor

← **Air, steam, or vapor would be pulled thru this opening**

Barometric Jets
Liquid Jet Exhausters

Exhausters use a pressurized liquid to create a vacuum for pump priming, evacuating vessels and for maintaining vacuums during material processes. In most cases the unit is discharged to atmosphere, although elevated discharge pressures are possible. Unit sizes range from 0.75" (20mm) to 14" (350mm), and can be manufactured from almost any workable material.

Process vessel would be on this side of jet. The speed of the water produces a vacuum that pulls gases or vapors from material in vessel. These vapors or gases mix with the water and would be emitted to atmosphere when the jet stream is cooled at the tower.

Barometric Jet

The reason cooling towers with a water circulation rate of greater than 10,000 gallons are permitted is that they are a significant source of particulate matter (PM). Water rates less than 10,000 gallons per minute are not considered significant.

The PM emissions are produced from the evaporation of dissolved solids in the water at the cooling tower. Water has dissolved solids and when the water returns to the cooling tower it trickles down thru holes in plates and at the same time air is blown from the bottom of the tower upwards cooling the water that is trickling downwards. As evaporation occurs, PM is released to the atmosphere.

In years past, sources with cooling towers added hexavalent chromium to the water to prevent corrosion. Rule 7012, Hexavalent Chromium Cooling Towers, was adopted in 1991, and it prohibited the addition of hexavalent chromium to cooling water circulating in cooling towers.

There are 24 stand-alone cooling tower permits in the District. There are 19 in the Southern Region, 3 in the Northern Region, and 2 in the Central Region. There are another 21 permits District-wide that mention cooling towers in the permit equipment description. See table on next page for listing of permit numbers.

#	REGION	FACILITY #	PTO #	COOLING TOWERS
1	S	33	162	COOLING TOWER #82-S-14
2	S	33	163	COOLING TOWER #82-S-15
3	S	33	359	12,000 GPM COOLING TOWER
4	S	44	44	COOLING TOWER
5	S	44	45	COOLING TOWER
6	S	75	19	28,000 GPM COOLING TOWER
7	S	75	20	18,000 GPM COOLING TOWER
8	S	91	8	36,000 GPM COOLING TOWER
9	S	724	42	16,000 GPM COOLING TOWER
10	S	883	29	23,150 GPM COOLING TOWER
11	S	1751	8	20,250 GPM COOLING TOWER
12	S	3412	5	COOLING TOWER AND DRIFT ELIMINATOR
13	S	3412	6	COOLING TOWER AND DRIFT ELIMINATOR
14	S	3523	3	COOLING TOWER AND DRIFT ELIMINATOR
15	S	3550	3	19,322 GPM COOLING TOWER W/ CONDENSER
16	S	3636	4	COOLING TOWER AND DRIFT ELIMINATOR
17	S	3636	5	COOLING TOWER WITH DRIFT ELIMINATOR
18	S	3640	64	COOLING TOWER
19	S	3746	3	137,000 GPM COOLING TOWER AND DRIFT ELIMINATOR
20	N	645	34	43,000 GALLONS PER MINUTE COOLING TOWER
21	N	802	16	25,000 GPM COOLING TOWER
22	N	3233	5	27,000 GPM COOLING TOWER W/ DRIFT ELIMINATOR
23	C	948	19	COOLING TOWER.
24	C	1820	8	COOLING TOWER

6.3 Graphic Arts facilities are exempt provided they utilize less than two gallons per day or 30 gallons per year. The exemption allows a facility to exceed two gallons on a few days provided they don't exceed 30 gallons in the year.

Rule 4607 covers graphic arts operations. Rule 4607 exempts operations that limit their operations to 400 lbs VOC per month. Due to this exemption and the VOC content limits (Section 5.0) for materials used in graphic arts, facilities that are permit exempt would also be exempt from Rule 4607.

6.4 Food Processing Equipment including equipment used to prepare food in eating establishments, excluding, some charbroilers and boilers Section (6.4.1); mixers and blenders in bakeries where products are intended for human consumption (Section 6.4.2); ovens at bakeries where less than 1000 lbs of products are made each operating day and if the oven is rated less than 5 million Btu/hour (Section 6.4.3); and smokehouses utilized to prepare food provided the inside cross-sectional area does not exceed 20 square feet.

There are 46 charbroilers currently under permit in the District that are subject to Rule 4692, Commercial Charbroiling Rule. The charbroilers subject to Rule 4692 are Carl's Jr, Burger King, and Fosters Freeze. There is a throughput limit that can exempt some

charbroilers from Rule 4692. Below is a list of the charbroilers that are permitted in the District as of March 2006:

REGION	Facility #	City
S	4064	TULARE
S	4274	VISALIA
S	4119	BUTTONWILLOW
S	4120	BAKERSFIELD
S	4042	BAKERSFIELD
S	4115	BAKERSFIELD
S	4117	VISALIA
S	4046	DELANO
S	4048	BAKERSFIELD
S	4050	BAKERSFIELD
S	4053	BAKERSFIELD
S	4054	TAFT
S	4055	WASCO
S	4065	EXETER
S	4066	LINDSAY
S	4114	BAKERSFIELD
S	4107	VISALIA
S	4109	BAKERSFIELD
S	4111	BAKERSFIELD
S	4113	BAKERSFIELD
S	4123	TULARE

REGION	FACILITY #	CITY
N	4849	TRACY
N	4777	MANTECA
N	4778	LOS BANOS
N	4809	OAKDALE
N	4810	MANTECA
N	4774	STOCKTON
N	4779	MERCED
N	4780	MERCED
N	4782	TURLOCK
N	4784	TRACY
N	4785	OAKDALE
N	4786	LOS BANOS
N	4804	MERCED
N	4805	TURLOCK
N	4807	STOCKTON
N	4789	MODESTO
N	4815	ESCALON
N	4816	STOCKTON
N	4817	STOCKTON
N	4797	TRACY

REGION	FACILITY#	CITY
C	4239	CLOVIS
C	4102	FRESNO
C	4145	FRESNO
C	4150	MENDOTA
C	4233	LEMOORE
C	4266	PRATHER

Restaurants are subject to Rule 4692 if they use a chain-driven charbroiler, because they cook on a large scale and are a significant source of VOC emissions. Typically the VOC emissions are controlled by utilizing oxidizers that combust VOC emissions from the oven vent. In years past, without these controls, there was the potential for visible emission violations.

Bakery ovens that have a rating of 5 million Btu/hr or less, but have a throughput greater than 1000 pounds per day need to be permitted, and could be subject to Rule 4693, Bakery Ovens. Rule 4693 is designed to reduce VOC emissions from the baking of yeast products by requiring controls at the exhaust of the ovens. The VOC emissions are a result of the

release of ethanol from yeast fermentation. Only major sources that have ovens that bake yeast-leavened products are subject to Rule 4693. Currently, there are two known facilities that are subject to Rule 4693, N-298 and C-996.

There are a number of sources that utilize ovens to bake products that are permitted but not subject to Rule 4693. While these units are typically rated below 5 million Btu/hour, they are direct-fired units, so they are not afforded the exemption found in Section 6.1.1. Section 6.1.1 provides exemptions from indirect combustion units. Ovens are direct-fired combustion units, because the flame is in direct content with the product being heated. With indirect combustion units, the material being heated is enclosed, generally within piping, and it is the piping that is directly heated and the product within the pipe is subsequently indirectly heated.

There are a number of ovens not subject to Rule 4693 that are permitted due to being direct-fired combustion units. Below is a listing as of March 2006:

REGION	sFacilityName	FAC #	PTO #
S	CALIFORNIA PRETZEL	445	1
S	CALIFORNIA PRETZEL	445	2
S	CALIFORNIA PRETZEL	445	3
S	CALIFORNIA PRETZEL	445	6
S	CALIFORNIA PRETZEL	445	7
S	RUIZ FOOD	1325	1
S	RUIZ FOOD	1325	2
S	RUIZ FOOD	1325	4
S	RUIZ FOOD	1325	18
S	RUIZ FOOD	1325	24
S	RUIZ FOOD	1325	25
S	RUIZ FOOD	1325	27
S	FRITO-LAY	2076	17
S	FRITO-LAY	2076	18

REGION	sFacilityName	FAC #	PTO #
C	HARRIS RANCH BEEF CO.	616	6
C	HARRIS RANCH BEEF CO.	616	7
C	GRUMA CORPORATION	845	1
C	GRUMA CORPORATION	845	6
C	GRUMA CORPORATION	845	8
C	GRUMA CORPORATION	845	9
C	GRUMA CORPORATION	845	10
C	GRUMA CORPORATION	845	11
C	GRUMA CORPORATION	845	12
C	GRUMA CORPORATION	845	13
C	GRUMA CORPORATION	845	14
C	GRUMA CORPORATION	845	15
C	GRUMA CORPORATION	845	16
C	GRUMA CORPORATION	845	17

REGION	sFacilityName	FAC #	PTO #
S	FRITO-LAY	2076	19
S	FRITO-LAY	2076	20
S	FRITO-LAY	2076	21
S	PRIMEX FARMS	4001	3
S	JAMES DAVES	4184	1
N	FRESH START BAKERIES	991	4
N	E & J GALLO WINERY	1237	12
N	GILROY FOODS	1787	10
N	FRITO-LAY	1919	1
N	FRITO-LAY	1919	2
C	ATHENS BAKING	263	3
C	HARRIS RANCH BEEF CO.	616	4
C	HARRIS RANCH BEEF CO.	616	5

REGION	sFacilityName	FAC #	PTO #
C	GRUMA CORPORATION	845	18
C	GRUMA CORPORATION	845	19
C	MI-RANCHO TORTILLA	3248	1
C	MI-RANCHO TORTILLA	3248	2
C	LA TAPATIA TORTILLERIA	3252	1
C	LA TAPATIA TORTILLERIA	3252	2
C	LA TAPATIA TORTILLERIA	3252	3
C	LA TAPATIA TORTILLERIA	3252	4
C	LA TAPATIA TORTILLERIA	3252	5
C	LA TAPATIA TORTILLERIA	3252	6
C	LA TAPATIA TORTILLERIA	3252	9
C	LA TAPATIA TORTILLERIA	3252	10
C	BASQUE FRENCH BAKERY	3271	2

Smokehouses for preparing food whose maximum horizontal inside cross-sectional area does not exceed 20 feet are exempt from permits. No permitted smokehouses are known.

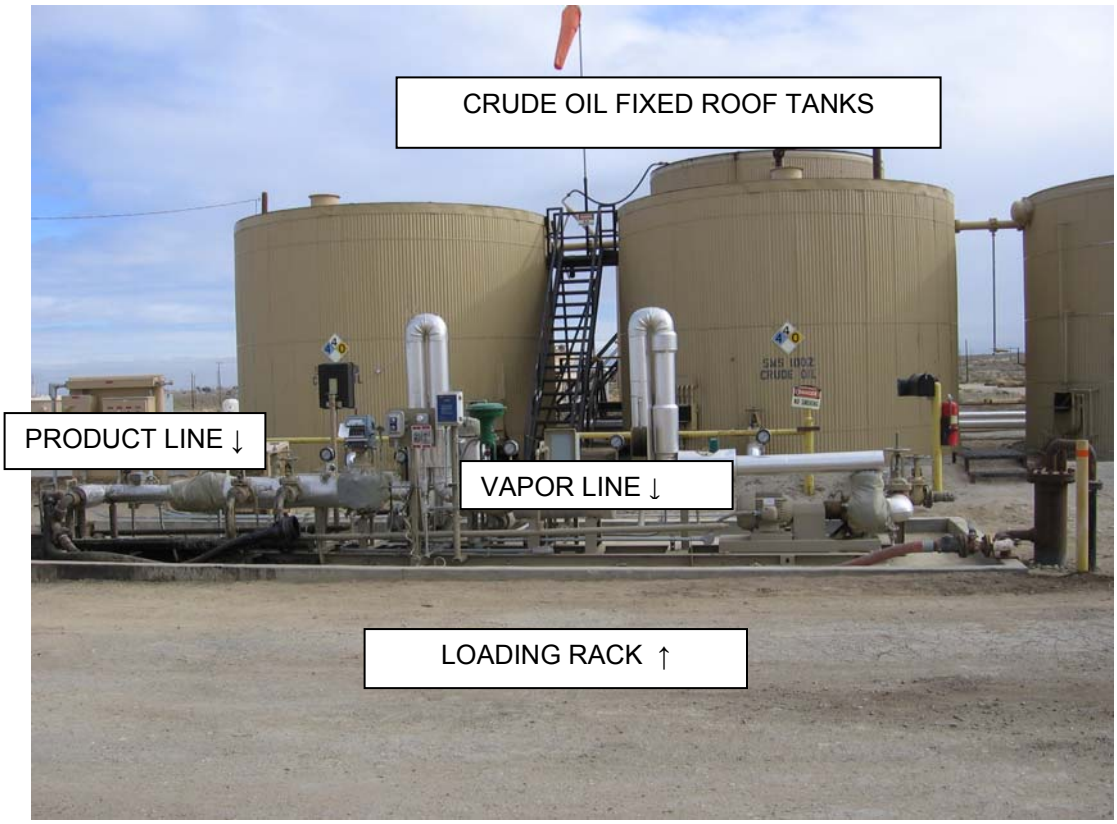
6.5 Plastic/Rubber Manufacturing operations that utilize compression molding or extrusion to make products and do not utilize blowing agents are exempt from permits.

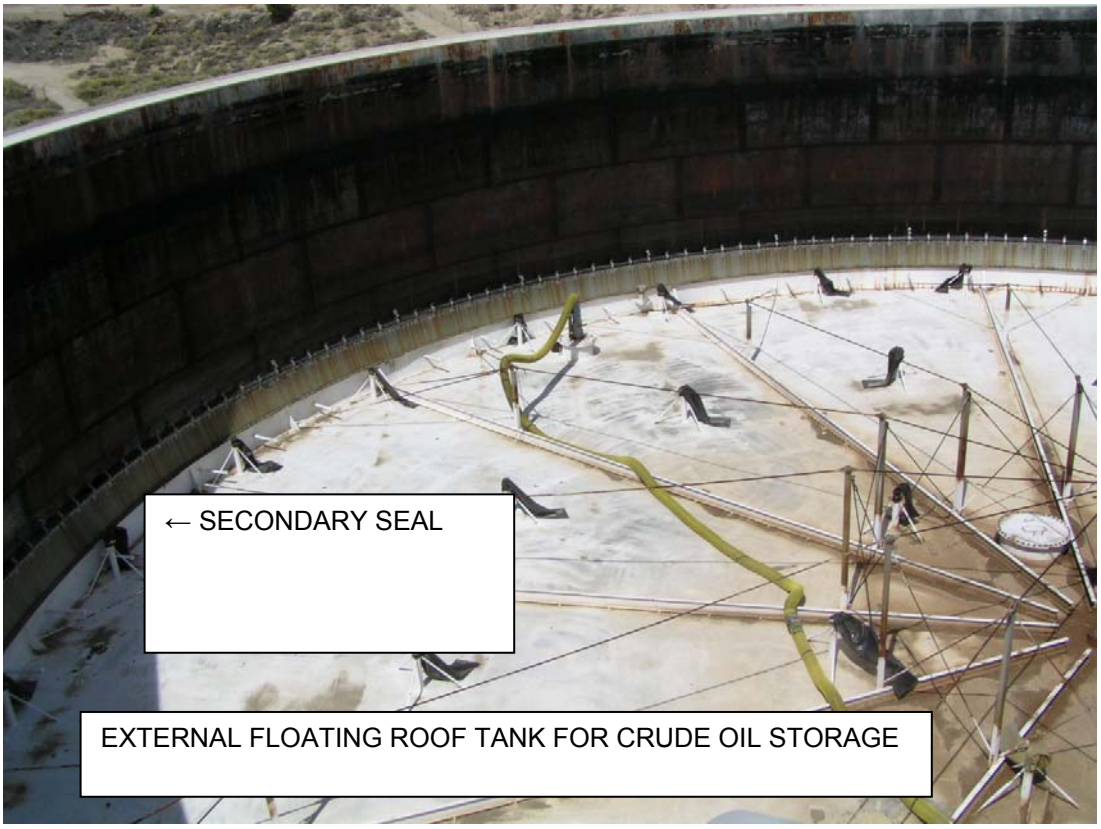
6.6 Storage Equipment is a concern to the District, because it can be a significant source of VOC emissions. Sources that have tanks or reservoirs holding volatile organic compounds can be subject to Rules 4621, 4623, 4694 and 2201. Tanks subject to these rules may have some form of vapor control requirements, record keeping requirements, testing

requirements, vapor pressure limitations, and potentially throughput limitations if subject to Rule 2201.

PERMITTED TANKS (T) OR PERMITTED FACILITIES (F) WITH TANKS			
RULE	NORTH	CENTRAL	SOUTH
4623	55 (T)	280 (T)	2878 (T)
4621/4622*	859 (F)	818 (F)	884 (F)
4694	1749 (T)	968 (T)	0 (T)

* A permitted gas station typically has one to four underground storage tanks





There are tanks that hold organic compounds, but are not significant sources of VOC emissions. The main reasons why these tanks are permit exempt include: the vapor pressure of the material is low (high initial boiling point), their throughput is low, the material is unheated, and the tank capacity is small.

There are several ways to determine a liquid's vapor pressure. Historically, one of the main laboratory methods has been the Reid vapor pressure test. For this test, a sample of the tank material is collected and taken to a lab. The lab will typically centrifuge out water and place the remaining liquid into a sample bomb. The sample bomb is placed in water that has been heated to 100° F. The ensuing vapor pressure value will be read in pounds per square inch. The greater the volatility of the material, the greater the vapor pressure will be. Recently, a new gas chromatograph method (HOST) has been approved for crude oil with an API gravity less than 26°.

The gravity of crude oil can give insight into its ability to produce VOC emissions. Two values are utilized, specific gravity and API gravity. Specific gravity is inversely proportional to API gravity. The lower the specific gravity, the higher the API gravity will be. API gravity is the term most often utilized by oil companies and is referenced in our rules. API gravity that is less than 20° is considered heavy crude and produces less VOC emissions. Light crude is defined having an API gravity value greater than 20°. It is the API value that the District utilizes to define heavy oil and light oil stationary sources. You will notice gravity thresholds in Rule 2020.

Heavy crude in the San Joaquin Valley consists of long-chained hydrocarbons that must be heated with steam in order to be extracted from the ground. The heating of this oil will drive off or produce smaller-chained hydrocarbons resulting in VOC emissions.

Temperature is an important component of VOC emissions from tanks. As tank temperature increases, the vapor pressure of a stored liquid increases as well. You will notice temperature thresholds in Rule 2020. Another function of temperature on VOC emissions is the initial boiling point of the liquid. A higher initial boiling point will result in less VOC emissions.

To generalize the above three paragraphs for crude oil:

Higher API gravity = Lower initial boiling point = Higher vapor pressure

Lower API gravity = Higher initial boiling point = Lower vapor pressure

Note: You can't utilize the API gravity relationship to vapor pressure for other liquids, like diesel, but you can utilize the initial boiling point-vapor pressure relationship to all liquids.

A tank's capacity can affect VOC emissions. Tanks with smaller capacity have fewer VOC emissions in practice. You will notice capacity thresholds in Rule 2020 as well.

6.6.1 Water is brought up with crude oil during production. Oil producers separate the water from the crude with water legs on front line tanks, mechanical separators, and with heat from combustion units. Sumps were utilized in years past but have mostly been replaced with tanks. Clean produced water is defined in Rule 1020 as having less than 35 mg of VOC per liter. The exemption is granted because there is little VOC in the water that can be released to atmosphere no matter what happens to the water, including heating.

6.6.2 Tanks storing crude oil with a gravity of 30° or less and having a capacity of 100 barrels or less, provided it is not required to have vapor recovery per Rule 4623 are exempt. Due to the small capacity of the tank, VOC emissions in practice are limited. This exemption holds true for new or existing tanks

6.6.3 This exemption is similar to 6.6.2, in that it gives an exemption to similar sized tanks (100 bbls or less), but it for crude oil greater than 30 degrees API gravity. This exemption only holds true for existing tanks (installed before June 1, 1989).

6.6.4 This exemption is for any unheated ($<150°$ F) material in a tank with a capacity of 250 gallons or less. The material can include volatile material such as gasoline. The term unheated in this exemption is very important to remember when making permit determinations.

6.6.5 Tanks holding unheated material with an initial boiling point greater than 302 degrees are exempt. Probably the most notable example in the District is diesel fuel, which has an initial boiling point between 340-400° F. With higher initial boiling point liquids, there is not a great concern for VOC emissions. If the liquids were heated to high temperatures, there could be a concern. The term unheated in this exemption is very important to remember when making permit determinations as well.

6.6.6 Fuel oils and non-air blown asphalts with an API gravity of 25° or less are exempt. Fuel oils and non-air blown asphalt are very heavy materials, with high initial boiling points and very low VOC emission rates.

Air blown asphalts can be a source of VOC emissions and a potential odor nuisance source. This type of asphalt is produced by injecting air thru molten asphalt at high temperatures to improve the properties of the material. The air can strip VOCs from the asphalt, and therefore such tanks are not exempt. Such operations generally have vapor control.

6.6.7 This section exempts the storage of motor fuels with an API gravity of 40° or less. Because gasoline has an API gravity greater than 40°, the exemption would be generally limited to diesel whose API gravity is between 33-39°. This exemption is a carry over from earlier rules and is not utilized to any great extent. A source could not heat diesel under section 6.6.5 but could under this section provided the tank was the correct size.

6.6.8 Lubricating oils have a high specific gravity, are very viscous, and do not produce significant VOCs.

6.6.9 Liquefied gases, such as propane and butane, are placed in pressure vessels designed to withstand the high vapor pressures associated with these compounds. The only way these vessels can vent VOCs is if the PRV valve vents, through fugitive leaks, or due to catastrophic failure of the vessel itself. The PRV valves are set to relieve at 90-120 psi, and this value is much higher than the working pressure of the vessels. Note that natural gasoline is a liquid at standard conditions and is therefore not a liquefied gas. Therefore, storage of natural gasoline, even in pressure vessels, is not exempt by this section.

ABOVE ARE A SERIES OF BULLET TANKS STORING LPG.
THESE TANKS ARE PERMIT EXEMPT.

6.6.10 Portable tanks, as shown below, at locations for less than six months are exempt provided they are not required to control VOCs per Rule 4623, and they hold produced liquids. This exemption is believed to be a hold over from the Kern County APCD Rules and Regulations. Historically, "produced fluids" have been interpreted to be fluids recovered from oil production operations.

6.6.11 Mobile equipment for delivery of VOCs is exempt and is regulated by Department of Transportation and CARB regulates cargo tanks carrying gasoline. However, the District can regulate how material is transferred in and out of such equipment.

6.7 Transfer equipment includes loading racks that generally load trucks or railcars with liquids by utilizing a flexible line that connects to the receiving vessel. A liquid pump will push the material from the holding vessel, generally a tank, into the cargo truck or railcar. In order for the loading to occur, air must be displaced from the receiving vessel. If the material being loaded is a volatile material, significant VOCs can be vented to atmosphere. Loading racks that load more than 4000 gallons per day of material with a vapor pressure greater than 1.5 psia must control VOCs in accordance with Rule 4624.

It should be noted that unloading racks are not subject to the requirements of Rule 4624; however New Source Review generally requires a similar level of control. Generally, unloading racks unload volatile liquids into VOC-controlled vessels.

Materials with high initial boiling points, asphalts, heavier crude oils, and heavy fuel oils don't result in significant emissions during loading, so they are afforded permit exemptions as listed below:

6.7.1.1 Equipment that transfers less than 4000 gallons per day of material with an initial boiling point greater than 302° F or fuel oil with an API gravity less than 40° is exempt. Conversely, if a facility loads more than 4000 gallons of such materials, it needs to be permitted.

6.7.1.2 Equipment that transfers crude oil, asphalt, or residual oil, and crude oil with an API gravity of 30° or less is exempt, with no throughput limitations. Equipment used to transfer crude oil with an API gravity of greater than 30° from a permitted tank needs to be permitted.

6.7.1.3 Delivery vessels with their own transfer equipment are exempt from permits when loading crude oil, asphalt, or crude oil. A good example of such a vessel would be a vacuum truck, which is commonplace in oilfield and refining operations.

6.7.2 Equipment that transfers refined lubricating oil. Such a product has an extremely low vapor pressure and is not a significant source of VOC emissions.

6.8 The application of surface coatings is heavily regulated by the District. There are several rules that govern coating operations, including Rules 4602, 4603, 4604, 4605, and 4306. Facilities subject to these rules are required to be permitted. There are surface coatings operations exempted from permits and these are listed below:

6.8.1 Architectural coating operations both residential and commercial are exempt. The coatings utilized, however, are subject to VOC limitations and are found in Rule 4601.

6.8.2 Facilities that utilize less than one quart per day or eight gallons per year of coatings are exempt. This exemption is granted because such sources are considered an insignificant source of VOC emissions.

When you read Rules 4602 and 4603, there is no throughput exemption from its control requirements like is found in Rule 6.8.2. The Compliance Department has had an understanding that if a source is exempt from permits, we won't subject them to the requirements of these rules.

6.8.3 Powder Coating operations that utilize less than five pounds per day of material or less than 50 pounds per year. Such operations are considered low VOC emitters.

6.9 This section has historically been applied to degreasing operations. Equipment for this type of operations can include dip tanks and conveyorized/unconveyorized degreasers. Rule 4662 covers degreasing operations and requires controls for certain equipment. Some degreasing equipment is exempt from permits and is limited to unconveyorized and unheated operations. Equipment that is conveyorized needs to be permitted, because it has several more emission points and is generally utilized at high volume operations.

6.9.1 Equipment with a surface area of 10 square feet or less, and a capacity of 92.5 gallons or less. Surface area and capacity affect VOC emissions from these types of operations. With a greater surface area and capacity, there is a greater likelihood that there will be significant VOC emissions from evaporation.

An important fact to remember is Rule 4662 exempts only equipment with a surface area of two square feet or less, so you could have equipment with a surface area of greater than two feet and less than ten feet would be subject to Rule 4662 but exempt from permits.

6.9.2 Equipment utilizing solvents with an initial boiling point of 248º F or less are exempt. Such solvents would have few VOC emissions due to its high initial boiling point.

6.9.3 Equipment that utilizes 25 gallons per year of solvent is exempt, because the amount of VOCs is considered insignificant.

6.10 The exemption for equipment used in brazing, soldering, and welding equipment has been carried over from other county rulebooks. Plasma cutting operations are sometimes associated with welding operations. However, plasma-cutting operations can emit significant toxic compounds and therefore require a permit by section 5.3 of Rule 2020.

6.11 Equipment used to compress or hold dry natural gas is exempt. Natural gas consists primarily of methane and ethane, which are not considered VOCs.

6.12 Fugitive emissions sources such as valves and flanges from equipment not needing a permit are exempt. In practical terms, permits are not required of fugitive components when the equipment they serve is permit exempt.

6.13 Pressure vessels that are 1) not vented (except for emergency pressure relief valves) to the atmosphere or a vapor control system, 2) solely vented to a field gas gathering system, 3) used for temporary separation of gas from produced fluids; are exempt from a permit if they are not associated with another emission unit that requires a permit. Additionally, pressure vessels that serve as storage equipment, e.g. bullet tanks used to store natural gasoline or condensed petroleum (but not including liquefied gases), require individual permits if their capacity is greater than 100bbl.

6.14 This exemption is similar to Section 6.12, but includes fugitive sources that serve permitted equipment. Including fugitive emissions sources on one permit makes practical sense, as permitting such components individually would be unwieldy.

6.15 Ponds are exempt, because they hold clean produced water and are not a source of significant VOC emissions. Pits are exempt from permits, because they are only utilized in emergency situations and cannot be utilized for any extended period, which limits VOC emissions.

6.16 Portable equipment that has a valid District or CARB registration is exempt from a District permit. If portable equipment does not have valid registration or a valid permit, they are in violation of Rule 2010 and enforcement action must be taken. However, Rule 2201 and permitting policy SSP 2150 generally prohibit portable equipment (even if registered) from being used to replace or supplement an ongoing operation or utility at a stationary source without a permit.

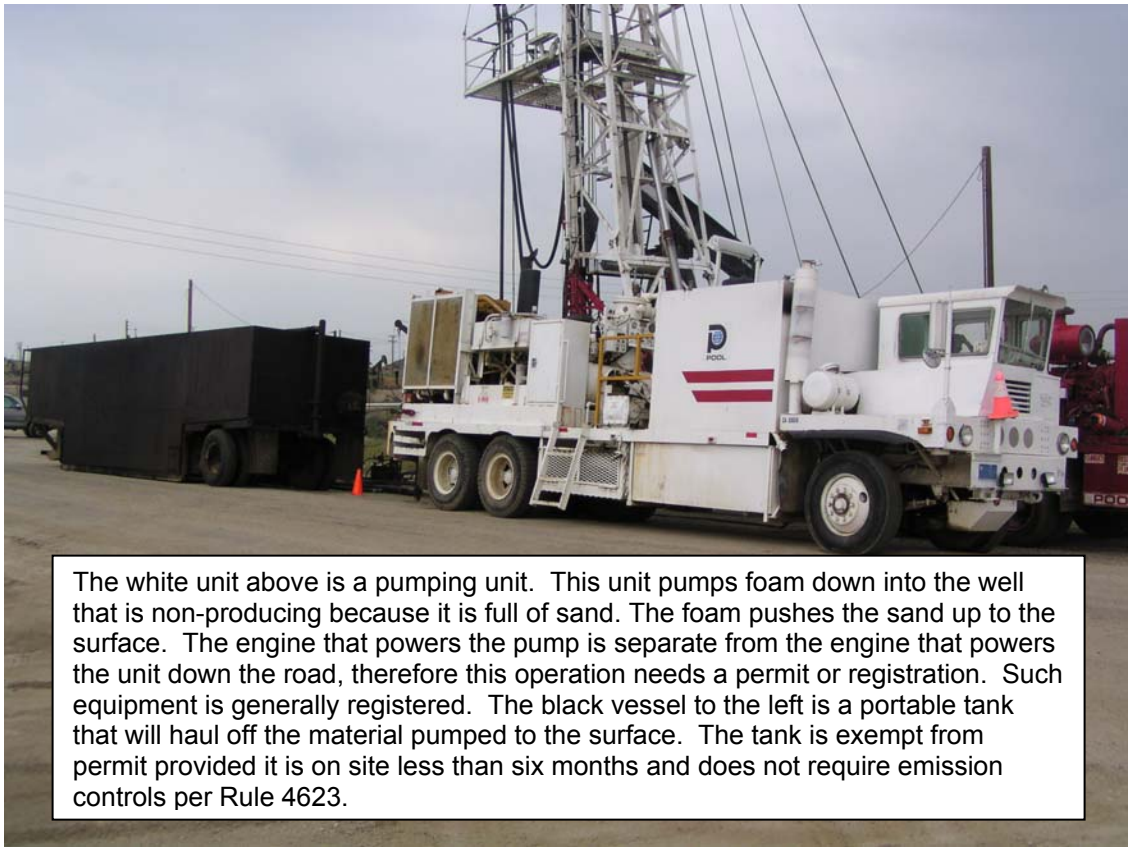
Above is a portable engine that powers a generator.

SILOS ARE PERMITTED AS PART OF STATIONARY SOURCE

EQUIPMENT ON BACK OF TRUCK IS REGISTERED SO IT IS PERMIT EXEMPT

THIS IS AN EXAMPLE OF A STATIONARY SOURCE THAT ALSO HAS REGISTERED PORTABLE EQUIPMENT. THEIR OPERATIONS ARE NOT RELATED.

The red equipment above is a workover rig that pulls tubing from a well. Because the engine that operates the well pulling equipment also powers the unit down the highway, it is permit exempt and exempt from registration. On the other side of the workover rig is equipment that needs registration or a permit.



The white unit above is a pumping unit. This unit pumps foam down into the well that is non-producing because it is full of sand. The foam pushes the sand up to the surface. The engine that powers the pump is separate from the engine that powers the unit down the road, therefore this operation needs a permit or registration. Such equipment is generally registered. The black vessel to the left is a portable tank that will haul off the material pumped to the surface. The tank is exempt from permit provided it is on site less than six months and does not require emission controls per Rule 4623.

6.17 Roadmix operations that use non-refined hydrocarbon product for their own properties or donate it to a non-profit operation do not require permits. A key word in this exemption is "refined hydrocarbons." If it utilizes refined hydrocarbons, e.g. asphalt, the operation would not be exempt.

6.18 Laboratory test equipment is exempt provided its emissions were less than two pounds per day or 75 pounds per year. Such a laboratory would be similar to a low emitting unit.

6.19 The low emitting unit category catches all those operations that don't fall under 6.1 thru 6.18. Low emitting units are defined as having emissions less than two pounds per day or, if greater, then less than 75 pounds per year. An example of a low-emitting unit is a baghouse serving a woodworking operation. Per Permit Services, the generation of 40 pounds of sawdust is approximately equal to 2 pounds of emissions on a given day and an operation that produces this much sawdust will require a permit.

7.0 District Exempt Activities include various activities that occur often and some that rarely occur.

7.1 & 7.3 Routine replacement of parts is a common occurrence with regulated facilities. Such activity is exempt from permits provided they replace "like parts with like parts." If a source replaces a part with a different one, it may need to receive prior District approval as such an occurrence can have a negative impact on the operation's emissions. For example, if a source replaces a ten horsepower motor that serves a vapor recovery compressor with a five horsepower motor, the vapor recovery system may not be capable of collecting vapors as required by rule or permit.

BELOW ARE PARTS THAT COULD FAIL AND NEED REPLACING. THE REPLACING OF PRESSURE-VACUUM VENTS AND OTHER EQUIPMENT COULD PUT A SOURCE IN NON-COMPLIANCE WITH A RULE.

When you notice parts like the ones above in a facility you are inspecting ask if they were taken from equipment under permit. If they were, verify the new parts were exact replacement. Ask why the parts were replaced and verify the new parts are in compliance with District requirements.

7.2 The venting of PUC gas is becoming a more common occurrence due to the increase in residential construction. While such operations are exempt from permit, they are not exempt from the public nuisance rule. There has been one known PUC gas-venting instance in the District that resulted in a Rule 4102 violation.

7.4 The detonation of explosives for research and development is a rare occurrence.

7.5 Pilot tests for soil remediation operations are a fairly common occurrence.

8.0 Record keeping to verify a permit exemption based on a throughput or emission limitation is required in order to benefit from such an exemption. A review of records is the way in which to determine whether an exemption is valid. If a source fails to maintain records, they can lose their exemption.

9.0 Owners or operators that are required to obtain a permit through loss of exemption shall submit an application within six months and shall not be subject to Rule 2201 until such time the emissions unit is modified.