

## Fugitive Emission Control in Petroleum Refineries in Brazoria, Dallas, El Paso, Galveston, Gregg, Harris, Jefferson, Nueces, Orange, Tarrant, and Victoria Counties

### 31 TAC §§115.251-115.255

The Texas Air Control Board adopts amendments to §§115.251-115.253, and 115.255, without changes to the proposed text published in the June 11, 1982, issue of the *Texas Register* (7 TexReg 2239). These amendments will not be republished. Amendments to §115.254 are adopted with changes to the proposed text published in the same issue and will be republished.

The amendment to §115.251, concerning control requirements, clarifies the definition of a leak.

Amendments to §115.252, concerning inspection requirements, clarify the definition of a leak and exempt components in continuous vacuum service from certain monitoring requirements.

The amendment to §115.253, concerning recording requirements, clarifies the definition of a leak.

Amendments to §115.254, concerning exemptions, exempt components that contact process fluids containing less than 10% volatile organic compounds (VOC) by volume; components which contact process liquids containing VOC having a true vapor pressure of less than 0.147 psia at 68° F; and petroleum refineries or individual process units in a temporary nonoperating status from certain requirements of this subchapter.

Amendments to §115.255, concerning counties and compliance schedule, clarify the original intent to have December 31, 1982, as the final compliance date of the requirements of §§115.251, 115.252, and 115.253. Additional minor editorial changes are also adopted.

Five written and two oral comments were received concerning the proposed amendments. Three comments generally supported the proposed changes because they would eliminate monitoring and record keeping requirements when unnecessary because of the low vapor pressure of the materials handled in the process equipment. Four comments addressed or requested clarification of specific issues concerning the proposed amendments.

One commentator suggested that, in §115.254(b), 10% VOC by weight be changed to 10% VOC by volume to be consistent with the basis for measurement methods and control requirements used elsewhere. In addition, wording changes were suggested to §115.254(c) and (d) to clarify intent and thereby minimize unintended and unnecessary requirements.

Region VI of the U.S. Environmental Protection Agency (EPA) suggested that hexane or methane should be allowed as the calibration gas in §115.251. The EPA also suggested that, in §115.254(d),

nonoperational units should not have an extension from compliance unless all lines are purged of VOC's and that any extensions of compliance must not interfere with or delay attainment by December 31, 1987. In addition, the EPA questioned the basis for exempting components contacting process liquids with a true vapor pressure (TVP) less than or equal to 0.147 psia when a light liquid has TVP greater than 0.04 psia and the basis for defining a leak as greater than 10,000 ppm of VOC. The EPA also suggested adding a definition for "in vacuum service" to the general rules to clarify the meaning of the term in §115.252(g).

Another commentator felt that a leak should be defined as 10,000 ppmv or more of VOC instead of more than 10,000 ppmv. In addition, this commentator questioned how much more cost effective the proposed changes would be. He suggested that additional wording be added to §115.251(a)(2) to specify what interim measures are to be taken to reduce leakage when processes cannot be shut down. He also suggested changing §115.253(a), (b), and (c) to require that copies of the monitoring log be kept for five years instead of two and that a copy be sent to the TACB.

The Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-13a, §5(c)(1), requires categorization of comments as being "for" or "against" a proposal. A commentator who suggested any changes in the proposal is categorized as "against" the proposal while a commentator who agreed with the proposal in its entirety is categorized as "for."

Copies of the written comments and the transcript of the hearing are available for inspection at the Texas Air Control Board, 6330 Highway 290 East, Austin, Texas 78723.

Shell Oil Company and the Houston Chamber of Commerce commented in favor of the amendments. Texas Mid-Continent Oil and Gas Association Refinery Subcommittee and U.S. Environmental Protection Agency, Region VI, commented against the amendments.

The Houston Chamber of Commerce and Shell Oil Company generally supported the proposed changes since they felt that the changes would eliminate monitoring and record keeping requirements when the low vapor pressure of certain materials handled in some process equipment would make such requirements unnecessary. However, two commentators questioned the basis for such changes. Region VI of the EPA noted that a light liquid is defined as fluid having a true vapor pressure (TVP) greater than 0.04 psia at 68°F (0.3kPa at 20°C), while §115.254(c) exempts components that contact a process liquid containing VOC having a TVP less than or equal to 0.147 psia at 68°F (1.013kPa at 20°C) from monitoring requirements (other than visual). Another commentator felt that a leak should be 10,000 ppmv or more of VOC instead of more than 10,000 ppmv. He also wanted to know how much more cost effective these

changes would be. The exemption for components contacting a process liquid containing VOC having a TVP less than or equal to 0.147 psia at 68°F is not based on the definition of a light liquid. It is based on the action level of 10,000 ppmv for monitoring and control recommended by the EPA in its control techniques guideline. Control of VOC emissions is not required unless a reading of more than 10,000 ppmv is obtained. Thus, the 0.147 psia vapor pressure exemption was included to exempt from monitoring any line, valve, or other component carrying fluids that would be exempt from repair requirements by the EPA's action level. A component contacting fluids having a true vapor pressure of 0.147 psia or less at 68°F could not give a reading of greater than 10,000 ppmv and, therefore, would not be required to be repaired.

The EPA, in its control techniques guideline, notes that repairing components with leak rates small enough to read less than 10,000 ppmv has not been shown to be cost effective since attempts to repair such small leaks may tend to increase rather than decrease emissions. Under the proposed 0.147 psia monitoring exemption, petroleum refineries would be spared the burden of monitoring about 10-50% of their components (depending on the nature of the operation) without affecting emissions, since no repairs would have been required under existing requirements. Despite the request of one commentator that a leak be defined as 10,000 ppmv or more of VOC, the definition of leak as more than 10,000 ppmv of VOC is needed for consistency and completeness.

Three other exemptions were proposed for components in continuous vacuum service, components that contact process fluids containing less than 10% VOC by weight, and petroleum refineries or individual process units in a temporary nonoperating status. If a leak developed, components in continuous vacuum service would not leak VOC, but rather have air leak in. Although the EPA felt a definition for "in continuous vacuum service" should be included in the definitions section of the general rules (§101.1), terms are listed only if the meaning is not a common one. "In continuous vacuum service" is a commonly understood expression used to denote a condition that exists in a system when the pressure within the system is constantly reduced below atmospheric pressure. Petroleum refineries or individual process units in a temporary nonoperating status would not normally have components that would emit VOC. Safety considerations and routine procedure govern line purging procedures in such cases. Thus, the EPA's concern that such units could potentially leak VOCs if unpurged is not of concern in practice. For components that contact process fluids containing less than 10% VOC by weight, a leak would almost have to be the result of a catastrophic failure to produce more than a 10,000 ppmv VOC leak (which is 1.0% VOC by volume). The EPA has concurred in this revision primarily to exempt process gas lines that usually contain only small amounts of VOC. Any failure large enough to produce a "leak" of VOC would already have a high priority

for repair for reasons of safety and economy of operation. Thus for these three additional cases, under normal operating conditions, there would be either no leakage of VOC, no emissions of VOC, or no emissions of VOC large enough to require repairs. Under such circumstances, it does not appear reasonable to require monitoring and record keeping when repairs would not be required or would be completed promptly by a company for reasons of safety or cost.

Several additional specific comments were made. The Texas Mid-Continent Oil and Gas Association (TMOGA) Refinery Subcommittee requested that in §115.254(b) the exemption be based on 10% VOC by volume instead of 10% VOC by weight because commonly used measurement techniques are read as percent by volume, such measurements are easier for a wide variety of samples, and using percent of volume would be more consistent with the usage of ppmv elsewhere. Depending upon the nature of the materials within a given process line, such a change could vary from a tightening to a relaxation of the proposed provision. However, any effect should prove small and, on average, the overall effect should be quite similar.

The EPA suggested that §115.251 should allow the use of either hexane or methane to calibrate leak detection equipment. The EPA noted that the refinery regulation required hexane while the synthetic organic chemical, polymer, and resin manufacturing plant regulation required methane. In addition, certain provisions of Regulation V affecting gasoline terminals and certain gasoline bulk plants make calibration using propane convenient. The TACB will allow calibration of such leak detection equipment using hexane, methane, or propane. However, the meter readout shall be as hexane.

TMOGA recommended certain wording changes. In §115.254(c), they recommend that "paragraph (1) and (2) of §115.252(a)" be replaced with "§115.251 and §115.252" to be consistent with other wording elsewhere and to eliminate the need to install double valves, etc., on certain lines containing VOC with a TVP less than 0.147 psia. In §115.254(d), they recommend that "affected petroleum refineries" be replaced with "petroleum refineries affected by this paragraph" to clarify intent. Both suggestions have merit and do not appear to be substantive changes, so they have been incorporated into the adopted rules.

The EPA noted that, under §115.254(d), any extension of the compliance date must not interfere with or delay attainment by December 31, 1987. No such interference or extension was intended. The language of §115.251(d) has been changed to meet this objection by requiring compliance as soon as practicable.

Another commentator felt that §115.251(a)(2) should specify what interim measures are to be taken to reduce leakage when a process cannot be shut down. There are so many competing considerations and varying circumstances that a regulation that specifies what interim measures are to be taken would create more

problems than it would solve. Moreover, this substantive revision was not proposed, so it would require new rulemaking before it could be adopted. A final comment concerning §115.253(a), (b), and (c) suggested that copies of the monitoring log should be kept for five years and a copy sent to the TACB. It is unclear that these additional requirements would lead to any additional emission reductions. Again, since such a change would be a substantive revision, and it was not proposed, it would require new rulemaking before it could be adopted.

The amendments are adopted under Texas Civil Statutes, Article 4477-5, §3.09(a), which provides the Texas Air Control Board with the authority to make rules and regulations consistent with the general intent and purposes of the Texas Clean Air Act and to amend any rule or regulation the Texas Air Control Board makes.

§115.254. Exemptions.

(a) Valves with a nominal size of two inches (5 cm) or less are exempt from the requirements of §115.251 of this title (relating to Control Requirements), §115.252 of this title (relating to Inspection Requirements), and §115.253 of this title (relating to Recording Requirements), provided allowable emissions at any refinery from sources affected by these sections after controls are applied with exemptions will not exceed by more than 5.0% such allowable emissions with no exemptions. Any person claiming an exemption for valves two inches (5.0 cm) nominal size or smaller under this section shall at the time he provides his control plan also provide the following information.

(1)-(3) (No change.)

(b) Components which contact a process fluid that contains less than 10% VOC by weight are exempt from the requirements of §115.251 of this title (relating to Control Requirements), §115.252 of this title (relating to Inspection Requirements), and §115.253 of this title (relating to Recording Requirements).

(c) Components which contact a process liquid containing VOC having a true vapor pressure equal to or less than 0.147 psia (1.013 kPa) at 68°F (20°C) are exempt from the requirements of §115.251 of this title (relating to Control Requirements), §115.252 of this title (relating to Inspection Requirements), and §115.253 of this title (relating to Recording Requirements), if the components are inspected visually according to the inspection schedules specified within these same sections.

(d) Petroleum refineries or individual process units that are in a temporary nonoperating status after the specified compliance dates in subsections (b) and (c) of §115.255 of this title (relating to Counties and Compliance Schedule) shall submit a plan for compliance with the provisions of §115.251 of this title (relating to Control Requirements), §115.252 of this title (relating to Inspection Requirements), §115.253 of this title (relating to Recording Requirements), and subsection (b) of §115.255 of this title (relating to Counties and Compliance Schedule) as soon as practicable but no later than one month before the process unit is scheduled for start-up and be in compliance as soon as practicable but no later than three

months after start-up. All petroleum refineries affected by this subsection shall notify the Texas Air Control Board of any nonoperating refineries or individual process units when they are shut down and dates of any start-ups as they occur.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on December 9, 1982.

TRD-829301 Bill Stewart, P.E.  
Executive Director  
Texas Air Control Board

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For further information, please call (512) 451-5711,  
ext. 354.

Fugitive Emission Control in Synthetic  
Organic Chemical, Polymer, and Resin  
Manufacturing Processes in Harris  
County

31 TAC §115.271-115.275

The Texas Air Control Board adopts new §115.271-115.275, with changes to the proposed text published in the June 11, 1982, issue of the *Texas Register* (7 TexReg 2241).

These new rules prescribe monitoring, maintenance, and record keeping requirements to reduce the fugitive emission of volatile organic compounds (VOC) into the atmosphere from certain processes in Harris County. These new rules are similar in many respects to §§115.251-115.255, concerning fugitive emission control in petroleum refineries, except for the following. There is no exemption for storage tank valves; operators of plants have the option to install certain emission control devices in lieu of monitoring. The monitoring schedule for certain valves may be revised after two quarterly inspections, and the compliance schedule is revised to set the final compliance date and the control plan submittal date as December 31, 1987, and December 31, 1984, respectively.

These new rules are part of a series of revisions to this chapter to provide in Harris County the additional VOC emissions reductions needed to satisfy U.S. Environmental Protection Agency requirements for 1982 State Implementation Plan (SIP) revisions. These new rules are based on technical information contained in the Radian Corporation report, "Assessment of the Feasibility and Costs of Controlling VOC Emissions from Stationary Sources in Harris County, Texas," submitted to the Texas Air Control Board September 11, 1981.

Six written and three oral comments were received concerning new §§115.271-115.275. Six comments requested that process drains be deleted from the pro-

posed provisions. Reasons given were that the rule should be consistent with the EPA's proposed new source performance standard and proposed control technique guideline, that technical reports indicate 0.0% efficiency of control of emission from this type of source, that emission reduction from such sources were not included in the 1982 SIP revisions, and that such a provision would not be cost effective. Three comments addressed or requested clarification of specific issues concerning the proposed new rules.

One commentator felt that the scope of processes covered by the controls in these provisions is unnecessarily ambiguous. He felt that the proposal should be changed to specify that only those processes involved in the production of synthetic organic chemicals, polymers, and resins are subject to fugitive emission controls.

Region VI of the U.S. Environmental Protection Agency (EPA) commented on a number of points. The EPA suggested that hexane or methane should be allowed as the calibration gas in § 115.271. The EPA also suggested that, in § 115.274(d), nonoperational units should not have an exemption from compliance unless all lines are purged of VOCs and that any extensions of compliance must not interfere with or delay attainment by December 31, 1987. In addition, EPA questioned the basis for exempting components contacting process liquids with a true vapor pressure (TVP) less than or equal to 0.147 psia and the basis for defining a leak as greater than 10,000 ppm of VOC. The EPA also suggested that, in § 115.272(b)(3), liquid service pumps with dual seals should have a barrier fluid system that uses heavy liquid or non-VOC barrier fluids. Furthermore, although the EPA noted that § 115.272(a)(1) requires yearly monitoring of certain requirements, it recommended quarterly monitoring. Finally, the EPA said that, as provided in § 115.275, the schedule for compliance appears to be unnecessarily long and asked the state to document the basis for the extended schedule.

Another commentator felt that a leak should be defined as 10,000 ppmv or more of VOC instead of more than 10,000 ppmv. In addition, this commentator questioned how cost effective the proposed provisions would be. He suggested that additional wording be added in § 115.271(a)(2) to specify what interim measures are to be taken to reduce leakage when processes cannot be shut down. He also suggested that § 115.273 (a), (b), and (c) should require that copies of the monitoring log be kept for five years instead of two and that a copy be sent to the TACB.

The Administrative Procedure and Texas Register Act, Texas Civil Statutes, Article 6252-13a, § 5(c)(1), requires categorization of comments as being "for" or "against" a proposal. A commentator who suggested any changes in the proposal is categorized as "against" the proposal, while a commentator who agreed with the proposal in its entirety is categorized as "for."

Copies of the written comment and the transcript of the hearing are available for inspection at the Texas Air Control Board, 6330 Highway 290 East, Austin, Texas 78723.

Speaking against the proposal were Charlie Seay of the Texas Chemical Council; Mel Skaggs of Diamond Shamrock Corporation; Jack S. Divita of the U.S. Environmental Protection Agency, Region VI; James L. Wamsley III of Jones, Day, Reavis, & Pogue for the Lubrizol Corporation; and C. H. Rivers of the Houston Chamber of Commerce.

Two comments each from the Texas Chemical Council, Diamond Shamrock Corporation, and the Houston Chamber of Commerce requested that process drains be deleted from the proposed revisions. The requirement for monitoring and control of process drain fugitive emissions was felt to be inconsistent with the EPA's proposed standards for new and existing sources. Although the EPA's proposed new source performance standards do not explicitly consider process drains, Appendix A (46 FedReg 1160, January 5, 1982), which contains reference method 21, does cover sampling procedures for VOC fugitive emissions for process drains. Specific mention of process drains in the EPA's draft control technique guidelines for existing SOCOMI plants is seen less clearly.

Regardless of whether or not process drains were intended to be included in the EPA's proposed standards for new or existing sources, several technical problems would still exist. There is no general agreement on what is meant by the term "process drain" as used by the EPA and as used by industry, there are a wide variety of "process drains" in use in affected plants including open drainage systems needed for upsets; and there is little or no emission reduction achievable at reasonable cost from trying to control emissions from such sources. Radian Corporation in a report entitled "Assessment of the Feasibility and Cost of Controlling VOC Emissions from Stationary Sources in Harris County, Texas" and submitted to the Texas Air Control Board (TACB) September 11, 1981, did not consider any emissions reductions for this measure, nor did the TACB include any reductions in its proposed 1982 SIP revisions for ozone control in Harris County. Thus, although clarification and resolution of the various problems concerning inclusion of process drains will take time, keeping or deleting process drains will have no effect on the demonstration of attainment of the ozone standard to be submitted to EPA. Requirements for process drains are not included in the adopted rules.

One commentator felt that the proposed standard should be changed to specify that only those processes involved in the production of synthetic organic chemicals, polymers, and resins are subject to fugitive emission control. While it was the intent of the TACB to have fugitive emission control limited only to those processes involved in the production of certain specified chemicals, polymers, and resins, review by legal counsel does confirm that additional language to clarify the original intent would be desirable.

Counsel suggested substituting the term "process" for "plant" wherever reference is made to synthetic organic chemical, polymer, and resin manufacturing plants to make it clear that the requirements apply only to specific processes. These changes and the corresponding changes to the proposed definitions have been made in these rules and the corresponding definitions in the General Rules (Chapter 101). Also an explicit exemption has been added (§115.274(e)) for processes that are at the same location as processes covered by these rules but are not related to the production of synthetic organic chemicals, polymers, and resins.

Two commentors questioned the basis for provisions to eliminate monitoring and record keeping requirements for components in certain types of service. The EPA noted that a light liquid is defined as a fluid having a true vapor pressure (TVP) greater than 0.04 psia at 68°F (0.3kPa at 20°C) while §115.274(c) exempts components which contact a process liquid containing VOC having TVP less than or equal to 0.147 psia at 68°F (1.013kPa at 20°C) from monitoring requirements (other than visual). Another commentor felt that a leak should be 10,000 ppmv or more of VOC instead of more than 10,000 ppmv. He also wanted to know how cost effective these provisions would be. The exemption for components contacting a process liquid containing VOC having a TVP less than or equal to 0.147 psia at 68° is not based on the definition of a light liquid. It is based on the action level of 10,000 ppmv for monitoring and control recommended by the EPA in its proposed control technique guideline and proposed new source performance standard.

Control of VOC emissions is not required unless a reading of more than 10,000 ppmv is recorded. If no reading is recorded, emissions are assumed to be greater than 10,000 ppmv. The 0.147 psia vapor pressure exemption was included to exempt from monitoring any line, valve, or other component carrying fluids that the EPA's action level would exempt from repair requirements. A component contacting fluids having TVP of 0.147 psia or less at 68°F could not give a reading of greater than 10,000 ppmv and would, therefore, not be required to be repaired.

The EPA, in its control technique guideline, notes that repairing components with leak rates small enough to read less than 10,000 ppmv has not been shown to be effective since attempts to repair such small leaks may tend to increase rather than decrease emissions. In this case, plants would be spared the burden of monitoring about 10% to 50% of their components, depending on the nature of the operation, without affecting emissions since no repairs would have been required under existing requirements. The definition of leak as more than 10,000 ppmv of VOC is needed for consistency and completeness.

Three other exemptions were proposed for components in continuous vacuum service, components that contact process fluids containing less than 10% VOC by weight, and plants or individual process units in a temporary nonoperating status. Components in

continuous vacuum service would not leak VOC but rather have air leak if a leak developed. Plants or individual process units in a temporary nonoperating status would not normally have components that would emit VOC. Safety considerations and routine procedure normally govern line-purging procedures in such cases. The EPA's concern that such units could potentially leak VOCs if unpurged is not of concern in practice. For components that contact process fluids containing less than 10% VOC by weight a leak would almost have to be the result of a catastrophic failure to produce more than a 10,000 ppmv VOC leak (which is 1.0% VOC by volume).

The EPA has concurred in this revision primarily to exempt process gas lines which usually contain only small amounts of VOC. Any failure large enough to produce a "leak" of VOC would be repaired for reasons of safety or general operating practice. Under normal operating conditions, the components are not likely to produce a VOC "leak" and would not normally require repair. For these three additional cases, under normal operating conditions there would be either no leakage of VOC or no emissions of VOC large enough to require repairs. Under these circumstances, it does not appear reasonable to require monitoring and record keeping when repairs would not be required or would be completed promptly by a company for reasons of safety or cost.

The EPA noted that although §115.272(a)(1) requires yearly monitoring of certain requirements, the EPA recommends quarterly monitoring. Another commentor also questioned how cost effective the proposed provisions would be. According to the previously cited Radian Corporation report, quarterly monitoring as recommended by the EPA might produce an additional 600 tons per year of VOC emissions reductions. The total additional cost to affected industries for these additional reductions was estimated to be about \$1 to 2 million per year in February 1981 dollars. The alternative monitoring schedule chosen by the TACB achieves estimated reductions of 14,900 tons per year ranging from a credit of about 0.37 million to a cost of \$4.5 million dollars per year in February 1981 dollars.

The Texas Mid-Continent Oil and Gas Association (TMOGA) Refinery Subcommittee in its testimony concerning fugitive emission control in petroleum refineries requested that in §115.254(b) the exemption be based on 10% VOC by volume instead of 10% VOC by weight because commonly used measurement techniques are read as percent by volume; such measurements are easier for a wide variety of samples, and percent by volume would be more consistent with the usage of ppmv elsewhere. The proposal appears to have merit also for fugitive emission control in synthetic organic chemical, polymer, and resin manufacturing plants and has been incorporated into the adopted rules. Depending upon the nature of the materials within a given process line, the effect of this change could vary from a tightening to a relaxation of the proposed provisions. However, any effect

should prove small and, on average, the overall effect should be quite similar.

TMOGA also recommended that in §115.254(d) "affected petroleum refineries" be replaced with "petroleum refineries affected by this paragraph" to clarify intent. This change does clarify the intent and is applicable to §115.274(d), where the phrase "affected . . . plants" is replaced with "synthetic . . . plants affected by this subsection."

The EPA suggested that §115.271 should allow the use of either hexane or methane to calibrate leak detection equipment. The EPA noted that the proposed refinery regulation required hexane while the proposed synthetic organic chemical, polymer, and resin manufacturing plan regulation required methane. In addition, certain provisions in Regulation V (Chapter 115) concerning gasoline terminals and certain gasoline bulk plants make calibration using propane convenient. The adopted regulations allow calibration of such leak detection equipment using hexane, methane, or propane. However, the meter readout is required to be as hexane.

The EPA noted that, under §115.274(d), any extension of the compliance date must not delay attainment or interfere with attainment by December 31, 1987. Such delay or interference was not intended and should not occur. To clarify intent, wording has been added to §115.274(d) specifying that in no event shall a synthetic organic chemical, polymer, or resin manufacturing process unit be operated after December 31, 1987, without having an adequate compliance plan fully implemented.

The EPA also noted that under §115.275, the dates given for final control plan submittal and final compliance (December 31, 1984, and December 31, 1987, respectively) seem unnecessarily long and asked that the basis for such a schedule be documented. To date, the EPA has issued proposed standards for new and existing sources but has not issued final standards. There is a good chance that if final standards are issued, which is not certain to happen, they will differ significantly from the proposed standards or may very well be the subject of litigation. The TACB deliberately chose an extended compliance schedule so that, given the uncertainty about the nature of any final standards, appropriate changes in the regulation provisions could be made and corresponding revisions in control plan requirements implemented before significant or costly steps would be undertaken by industry to meet requirements based on the EPA's proposed standards.

Another commentor felt that §115.251(a)(2) should specify what interim measures are to be taken to reduce leakage when a process cannot be shutdown. In such cases, there are generally too many competing considerations and varying circumstances to specify when and what kind of interim measures are to be taken without creating more problems than one is solving. The commentor said the same comments should also be applicable to §§115.271-115.275.

The same commentor suggested that in §115.273(a), (b), and (c), copies of the monitoring log should be kept for five years and a copy sent to the TACB. The need for such a change is debatable. The requirement that the monitoring log should be kept by the owner/operator was designed to have records against which TACB personnel could check their inventory listings and with which compliance spot checks would be aided. A period of longer than two years would not be justified since owners could modify their control plan significantly within that time period and old records then would not be of much use in enforcement. Any additional use to which such records could be put does not seem to be easily implemented or of sufficient importance to justify the cost and storage problems of keeping these additional records on thousands to hundreds of thousands of components. Similar considerations apply to the suggestions that a copy of these records be sent to the TACB. Access to records kept at the plant is sufficient for the regulatory uses that are anticipated for these records.

These rules are adopted under Texas Civil Statutes, Article 4477-5, §3.09(a), which provides the Texas Air Control Board with the authority to make rules consistent with the general intent of the Texas Clean Air Act.

**§115.271. Control Requirements.** No person shall operate a synthetic organic chemical, polymer, or resin manufacturing process, as defined in §101.1 of this title (relating to Definitions), without complying with the following requirements:

(1) No component shall be allowed to leak, as defined in §101.1 of this title (relating to Definitions), volatile organic compounds (VOC) with a VOC concentration exceeding 10,000 parts per million by volume (ppmv). The leak detection equipment can be calibrated with methane, propane, or hexane, but the meter readout must be as parts per million by volume (ppmv) hexane.

(2) Every reasonable effort shall be made to repair a leaking component, as specified in paragraph (1) of this subsection, within 15 days after the leak is found. If the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown.

(3) All leaking components, as defined in paragraph (1) of this subsection, which cannot be repaired until the unit is shut down for turnaround, shall be identified for such repair by tagging. The executive director at his discretion may require early unit turnaround or other appropriate action based on the number and severity of tagged leaks awaiting turnaround.

(4) Except for safety pressure relief valves, no valves shall be installed or operated at the end of a pipe or line containing volatile organic compounds unless the pipe or line is sealed with a second valve, a blind flange, a plug, or a cap. The sealing device may be removed only while a sample is being taken, or during maintenance operations.

(5) Pipeline valves and pressure relief valves in gaseous volatile organic compound service shall be

marked in some manner that will be readily obvious to monitoring personnel.

**§115.272. Inspection Requirements.**

(a) The owner or operator of a synthetic organic chemical, polymer, or resin manufacturing process shall conduct a monitoring program consistent with the following provisions.

(1) Measure yearly (with a hydrocarbon gas analyzer) the emissions from all:

- (A) pump seals;
- (B) pipeline valves in liquid service.

(2) Measure quarterly (with a hydrocarbon gas analyzer) the emissions from all:

- (A) compressor seals;
- (B) pipeline valves in gaseous service; and
- (C) pressure relief valves in gaseous service.

(3) Visually inspect, weekly, all pump seals.

(4) Measure (with a hydrocarbon gas analyzer) the emissions from any pump seal from which liquids having a true vapor pressure greater than 0.147 psia (1.013 kPa) at 68°F (20°C) are observed dripping.

(5) Measure (with a hydrocarbon gas analyzer) emissions from any relief valve which has vented to the atmosphere within 24 hours.

(6) Measure (with a hydrocarbon gas analyzer) immediately after repair, the emissions from any component that was found leaking.

(b) The following items are exempt from the monitoring requirements of subsection (a) of this section:

(1) pressure relief devices connected to an operating flare header, components in continuous vacuum service, inaccessible valves, and valves that are not externally regulated (such as in-line check valves);

(2) pressure relief valves that are downstream of a rupture disk which is intact;

(3) pumps in liquid service that are equipped with dual pump seals, barrier fluid system, seal degassing vents, and vent control systems kept in good working order; and

(4) compressors that are equipped with degassing vents and vent control systems kept in good working order.

(c) The owner or operator of a synthetic organic chemical, polymer, or resin manufacturing process upon the detection of a component leaking more than 10,000 ppmv of VOC shall affix to the leaking component a weatherproof and readily visible tag, bearing an identification number and the date the leak was located. This tag shall remain in place until the leaking component is repaired.

(d) The monitoring schedule of subsection (a)(1)-(3) of this section may be modified as follows:

(1) After at least two complete annual checks, the operator of a process may request in writing to the Texas Air Control Board that the monitoring schedule be revised. This request shall include data that have been developed to justify any modification in the monitoring schedule.

(2) After at least two complete quarterly checks of pipeline valves in gaseous service, the operator of a process may request in writing to the Texas Air Control Board that the monitoring schedule for pipeline valves

in gaseous service be revised. This request shall include data that have been developed to justify any modification in the monitoring schedule.

(3) If the executive director of the Texas Air Control Board determines that there is an excessive number of leaks in any given process, he may require an increase in the frequency of monitoring for that process.

(e) The executive director of the Texas Air Control Board may approve an alternative monitoring method if the process operator can demonstrate that the alternate monitoring method is equivalent to the method required by this rule. Any request for an alternate monitoring method must be made in writing to the executive director.

**§115.273. Recording Requirements.**

(a) The owner or operator of a synthetic organic chemical, polymer, or resin manufacturing process shall maintain a leaking components monitoring log for all leaks of more than 10,000 ppmv of VOC detected by the monitoring program required by §115.272 of this title (relating to Inspection Requirements). This log shall contain, at a minimum, the following data:

(1) the name of the process unit where the component is located;

(2) the type of component (e.g., valve or seal);

(3) the tag number of the component;

(4) the date on which a leaking component is discovered;

(5) the date on which a leaking component is repaired;

(6) the date and instrument reading of the recheck procedure after a leaking component is repaired;

(7) a record of the calibration of the monitoring instrument;

(8) those leaks that cannot be repaired until turnaround; and

(9) the total number of components checked and the total number of components found leaking.

(b) Copies of the monitoring log shall be retained by the owner or operator for a minimum of two years after the date on which the record was made or the report prepared.

(c) Monitoring records shall be maintained for two years and be made available for review by authorized representatives of the Texas Air Control Board or local air pollution control agencies.

**§115.274. Exemptions.**

(a) Valves with a nominal size of two inches (5.0 cm) or less are exempt from the requirements of §115.271 of this title (relating to Control Requirements), §115.272 of this title (relating to Inspection Requirements), and §115.273 of this title (relating to Recording Requirements) provided allowable emissions at any plant from sources affected by these sections after controls are applied with exemptions will not exceed by more than 5.0% such allowable emissions with no exemptions. Any person claiming an exemption for valves two inches (5.0 cm) nominal size or smaller under this section shall at the time he provides his control plan also provide the following information:

(1) Identification of valves or classes of valves to be exempted.

(2) An estimate of uncontrolled emissions from exempted valves and an estimate of emissions if controls were applied plus an explanation of how the estimates were derived.

(3) An estimate of the total VOC emissions within the process from sources affected by §115.271 of this title (relating to Control Requirements), §115.272 of this title (relating to Inspection Requirements), and §115.273 of this title (relating to Recording Requirements), after controls are applied and assuming no exemptions for small valves, plus an explanation of how the estimate was derived.

(b) Components which contact a process fluid that contains less than 10% VOC by volume are exempt from the requirements of §115.271 of this title (relating to Control Requirements), §115.272 of this title (relating to Inspection Requirements), and §115.273 of this title (relating to Recording Requirements).

(c) Components which contact a process liquid containing VOC having a true vapor pressure equal to or less than 0.147 psia (1.013 kPa) at 68°F (20°C) are exempt from the monitoring requirements of §115.271 of this title (relating to Control Requirements), §115.272 of this title (relating to Inspection Requirements), and §115.273 of this title (relating to Recording Requirements), if the components are inspected visually according to the inspection schedules specified within these same sections.

(d) Synthetic organic chemical, polymer, and resin manufacturing process units in a temporary nonoperating status during the specified compliance dates in §115.275 (b) and (c) of this title (relating to Counties and Compliance Schedule) shall submit a plan for compliance with the provisions of §115.271 of this title (relating to Control Requirements), §115.272 of this title (relating to Inspection Requirements), §115.273 of this title (relating to Recording Requirements), and §115.275(b) of this title (relating to Counties and Compliance Schedule) within six months after start-up and be in compliance as soon as practicable but no later than one year after start-up or December 31, 1987, whichever is earlier. All synthetic organic chemical, polymer, and resin manufacturing processes affected by this subsection shall notify the Texas Air Control Board of any nonoperating process units when they are shut down and dates of any start-ups as they occur.

(e) Processes at the same location but unrelated to the production of synthetic organic chemicals, polymers, and resins are exempt from the requirements of this undesignated head (relating to Fugitive Emission Control in Synthetic Organic Chemical, Polymer, and Resin Manufacturing Processes in Harris County).

§115.275. Counties and Compliance Schedule.

(a) The provisions of §115.271 of this title (relating to Control Requirements), §115.272 of this title (relating to Inspection Requirements), and §115.273 of this title (relating to Recording Requirements) shall apply only within Harris County. All affected persons shall submit a final control plan to the Texas Air Control Board no later than December 31, 1984, and shall be in compliance with these provisions as soon as practicable but no later

than December 31, 1987, with the exceptions noted in subsection (b) of this section.

(b) The owner or operator of an affected synthetic organic chemical, polymer, or resin manufacturing process shall:

(1) Submit to the executive director a monitoring program plan as soon as practicable but no later than the date specified in subsection (a) of this section for submitting a final control plan. This plan shall contain, at a minimum, a list of the process units and the quarter in which they will be monitored, a copy of the log book format, and the make and model of the monitoring equipment to be used.

(2) Complete the first weekly, quarterly, and annual monitoring as soon as practicable but no later than December 31, 1987.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on December 9, 1982.

TRD-829302 Bill Stewart, P.E.  
Executive Director  
Texas Air Control Board

Effective date: December 30, 1982  
Proposal publication date: June 11, 1982  
For further information, please call (512) 475-5711, ext. 354.

Alternate Means of Control

31 TAC §115.401

The Texas Air Control Board adopts an amendment to §115.401, concerning procedure, without changes to the proposed text published in the June 11, 1982, issue of the *Texas Register* (7 TexReg 2243). The amendment changes a reference to conform to the new numbers that result from the adoption of new and amended rules published elsewhere.

No comments were received regarding the proposed amendment.

This amendment is adopted under Texas Civil Statutes, Article 44-77-5, §3.09(a), which provides the Texas Air Control Board with the authority to make rules and regulations consistent with the general intent and purposes of the Texas Clean Air Act and to amend any rule or regulation the Texas Air Control Board makes.

This agency hereby certifies that the rule as adopted has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Issued in Austin, Texas, on December 9, 1982.

TRD-829304 Bill Stewart, P.E.  
Executive Director  
Texas Air Control Board

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For further information, please call (512) 451-5711, ext. 354.