

2. The make, model and serial number of the flare;
3. A copy of the manufacturer's specification of the performance standards for the flare;
4. A statement that the flare was installed in accordance with the manufacturer's specifications;
5. A statement that the flare is being operated and maintained in accordance with the manufacturer's specifications; and
6. A statement that the flare will continue to be operated in accordance with the manufacturer's specifications.

(c) The owner or operator of a flare subject to this section shall inspect the flare before May 1 of each year beginning in 1995 to verify that the flare continues to be operated in accordance with the manufacturer's specifications for the operation of the flare. The owner or operator of the flare shall record the following in a permanently bound log book at the conclusion of each inspection:

1. The name of the person conducting the inspection;
2. The date on which the inspection was conducted;
3. An entry indicating which flare was inspected;
4. Any changes or adjustments made to the flare as a result of the inspection; and
5. A statement stating that the flare is currently being operated in compliance with the manufacturer's specifications.

New Rule, R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Administrative Correction.

See: 26 N.J.R. 4793(a).

Administrative Correction.

See: 27 N.J.R. 2740(a).

7:27-16.14 through 7:27-16.15 (Reserved)

7:27-16.16 Other source operations

(a) The provisions of this section apply to any source operation, except source operations in the following categories (Note: Source operations in those categories designated by an asterisk (*) which have the potential to emit three pounds per hour or more of VOC and which are located at a major VOC facility are regulated by N.J.A.C. 7:27-16.17.):

1. VOC storage operations;
2. Gasoline transfer operations;
3. VOC transfer operations, other than gasoline;
4. Marine transfer operations;
5. Open top tanks and surface cleaners;
6. Surface coating and graphic arts operations;
7. Boilers;

8. Stationary gas turbines;
9. Stationary internal combustion engines;
10. Asphalt plants;
11. Natural gas pipeline blowdown events;
12. Flares;
13. Petroleum solvent dry cleaning operations;
14. Fiberglass manufacturing furnaces;
15. Glass manufacturing furnaces;
16. Fuel burning for steam generation for space heating;
17. Sulfuric acid plant burners;
18. Any source operation regulated pursuant to N.J.A.C. 7:27-16.17; and
19. Any source operation exempted from this subchapter pursuant to N.J.A.C. 7:27-16.27.

(b) Source operations to which this section apply are not limited to those involved in manufacturing and include, without limit, the following: agitators, autoclaves, bakery ovens, blenders, centrifuges, distillation processes, driers, extruders, fermentation processes, fiberglass boat or vessel manufacturing operations, fiberglass product manufacturing operations, foam blowing operations, fumigation chambers, mills, mixers, ovens, reactors, receivers, roasters, sterilization operations, and synthetic fiber manufacturing operations. The provisions of this section do not apply to any insignificant source operation as defined in N.J.A.C. 7:27-8.2 or 22.1.

(c) No person shall cause, suffer, allow, or permit any VOC to be emitted into the outdoor atmosphere from any source operation subject to the provisions of this section, in excess of the maximum allowable emission rate, as determined in accordance with the procedure in (d) below.

(d) For the purposes of (c) above, the maximum allowable emission rate for a source operation subject to this section shall be determined in accordance with the following procedure:

1. Determine the vapor pressure at standard conditions in pounds per square inch absolute of the VOC emitted from the source operation.
2. Determine the percent by volume of the VOC in the source gas emitted from the source operation. Whenever dilution gas is added to the source gas from a source operation, the source gas shall be considered to have the gas discharge rate and composition prior to such dilution, in accordance with the following:
 - i. If the source operation discharges under a ventilation hood, concentration of VOC and the flow rate of the source gas may be measured or otherwise deter-

mined in the duct connecting the hood to the inlet of the ventilation fan.

ii. If the emissions and ventilation air are conveyed through ducts from the source operation to the outdoor atmosphere with no interruption, the concentration of VOC and the rate of the source gas are to be determined inside the ducts.

iii. For all other source operations including, but not limited to, evaporation from steps in chemical manufacturing processes, the concentration of VOC and the rate of the source gas shall be measured at a point no farther than six inches (15 centimeters) downstream from the point at which the vapors leave the process equipment.

3. From Table 16B, find the source gas range classification by selecting the appropriate line for the vapor pressure as determined in Step 1 and the appropriate column for the percent VOC as determined in Step 2.

4. From Table 16A, Column 2, determine the maximum allowable percent of process emissions for the source gas range as determined in Step 3.

5. The maximum allowable emission rate shall be the pounds (kilograms) per hour (or per batch cycle hour) equivalent to the percent of the process emissions shown in Column 2 or the Exclusion Rate shown in Column 3, whichever is greater.

TABLE 16A
MAXIMUM ALLOWABLE HOURLY VOC EMISSIONS
FROM SOURCE OPERATIONS

Column 1 Range Determined From Table 16B	Column 2 Maximum Allowable emissions, Percent of Process Emissions by Weight	Column 3 Exclusion Rates As of June 15, 1990 Continuous or Batch Cycle Emission	
		Pounds Per Hour	Kilograms Per Hour
Range A	15	3.5	1.59
Range B	15	3	1.36
Range C	15	2.5	1.14
Range D	12	2	0.91
Range E	10	1.5	0.68
Range F	8	1	0.46
Range G	2	0.5	0.23
Range H	0.3	0	0
Range I	15	3.5	1.59

TABLE 16B
DETERMINANTS OF CONTROLS REQUIRED FOR PROCESS SOURCE GASES
Concentration of VOC by Volume, Percent

Vapor Pressure, PSIA @ 70°F		Range A	Range B		Range C		Range D		Range E		Range F	G	H	I
Greater Than	But not Greater Than	Not Greater Than	Greater Than	But not Greater Than	Greater Than	But not Greater Than	Greater Than	But not Greater Than	Greater Than	But not Greater Than	Greater Than	But not Greater Than		
0.0	0.1								1.0	18.0	18.0			
0.1	0.2						1.0	7.0	7.0	29.0	29.0			
0.2	0.3				6.0		6.0	13.0	13.0	40.0	40.0			
0.3	0.4				9.0		9.0	18.0	18.0	45.0	45.0			
0.4	0.5				12.0		12.0	22.0	22.0	50.0	50.0			
0.5	0.6				14.0		14.0	25.0	25.0	56.0	56.0			
0.6	0.7				16.0		16.0	28.0	28.0	60.0	60.0			
0.7	0.8				18.0		18.0	31.0	31.0	64.0	64.0			
0.8	0.9				20.0		20.0	34.0	34.0	67.0	67.0			
0.9	1.0				22.0		22.0	37.0	37.0	70.0	70.0			
1.0	1.2				26.0		26.0	41.0	41.0	74.5	74.5			
1.2	1.4				29.0		29.0	45.0	45.0	77.5	77.5			
1.4	1.6				32.0		32.0	49.0	49.0	80.5	80.5			
1.6	1.8				34.5		34.5	52.0	52.0	83.0	83.0			
1.8	2.1				38.0		38.0	55.0	55.0	86.0	86.0			
2.1	2.4				41.5		41.5	58.0	58.0	88.0	88.0			
2.4	2.7				45.0		45.0	61.0	61.0	90.0	90.0			
2.7	3.0				48.0		48.0	64.0	64.0	91.5	91.5			
3.0	3.5				52.0		52.0	68.0	68.0	93.5	93.5			
3.5	4.0				55.0		55.0	71.0	71.0	95.5	95.5			
4.0	4.5				58.0		58.0	74.0	74.0	97.0	97.0			
4.5	5.0				61.0		61.0	76.0	76.0	97.0	97.0			
5.0	5.5				64.0		64.0	78.0	78.0	97.0	97.0			
5.5	6.0				66.5		66.5	79.5	79.5	97.0	97.0			
6.0	6.5				68.5		68.5	81.0	81.0	97.0	97.0			
6.5	7.0				70.5		70.5	82.5	82.5	97.0	97.0			
7.0	7.5				72.0		72.0	84.0	84.0	97.0	97.0			
7.5	8.0				73.5		73.5	85.0	85.0	97.0	97.0			
8.0	8.5				75.0		75.0	86.0	86.0	97.0	97.0			
8.5	9.5				77.5		77.5	87.5	87.5	97.0	97.0			
9.5	10.5				80.0		80.0	89.0	89.0	97.0	97.0			
10.5	11.5				82.0		82.0	90.5	90.5	97.0	97.0			
11.5	13.0				84.5		84.5	92.0	92.0	97.0	97.0			
13.0	14.7				87.0		87.0	93.0	93.0	97.0	97.0			

(e) The provisions of (c) above shall not apply to a source gas in Range A or B discharged into the outdoor atmosphere through a local exhaust ventilation system whose intake is located within six inches (15 centimeters) of the point at which the source gas is discharged to an internal work space, provided such exhaust ventilation system:

1. Collects at least 60 percent by volume of a Range A source gas or 85 percent by volume of a Range B source gas emitted from the source operation; and
2. Is equipped with a vapor control system which prevents from being discharged into the outdoor atmosphere at least 85 percent by volume of the VOC collected, on an hourly basis.

(f) For the purpose of this section:

1. Source gases from a single source operation which are emitted from different vents in different range classifications as determined from Table 16B shall be considered as being discharged from separate source operations for each of which the maximum allowable emission rate must be determined separately.

2. Source operations normally falling within the category subject to the provisions of this section but used for research or development purposes are exempt from compliance with (c) above provided they do not exceed the hourly exclusion rates for their ranges, as set forth in Table 16A, Column 3, as applicable; or provided:

- i. No more than two times the applicable hourly exclusion rate set forth in Table 16A, Column 3 is emitted in any one hour or over a batch cycle average; and
- ii. No more than three times the applicable hourly exclusion rate set forth in Table 16A, Column 3 is emitted in any 24-hour period.

3. The maximum allowable emission rate for source gases physically combined (manifolded) for more than one source operation shall be the sum of the maximum allowable emission rates for the separate source gases as determined under N.J.A.C. 7:27-16.6(c), (h), (i), and (j) and 16.16(c) and (e). The process emission rate shall be used as the maximum allowable emission rate of a separate source gas if it is less than the applicable exclusion rate contained in Table 16A, Column 3;

4. Until March 28, 1994, the provisions of 3 above may apply to source gases which are mathematically combined, providing approval for such a mathematical combination of sources has been obtained from the Department prior to March 28, 1992;

5. As of March 28, 1992, the Department shall not approve any mathematical combining of source gases; and

6. Any approval of a permit or certificate issued by the Department authorizing the demonstration of compliance through a mathematical combination of sources shall expire as of March 28, 1994. Any person who, as a result of this expiration, must alter any equipment or control apparatus in order to operate in conformance with any requirement of this subchapter shall do so in accordance with the following schedule:

i. By September 24, 1992, apply to the Department for a permit to carry out the alteration; and

ii. By March 28, 1994, comply with the requirements of this chapter and with any provisions or conditions set forth in any alteration permit issued which authorizes the alteration of the equipment or control apparatus.

(g) Any person responsible for a source operation subject to (c) above shall maintain the following records for each source operation:

1. For each different kind of batch or continuous process for which the source operation is used:

i. Record the following information determined in accordance with the Procedure for Using Table 16A in (c) above: the chemical name and vapor pressure of each VOC used, the percent concentration by volume of VOC in the source gas, the volumetric gas flow rate, the source gas range classification, and the maximum allowable emission rate; also record the maximum actual emission rate and maintain the calculations and any test data used to determine the actual emission rate for each process; and, if the source operation is used for more than one process, record the dates on which the source operation is used for each process; or

ii. Conduct an analysis of the source operation, which demonstrates that, under operating conditions that maximize the VOC emissions after any control, the VOC emission rate of the source operation is in compliance with this section; and maintain process records sufficient to demonstrate whether the VOC emission rate of the source operation from actual operations does not exceed the VOC emission rate under operating conditions;

2. For any source operation that has a thermal oxidizer used to control the emission of VOCs, record on a continuous basis or at a frequency approved in writing by the Department the operating temperature at the exit of the combustion chamber and the carbon monoxide concentration in the flue gas emitted to the outdoor atmosphere; also maintain production records sufficient to demonstrate whether the processes conducted generate VOC emissions within the design parameters of the thermal oxidizer;

3. For any source operation that has a control apparatus using carbon or other adsorptive material used to control the emission of VOC:

i. Record on a continuous basis or at a frequency approved in writing by the Department the concentration of the total VOC in the flue gas emitted to the outdoor atmosphere; or

ii. Record the date and time the carbon or other adsorptive material used in the control apparatus is regenerated or replaced; also maintain production records sufficient to demonstrate whether the processes conducted generate VOC emissions within the design parameters of the control apparatus and any other information required to document whether the control apparatus is being used and maintained in accordance with the manufacturer's recommended procedures. The manufacturer's recommendations for use and maintenance are also to be readily available on the operating premises, and the person responsible for the source operation shall provide these to the Department upon request; and

4. Upon the request of the Department and at the frequency specified by the Department, record any other operating parameter relevant to the prevention or control of air contaminant emissions from the source operation or control apparatus.

Amended by R.1986 d.379, effective September 22, 1986 (operative October 18, 1986).

See: 17 N.J.R. 1969(a), 18 N.J.R. 1936(a).

Substantially amended.

Amended by R.1989 d.331, effective June 19, 1989 (operative July 24, 1989).

See: 20 N.J.R. 3052(a), 21 N.J.R. 1669(b).

Established separate provisions for prior to and as of June 15, 1990 and added Column 4 to table 4.

Amended by R.1992 d.102, effective March 2, 1992 (operative March 28, 1992); (m)1. (operative October 1, 1992); (m)2-4 (operative April 1, 1993).

See: 23 N.J.R. 1858(b), 24 N.J.R. 792(a).

Addressed EPA-identified deficiencies; eliminated "bubble" provisions.

Administrative correction to (a); (m)1, i and 3.

See: 24 N.J.R. 1889(a).

Recodified from 7:27-16.6 and amended by R.1994 d.313, effective June 20, 1994 (operative July 26, 1994).

See: 25 N.J.R. 3339(a), 26 N.J.R. 2600(a).

Amended by R.2003 d.224, effective June 2, 2003 (operative June 29, 2003).

See: 34 N.J.R. 2489(a), 35 N.J.R. 2509(a).

In (b), added the second sentence; in (g), rewrote 2.

7:27-16.17 Facility-specific VOC control requirements

(a) This section establishes procedures and standards for the establishment of VOC control requirements for any source operation that:

1. Is located at a major VOC facility and has the potential to emit at least three pounds per hour (potential batch cycle emission rate of three pounds per hour for batch processes), and:

i. Is not regulated elsewhere in this subchapter; and

ii. Is not specifically exempted elsewhere in this subchapter because the source operation is within a category that is exempted or because the source operation operates below exclusion rates or threshold levels for control; or

2. If the owner or operator of a source operation regulated under N.J.A.C. 7:27-16.2 through 16.16 or 16.18 through 16.21 seeks approval of an alternative VOC control plan, which would apply to the equipment or source operation notwithstanding any control requirement or emission limit which would otherwise apply under this subchapter.

(b) Except as provided at (t) below, the owner or operator of any facility that contains a source operation subject to (a)1 above shall:

1. By October 24, 1994, submit a demonstration for all source operations to the Department at the address listed in (s) below. This demonstration shall include one of the following for each source operation subject to (a)1 above:

i. Information, pursuant to (e) below, that demonstrates the source operation is currently served by a control apparatus that collects at least 90 percent by weight of the VOC emissions from the source operation and prevents from being discharged into the outdoor atmosphere at least 90 percent by weight of the VOC collected, that the owner or operator has implemented pollution prevention measures (or a combination of control apparatus and pollution prevention measures) that achieve at least the same level of VOC emission reductions;

ii. Information, pursuant to (e) below, that demonstrates by May 31, 1995 the source operation will be served by control apparatus that collects at least 90

percent by weight of the VOC emissions from the source operation and prevents from being discharged into the outdoor atmosphere at least 90 percent by weight of the VOC collected, that the owner or operator will implement pollution prevention measures (or a combination of control apparatus and pollution prevention measures) that achieve at least the same level of VOC emission reductions; or

iii. A proposed alternative VOC control plan prepared in accordance with (d) below.

2. Beginning on May 31, 1995, comply with either (b)2i or ii below:

i. Use control apparatus that the Department has determined (pursuant to (1) below) will collect at least 90 percent by weight of the VOC emissions from the source operation and prevent from being discharged into the outdoor atmosphere at least 90 percent by weight of the VOC collected; or

ii. Operate the facility in accordance with an alternative VOC control plan approved by the Department pursuant to (j) below.

(c) An owner or operator seeking approval of an alternative VOC control plan pursuant to (a)2 above shall submit to the Department at the address listed in (s) below a proposed alternative VOC control plan prepared in accordance with (d) below. Submission of a proposed alternative VOC control plan does not relieve an owner or operator of any facility, equipment or source operation facility from complying by May 31, 1995 for source operations first regulated under this subchapter as amended operative July 26, 1994 or compliance dates in other sections of this subchapter. If and when the Department approves the alternative VOC control plan, the owner or operator shall be subject to the conditions and requirements of the plan and of the Department's approval.

(d) An owner or operator submitting a proposed alternative VOC control plan pursuant to (b)1iii or (c) above shall include the following information in the plan:

1. A list of each source operation at the facility to be included in the plan:

i. For a submission pursuant to (b)1iii above, the list shall include each source operation that is not regulated under N.J.A.C. 7:27-16.2 through 16.16, 16.20 or 16.21, and has the potential to emit at least three pounds of VOC per hour; or

ii. For a submission pursuant to (c) above, the list shall include each source operation for which the owner or operator seeks an alternative to compliance under N.J.A.C. 7:27-16.2 through 16.16, 16.20 or 16.21;

2. The following information for each source operation listed pursuant to (d)1 above:

i. A brief description of the source operation, and its permit number and any other identifying numbers;

ii. The maximum rated capacity of the source operation;

iii. The source operation's potential to emit VOC;

iv. A list of all VOC control technologies available for use with the source operation;

v. A list of all alternative processes and pollution prevention measures that the owner or operator is considering using with or in place of the source operation to reduce VOC emissions;

vi. An analysis of the technological feasibility of installing and operating each control technology and process alternative identified in (d)2iv and v above;

vii. For each control technology and process alternative which is technologically feasible to install and operate, an estimate of the cost of installation and annual operation;

viii. An estimate of the remaining useful life of the existing source operation;

ix. An estimate of the reduction in VOC emissions attainable through the use of each control technology and process alternative identified in (d)2iv and v above;

x. The VOC control technology or technologies or process alternatives which the owner or operator proposes to employ;

xi. For any construction, alteration or installation of any equipment or control apparatus that the owner or operator proposes in the plan, a complete application for each permit required. The permit may be a pre-construction permit and certificate under N.J.A.C. 7:27-8, an operating permit under N.J.A.C. 7:27-22, or a facility-wide permit as defined at N.J.A.C. 7:1K-1.5;

xii. A proposed VOC emission limit for the source operation or for the proposed process alternative; and

xiii. Proposed recordkeeping requirements sufficient to document the owner or operator's continued compliance with the plan;

3. Any other information the Department requests that is reasonably necessary to enable it to determine whether the application satisfies the requirements of (j) below; and

4. A certification signed by the owner or operator, satisfying the requirements of N.J.A.C. 7:27-1.39.

(e) An owner or operator submitting a demonstration pursuant to (b)1i or ii above shall include the following information in the demonstration:

1. A list of each source operation at the facility within the scope of (a)1 above;

2. The following information for each source operation listed pursuant to (e)1 above:

i. A brief description of the source operation, and its permit number and any other identifying numbers;

ii. The maximum rated capacity of the source operation;

iii. The source operation's potential to emit VOC;

iv. A description of the control apparatus that serves the source operation (for demonstrations pursuant to (b)1i above) or that the owner or operator states will serve the source operation (for demonstrations pursuant to (b)1ii above);

v. An analysis of how the control apparatus will collect at least 90 percent by weight of the VOC emissions from the source operation and prevent from being discharged into the outdoor atmosphere at least 90 percent by weight of the VOC collected;

vi. A description of any pollution prevention measures that the owner or operator has implemented (for demonstrations pursuant to (b)1i above) or will implement (for demonstrations pursuant to (b)1ii above), and analysis of how such measures will control VOC emissions to the extent required under (b)1i and ii above;

vii. A proposed VOC emission limit for the source operation or for the proposed process alternative; and

viii. Proposed recordkeeping requirements sufficient to document the owner or operator's continued compliance with the plan;

3. A complete application for each new permit required and for each change to an existing permit for any equipment or control apparatus to be constructed, altered or installed in connection with the demonstration;

4. Any other information which the Department may request which is reasonably necessary to enable it to determine whether the application satisfies the requirements of (1) below; and

5. A certification signed by the owner or operator, satisfying the requirements of N.J.A.C. 7:27-1.39.

(f) Notwithstanding the provisions of (b) above, the owner or operator of a facility that had actual annual emissions of VOC in 1990 and each year thereafter of less than 25 tons, may comply with the requirements of this section by obtaining the Department's approval of a compliance plan and implementing such a plan. To comply in this manner, the owner or operator shall submit a proposed compliance plan pursuant to (f)1 below, obtain the Department's approval of the plan pursuant to (k) below, and implement the plan pursuant to (f)2 below.