PART E - SOURCE EMISSION AND OPERATING STANDARDS

Subpart 7- Miscellaneous VOC Sources

§2105.70 PETROLEUM REFINERIES

a. **Specific Sources.**

1. **Wastewater Separators.** No person shall cause or permit the use of any compartment of any single or multiple compartment volatile organic compound wastewater separator which compartment receives effluent water containing 200 gallons a day or more of any VOC from equipment processing, refining, treating, storing, or handling VOCs unless such compartment is equipped with one of the following vapor loss control devices, properly installed, in good working order, and in operation, as follows:

   A. A container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place; or

   B. A container equipped with a floating roof, consisting of a pontoon-type roof, double-deck-type roof, or internal floating cover, which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and container wall. All gauging and sampling devices shall be gas tight except when gauging or sampling is taking place.

2. **Pumps and Compressors.** All pumps and compressors handling VOCs with a vapor pressure of greater than 1.5 psi at actual conditions shall have mechanical seals. For the purpose of determining vapor pressure, a temperature no greater than 100^{o}F (37.8^{o}C) shall be used.

3. **Vacuum-Producing Systems.** Vacuum producing systems shall conform with the following:

   A. No person shall operate, or allow to be operated, a vacuum-producing system at a petroleum refinery in such manner that there are any emission of VOCs from the condensers, hot wells, or accumulators of the system; and

   B. The emission limit under Subparagraph 3.A of this Subsection shall be achieved by one of the following:

      i. Piping the vapors to a firebox or a incinerator;

      ii. Compressing the vapors and adding them to the refinery fuel gas; or

      iii. Any method approved by the Department which recovers no less than 90% by weight of uncontrolled VOCs that would otherwise be emitted to the atmosphere.

4. **Process Unit Turnarounds.** Purging of VOCs during depressurization of reactors, fractionating columns, pipes, or vessels during unit shutdown, repair, inspection, or start-up shall be performed in such a manner as to direct the VOCs to a fuel gas system, flare, or vapor recovery system until the internal pressure in such equipment reaches 19.7 psia.

b. **Fugitive Sources.**

1. The owner or operator of a petroleum refinery shall:

   A. Develop and conduct a monitoring program consistent with the provisions of Paragraphs 4, 5, and 6 of this Subsection b.

   B. Record leaking refinery components which have a VOC concentration exceeding 10,000 ppm when tested in accordance with the provisions of Part G of this Article, relating to emissions of VOCs, and place an identifying tag on each refinery component consistent with the provisions of Paragraph 6 of this Subsection b.

   C. Repair and retest the leaking refinery components as soon as possible. Every reasonable effort shall be made to repair each leak within 15 days unless a refinery unit shutdown is required to make the necessary repair.

   D. Identify leaking refinery components which cannot be repaired until the unit is shutdown for turnaround.

2. No person shall install or operate, or allow the installation or operation of, a valve at a petroleum refinery at the end of a pipe or line containing VOCs unless the pipe or line is sealed with a second valve, a blind flange, a plug, or a cap, except for safety pressure relief valves and fittings on valves one inch or smaller. The sealing device may be removed only when a sample is being taken or during maintenance operations.

3. Pipeline valves and pressure relief valves in gaseous VOC service shall be marked in some manner that will be readily obvious to both refinery personnel performing monitoring and the Department.

4. Any person operating, or allowing the operation of, a petroleum refinery shall conduct a monitoring program consistent with the following requirements:

   A. Check yearly, by methods referenced in Part G of this Article, pump seals and pipeline valves in liquid service.

   B. Check quarterly by methods referenced in Part G of this Article, compressor seals, pipeline valves in gaseous service, and pressure relief valves in gaseous service.

   C. Check monthly, by visual methods, all pump seals.

   D. Check within 24 hours, by methods referenced in Part G of this Article, pump seal from which VOC liquids are observed to be dripping.

   E. Check, by methods referenced in Part G of this Article, relief valve within 24 hours after it has vented to the atmosphere.

   F. Check within 24 hours after repair, by methods referenced in Part G of this Article, refinery component that was found leaking.

5. Pressure relief devices which are connected to an operating flare header, vapor recovery devices, inaccessible valves, storage tank valves, and valves that are not externally regulated are exempt from the monitoring requirements in Paragraph 4 of this Subsection b.

6. Any person operating, or allowing the operation of, a petroleum refinery, upon the detection of a leaking refinery component, shall affix a weatherproof and readily visible tag, bearing an identification number and the date upon which the leak is located to the leaking refinery

component. This tag shall remain in place until the leaking refinery component is repaired.

7. Any person operating, or allowing the operation of, a petroleum refinery shall maintain a leaking refinery components monitoring log which shall contain, at a minimum, the following data:

   A. The name and process unit where the refinery component is located.

   B. The type of refinery component, for example, valve, seal.

   C. The tag number of refinery component.

   D. The dates on which the leaking refinery component was discovered and repaired.

   E. The date and instrument reading of the recheck procedure after a leaking refinery component was repaired.

   F. A record of the calibration of the monitoring instrument.

   G. Those leaks that cannot be repaired until turnaround.

   H. The total number of refinery components checked and the total number of refinery components found leaking.

8. Copies of the monitoring log shall be retained by the owner or operator for two years after the date on which the record was made or the report was prepared, whichever is later.

9. Copies of the monitoring log shall immediately be made available to the Department for inspection and copying, upon verbal or written request, at any reasonable time.

10. The person operating, or allowing the operation of, a petroleum refinery, within 30 days following the end of each calendar year, shall:

   A. Submit a written report to the Department for such calendar year that lists all leaking refinery components that were located during such year but not repaired within 15 days, all leaking refinery components awaiting unit turnaround as of the end of the year, the total number of refinery components inspected, and the total number of refinery components found leaking.

   B. Submit a signed statement with the report attesting to the fact that, with the exception of those leaking refinery components listed in Subparagraph A of this Paragraph b.10, monitoring and repairs were performed as stipulated in the monitoring program.

11. The owner or operator of a petroleum refinery may submit an alternative plan for the control of leaks from petroleum refinery equipment to the Department. If the Department finds that the alternative plan will achieve an emission reduction which is equivalent to or greater than the reduction which can be achieved under this Section and that the alternative plan is as enforceable as this Section, then the Department will allow the implementation of this alternative plan.

12. The owner or operator of a petroleum refinery may submit to the Department a list of refinery components the inspection of which would involve a significant element of danger. The Department may exempt the refinery components on this list from the requirements of this Section if it is demonstrated to the satisfaction of the Department that a significant element of danger exists which cannot be reasonably eliminated and that these exemptions will not result in a significant

reduction in the effectiveness in the control of VOC emissions.

§2105.71 PHARMACEUTICAL PRODUCTS

a. **Manufacture of synthesized pharmaceutical products.** This Subsection applies to synthesized pharmaceutical manufacturing sources.

1. Any person who operates, or allows the operation of, a synthesized pharmaceutical manufacturing source subject to this Subsection shall control the VOC emissions from reactors, distillation operations, crystallizers, centrifuges, and vacuum dryers that emit 15 pounds per day or more of VOCs. Surface condensers or equivalent controls shall be used and if:

A. Surface condensers are used, the condenser outlet gas temperature shall not exceed:

i. Minus 25^{o}C when condensing VOCs of vapor pressure greater than 5.8 psi when measured at 68^{o}F.

ii. Minus 15^{o}C when condensing VOCs of vapor pressure greater than 2.9 psi when measured at 68^{o}F.

iii. 0^{o}C when condensing VOCs of vapor pressure greater than 1.5 psi when measured at 68^{o}F.

iv. 10^{o}C when condensing VOCs of vapor pressure greater than one psi when measured at 68^{o}F.

v. 25^{o}C when condensing VOCs of vapor pressure greater than 0.5 psi when measured at 68^{o}F.

B. Equivalent controls are used, the VOC emissions shall be reduced by an equivalent or greater amount than would be required in Subparagraph 1.A of this Subsection.

2. Any person who operates, or allows the operation of, a synthetic pharmaceutical manufacturing source subject to this Section shall reduce the VOC emissions from air dryers and production equipment exhaust systems:

A. By at least 90% if uncontrolled emissions are 220 pounds per day per day) or more of VOCs; or

B. To 33 pounds per day or less if uncontrolled emissions are less than 220 pounds per day of VOCs.

3. Any person who operates, or allows the operation of, a synthesized pharmaceutical manufacturing source subject to this Section shall enclose centrifuges, rotary vacuum filters, and other filters having an exposed liquid surface, where the liquid contains VOCs and exerts a total VOC vapor pressure of 0.5 psi or more at 20°C.

4. Any person who operates, or allows the operation of, a synthesized pharmaceutical source subject to this Section shall install covers on in-process tanks containing a VOC at any time. These covers shall remain closed except during production, sampling, maintenance or inspection procedures that require operator access.

5. Any person who operates, or allows the operation of, a synthesized pharmaceutical manufacturing source subject to this Section shall repair leaks from which a liquid, containing VOCs, can be observed running or dripping. The repair shall be completed the first time the equipment is off-line for a period of time long enough to complete the repair.

b. **Pharmaceutical tablet coating.** This Subsection applies to pharmaceutical tablet coating at pharmaceutical manufacturing sources that emit greater than 50 tons of VOCs per year.

1. Any person who operates, or allows the operation of, any pharmaceutical manufacturing source subject to this Subsection shall control VOC emissions from pharmaceutical tablet coating equipment that has a potential to emit more than 33 pounds per day of VOCs. VOC emissions from such equipment shall be reduced:

A. By at least 90% overall on a daily basis, if uncontrolled VOC emissions are 330 pounds per day or more; or

B. To 33 pounds per day, or less, if uncontrolled VOC emissions are less than 330 pounds per day.

2. Carbon adsorption or incineration shall be used to effect compliance with Paragraph 1 of this Subsection. Control equipment shall be installed, operated, and maintained consistent with the manufacturer's specifications and recommendations.

3. Any person who operates, or allows the operation of, any affected pharmaceutical tablet coating source shall demonstrate compliance by:

A. Certifying in writing to the Department that the appropriate control equipment is in place and in use, including compliance with applicable installation permit and operating license requirements;

B. Providing the Department, upon request, with certified written analyses of all tablet coatings in place and in use. The analyses shall include determinations of VOC content and solids content and any other determinations requested by the Department. Analyses shall be provided by the owner-operator of the source, the manufacturer of the coating solution, or an independent laboratory acceptable to the Department;

C. Maintaining VOC purchasing, inventory, and daily consumption records such that the Department can determine compliance;

D. Maintaining daily operating records for all equipment connected to the VOC control equipment;

E. Maintaining the appropriate control equipment in a manner consistent with manufacturer's specifications and recommendations; and

F. Maintaining daily operating, inspection, and maintenance records for VOC control equipment in a manner approved by the Department.

4. Any person who operates, or allows the operation of, any affected pharmaceutical tablet coating source shall maintain copies of all manufacturer's specifications and recommendations for VOC control equipment operated at the source, all records of operations, inspections, and maintenance required under Paragraphs 3 and 4 of this Subsection, and all other records that are necessary for the Department to determine compliance. These records shall be retained at the source for a period

of at least two (2) years and shall be made available to the Department for inspection and copying upon request.

5. Any person who operates, or allows the operation of, any affected pharmaceutical tablet coating source shall submit reports to the Department summarizing information on daily operations, inspections, and maintenance activities, and such other information as is required by the Department to determine compliance, on a schedule and in a form and manner as prescribed by the Department.

§2105.72 MANUFACTURE OF PNEUMATIC RUBBER TIRES

a. This Section applies to pneumatic rubber tire manufacturing sources. For purposes of this Section, pneumatic rubber tire manufacturing means the production of pneumatic rubber passenger-type tires on a mass production basis. Passenger-type tires are agricultural, airplane, industrial, mobile home, light- or medium-duty truck, or passenger vehicle tires with bead diameters up to 20 inches and cross-sectional dimensions up to 12.8 inches. With prior written approval from the Department, the production of specialty tires for antique or other vehicles when produced on an irregular basis or with short production runs and when produced on equipment separate from normal production lines for passenger-type tires are exempt from the requirements of this Section.

b. Any person who operates, or allows the operation of, an undertread cementing, tread-end cementing, or bead dipping operation subject to this Section shall:

1. Install and operate a capture system designed to achieve maximum reasonable capture, of at least 85% by weight of VOCs emitted, from undertread cementing, tread-end cementing, and bead dipping operations. Maximum reasonable capture shall be consistent with the following documents:

A. Industrial Ventilation, A Manual of Recommended Practices, 14th Edition, American Federation of Industrial Hygienists.

B. Recommended Industrial Ventilation Guidelines, United States Department of Human Services National Institute of Occupational Safety and Health.

2. Install and operate a control device that meets the requirements of one of the following:

A. A carbon adsorption system designed and operated in a manner so that there is at least a 95% removal of VOCs by weight from the gases ducted to the control device.

B. An incineration system that reduces VOCs by at least 90%.

c. Any person who operates, or allows the operation of, a green-tire spraying operation subject to this Section shall implement one of the following means of reducing VOC emissions:

1. Substitute water-based sprays for the normal solvent-based mold release compound.

2. Install a capture system designed and operated in a manner that will capture and transfer at least 90% of the VOCs emitted by the green-tire spraying operation to a control device that meets the requirements in Paragraph b.2 of this Section.

d. Notwithstanding the other provisions of this Section, the Department may allow a pneumatic rubber tire manufacturing source to implement permanent and enforceable measures including recordkeeping and

reporting requirements, which are approved by the Department and the EPA as RACT.
