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Chapter 115. Control of Air Pollution from Volatile Organic Compounds

The Texas Natural Resource Conservation Commission (TNRCC) adopts amendments to §115.10, concerning Definitions; §§115.121, 115.122, 115.126, 115.127, and 115.129, concerning Vent Gas Control; §§115.132 and §115.139, concerning Water Separation; §§115.152, 115.153, 115.155-115.157, and 115.159, concerning Municipal Solid Waste Landfills; §§115.211-115.217, and 115.219, concerning Loading and Unloading of Volatile Organic Compounds (VOC); §§115.352-115.357, and 115.359, concerning Fugitive Emission Control in Petroleum Refining and Petrochemical Processes; §§115.412, 115.415-115.417, and 115.419, concerning Degreasing and Clean-up Processes; §§115.421, 115.422, and 115.429, concerning Surface Coating Processes; §115.432 concerning Graphic Arts (Printing) by Rotogravure and Flexographic Processes; §§115.442, 115.443, 115.445, 115.446, 115.449, concerning Offset Lithographic Printing; §115.532, concerning Pharmaceutical Manufacturing Facilities; and §§115.541-115.547, and 115.549, concerning Degassing or Cleaning of Stationary, Marine, and Transport Vessels.

TNRCC also adopts new §§115.140 and 115.142-115.149, concerning Industrial Wastewater; §§115.252, 115.253, 115.255-115.257, and 115.259, concerning Control of Reid Vapor Pressure (RVP) of Gasoline; §§115.552, 115.553, 115.555-115.557, and 115.559, concerning Petroleum Dry Cleaning Systems; and §§115.600, 115.610, 115.612-115.617, and 115.619, concerning Consumer Products. In concurrent rulemaking, the TNRCC adopts the repeal of old §§115.612-115.615, 115.617, and 115.619, concerning Consumer Solvent Products

Adopted with changes as published in the December 24, 1993 issue of the *Texas Register* (18 TexReg 9890), the January 4, 1994 issue of the *Texas Register* (19 TexReg 19), and the January 7, 1994 issue of the *Texas Register* (19 TexReg 150) are §115.10, concerning Definitions; §§115.121, 115.122, 115.126, 115.127, and 115.129, concerning Vent Gas Control; §§115.132, concerning Water Separation; §§115.152, 115.156, 115.157, and 115.159, concerning Municipal Solid Waste Landfills; §§115.211, 115.212, 115.214, 115.217, and 115.219, concerning Loading and Unloading of Volatile Organic Compounds; §115.357, concerning Fugitive Emission Control in Petroleum Refining and Petrochemical Processes; §§115.412, 115.417, and 115.419 concerning Degreasing and Cleanup Processes; §115.421 and §115.422, concerning Surface Coating Processes; §115.432, concerning Graphic Arts (Printing) by Rotogravure and Flexographic Processes; §115.449, concerning Offset Lithographic Printing; §115.532, concerning Pharmaceutical Manufacturing Facilities; §§115.541, 115.542, and 115.549, concerning Degassing or Cleaning of Stationary, Marine, and Transport Vessels; and new §§115.140, 115.142, 115.144, and 115.147,

concerning Industrial Wastewater, new §115.252, concerning Control of Reid Vapor Pressure of Gasoline, new §§115.552, 115.555, and 115.559, concerning Petroleum Dry Cleaning Systems, and new §§115.600, 115.610, 115.612-115.617, and 115.619, concerning Consumer Products

Adopted without changes are §115.139, concerning Water Separation, §115.153 and §115.155, concerning Municipal Solid Waste Landfills, §115.213, concerning Loading and Unloading of VOC, §§115.352-115.356, and 115.359, concerning Fugitive Emission Control in Petroleum Refining and Petrochemical Processes; §115.415 and §115.416, concerning Degreasing and Clean-up Processes, §115.429, concerning Surface Coating Processes; §§115.442, 115.443, 115.445, and 115.446, concerning Offset Lithographic Printing; §§115.543-115.547, concerning Degassing or Cleaning of Stationary, Marine, and Transport Vessels; and new §§115.143, 115.145, 115.146, and 115.149, concerning Industrial Wastewater; new §§115.253, 115.255-115.257, 115.259, concerning Control of Reid Vapor Pressure of Gasoline; and new §§115.553, 115.556, and 115.557, concerning Petroleum Dry Cleaning Systems

Revisions to Chapter 115, concerning Control of Air Pollution from VOC and the State Implementation Plan (SIP) are adopted in response to the 1990 Amendments to the Federal Clean Air Act (FCAA) and United States Environmental Protection Agency (EPA) requirements for states to develop and adopt rules relating to the Rate-of-Progress (ROP) requirement by November 15, 1993. The ROP SIP revision and rules are required to achieve and maintain VOC emissions levels that are 15% below the 1990 base year levels by 1996 in the Beaumont/Port Arthur (BPA), Dallas/Fort Worth (DFW), El Paso, and Houston/Galveston (H/GA) ozone nonattainment areas.

Texas submitted rules to meet the ROP reduction in two phases. Phase I consisted of a core set of rules comprising a significant portion of the required reductions. This phase was adopted on November 10, 1993 and submitted by the original deadline of November 15, 1993. The adopted new and revised rules comprising Phase II consist of any remaining percentage toward the 15% net of growth reductions. Phase II will be submitted by May 13, 1994. The appropriate compliance date will be incorporated into each control measure to ensure that the required reductions will be achieved by the November 15, 1996 deadline

The FCAA also requires all nonattainment areas classified as serious and above to submit a revision to the SIP by November 15, 1994 which describes how each area would achieve further reductions of VOC and/or nitrogen oxides (NO_x) in the amount of 3.0% per year averaged over three years and which includes a demonstration of attainment based on modeling results using the Urban Airshed Model (UAM). In addition to the 15% reduction, states must also prepare contingency rules that will result in an additional 3.0% reduction of either NO_x or VOC, of which up to 2.7% may be reductions in NO_x. Underlying this substitution provision is the recognition that NO_x controls may effectively reduce ozone in many areas and that the design of strategies is more efficient when the

characteristic properties responsible for ozone formation and control are evaluated for each area. The primary condition to use NO_x controls as contingency measures is a demonstration through UAM modeling that these controls will be beneficial toward the reduction of ozone. These VOC and/or NO_x contingency measures would be implemented immediately should any area fall short of the 15% goal. Recent modeling results tend to indicate that NO_x reductions may not be beneficial in reducing ozone in the nonattainment areas and that all VOC controls may therefore be necessary. These rules, in part, satisfy the contingency measure requirement. Additional measures, as needed, will be adopted by November 15, 1994.

The ROP SIP has been revised to include all rules, and deletes references to the phased approach, except for a historical documentation in the introduction

Most of the rules affect some or all of the ozone nonattainment counties of Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller

The revisions to §115.10, concerning Definitions, add definitions for alcohol (used in offset lithographic printing), bakery oven, clear coat, clear sealers, continuous monitoring, final repair coat, leak-free marine vessel, marine loading facility, marine loading operation, opaque ground coats and enamels, polyester resin materials, polyester resin operation, semitransparent spray stains and toners, semitransparent wiping and glazing stains, shellacs, topcoat, varnish, and wash coat. The changes also revise the definition of surface coating processes to include wood parts and products coating, revise the definition of marine terminal, and delete the definition of leakless valve

The revisions to §§115.121, 115.122, 115.126, 115.127, and 115.129, concerning Vent Gas Control, require each affected bakery in DFW, El Paso, and H/GA to reduce total VOC emissions by at least 30% from the 1990 emissions inventory. Non-major source bakeries in DFW have been included as a contingency measure. The revisions also add an exemption for vent gas streams in the pulp and paper industry in response to a petition for rulemaking submitted by the Texas Paper Industry Environmental Council

The revisions to §115.132 and §115.139, concerning Water Separation, respond to industry's request to apply a recent revision to the federally mandated "once-in, always-in" concept to all applicable rules, and respond to industry concerns regarding the timing of the requirements of the new §§115.140 and 115.142-115.149, concerning Industrial Wastewater, by extending the compliance date for previously adopted changes to §§115.131-115.133 and 115.135-115.137, concerning Water Separation, to May 31, 1995. The new §§115.140 and 115.142-115.149, concerning Industrial Wastewater, establish criteria for the control of VOC emissions from affected VOC wastewater streams in DFW, El Paso, and H/GA based upon EPA's draft Control Techniques Guideline (CTG) for industrial wastewater

The revisions to §§115.152, 115.153, 115.155-115.157, and 115.159, concerning Municipal Solid Waste Landfills, establish requirements for the control of VOC emissions resulting from the decay of material in sanitary landfills in El Paso and H/GA. These requirements are based upon draft EPA New Source Performance Standard (NSPS) rules for landfills.

The revisions to §§115.211-115.217 and 115.219 establish rules which regulate emissions from marine vessel loading at marine terminals in H/GA. Provisions for fugitive emissions monitoring, vacuum-assisted loading, and automatic shutoff in the event of a control device malfunction at gasoline terminals in DFW, El Paso, and H/GA have also been added.

The new §§115.252, 115.253, 115.255-115.257, and 115.259, concerning Control of Reid Vapor Pressure of Gasoline, establish controls on the volatility of gasoline in El Paso during the summer ozone season.

The revisions to §§115.352-115.357, and 115.359, concerning Fugitive Emission Control in Petroleum Refining and Petrochemical Processes, establish standardized requirements for fugitive monitoring programs for petroleum refineries, synthetic organic chemical, polymer, resin, and methyl tert-butyl ether (MTBE) manufacturing processes, and natural gas/gasoline processing operations in DFW and apply a more stringent level of control than currently exists to all of these industries. The amendments also revise the recently adopted exemptions concerning leakless valves.

The existing sections regarding fugitive emission controls for the BPA, DFW, El Paso, and H/GA ozone nonattainment areas will be repealed after the compliance date of the revised sections. This will not affect the existing sections in Gregg, Nueces, or Victoria Counties. The existing sections scheduled for future repeal include §§115.322(a), 115.323(a), 115.324(a), 115.325(a), 115.326(a), and 115.327(a), concerning Fugitive Emissions Control in Petroleum Refineries; §§115.332-115.339, concerning Fugitive Emission Control in Synthetic Organic Chemical, Polymer, Resin, and Methyl Tert-Butyl Ether Manufacturing Processes, and §§115.342-115.349, concerning Fugitive Emission Control in Natural Gas/Gasoline Processing Operations.

The revisions to §§115.412, 115.415, 115.416, 115.417, and 115.419, concerning Degreasing and Clean-up Processes, establish limitations on acetone usage for clean-up at cultured (synthetic) marble and fiber reinforced plastic (FRP) operations in DFW, El Paso, and H/GA.

The revisions to §§115.421, 115.422, and 115.429, concerning Surface Coating Processes, add VOC emission limits for surface coating of wood parts and products in DFW, El Paso, and H/GA. The changes also revise the wording of the clean-up requirements for automobile refinishing operations for consistency with Standard Exemption (SE) 124, and respond to industry's request to apply a recent revision to the federally mandated "once-in, always-in" concept to all applicable rules. The revisions to §115.432 concerning

Graphic Arts (Printing) by Rotogravure and Flexographic Processes, respond to industry's request to apply a recent revision to the federally mandated "once-in, always-in" concept to all applicable rules.

The revisions to §§115.442, 115.443, 115.445, 115.446, 115.449, concerning Offset Lithographic Printing, establish requirements for the control of VOC emissions from fountain solution usage, printing press cleaning solution usage, and heatset offset lithographic printing press dryer exhaust streams in H/GA. Offset lithographic printing facilities in DFW have been included as a contingency measure.

The revisions to §115.532, concerning Pharmaceutical Manufacturing Facilities, respond to industry's request to apply a recent revision to the federally mandated "once-in, always-in" concept to all applicable rules.

The revisions to §§115.541-115.547, and 115.549, concerning Degassing or Cleaning of Stationary, Marine, and Transport Vessels, require vapors from degassing or cleaning of transport vessels and stationary storage tanks to be controlled through vapor-tight fittings and piping to a vapor recovery system in El Paso. Degassing or cleaning operations in DFW have been included as a contingency measure.

The new §§115.552, 115.553, 115.555-115.557, and 115.559, concerning Petroleum Dry Cleaning Systems, establish control requirements that petroleum-based dry cleaning facilities must use to reduce VOC emissions in El Paso and H/GA. Petroleum dry cleaners in DFW have been included as a contingency measure.

The new §§115.600, 115.610, 115.612-115.617, and 115.619, concerning Consumer Products, establish VOC content standards to various consumer products, and establish dates for the requirements that allow manufacturers time to develop new product formulations. The new §§115.600, 115.610, 115.612-115.617, and 115.619 affect all counties in the state to maximize the effectiveness of these rules and the subsequent reduction in VOC emissions.

Public hearings were held January 24, 1994 in Houston, January 26, 1994 in El Paso, and January 27, 1994 in Irving. The comment period closed on February 25, 1994.

Texas Chemical Council and Texas Mid-Continent Oil & Gas Association submitted joint comments and will be referred to as TCC. The El Paso City County Health District (EPHD) fully supported all proposed rules with the exception of new §§115.252, 115.253, 115.255-115.257, and 115.259, concerning Control of Reid Vapor Pressure of Gasoline. El Paso Metropolitan Planning Organization (EPMPO), Autotronic Controls (AC), and an individual submitted comments concerning transportation issues such as alternative fuels. Comments on these issues are not within the scope of the proposed revisions and have not been addressed.

Eleven commenters submitted testimony on §115.10, concerning Definitions. Crown Cabinet Corporation (Crown); Dow Chemical Company (Dow), Gemini Coatings (Gemini),

Independent Liquid Terminals Association (ILTA), Jones' Blair Company (JBC); Republic Industries, Incorporated (Republic), Ribelin Sales, Incorporated (Ribelin), TCC, Texwood Industries, Incorporated (Texwood), and Trinity Coatings Company (Trinity) generally supported the definitions but suggested changes or clarifications, while Galveston Houston Association for Smog Prevention (GHASP) generally opposed the proposed definitions.

Eight commenters submitted testimony on §§115.121, 115.122, 115.126, 115.127, and 115.129, concerning Vent Gas Control. American Bakers Association (ABA), Mrs. Baird's Bakeries (Mrs. Baird's); Campbell Taggart, Incorporated (CTI), Simpson Pasadena Paper Company (SPPC); and Texas Paper Industry Environmental Council (TPIEC) generally supported the proposed revisions but suggested changes or clarifications, while EPA, GHASP, and Manufacturers of Emission Controls Association (MECA) generally opposed the proposed changes.

Two commenters submitted testimony on §§115.132 and §115.139, concerning Water Separation. EPHD fully supported the proposed rules, while Firestone Synthetic Rubber & Latex Company (Firestone) supported the proposed rule with changes.

Twenty-three commenters submitted testimony on §§115.140, and 115.142-115.149, concerning Industrial Wastewater. EPHD fully supported the proposed rules, while TPIEC, GHASP; TCC; Dow, EPA, Gulf Coast Waste Disposal Authority (GCA), Rohm and Haas Texas Incorporated (Rohm & Haas), Phillips 66 Company Sweeney (Phillips); Firestone; Goodyear Tire & Rubber Company (Goodyear), Hoffman-La Roche (Roche); DuPont Agricultural Products (DuPont); Mobil Oil Corporation (Mobil), Exxon Company, U.S.A. Baytown (Exxon-Baytown), Amoco Oil Company (Amoco), Exxon Chemical Americas (Exxon Chemical); SPPC, Lubrizol Corporation (Lubrizol); Monsanto; Chevron U.S.A. Products Company (Chevron Products), and Shell Oil Company (Shell) supported the proposed rules with changes. Amoco, Dow; DuPont; Exxon Chemical; Exxon-Baytown, Mobil, Phillips, and Shell supported TCC. In all instances where they agree, they will be referred to as TCC. In instances where they differ or comment on other issues, the individual organization will be specifically identified.

Two commenters submitted testimony on §§115.152, 115.153, 115.156, 115.157, and 115.159, concerning Municipal Solid Waste Landfills. Browning-Ferris Industries (BFI) opposed the proposed rules, while GHASP supported the proposed rules with changes.

Seventeen commenters submitted testimony on §§115.211-115.217 and 115.219, concerning Loading and Unloading of Volatile Organic Compounds. Amoco, ARCO Pipe Line Company (ARCO), Chevron U.S.A. Incorporated (Chevron), Coastal Towing, Incorporated (Coastal), Dow, EPA, GATX Terminals Corporation (GATX), Inchcape Testing Services (Inchcape); Mobil; Phillips; Shell; Sierra Club Lone Star Chapter (Sierra); TCC, and Texas Waterway Operators Association (TWOA) generally supported the proposed revisions but suggested changes or clarifica-

tions, while Fina Oil and Chemical Company (Fina), GHASP, and ILTA generally opposed the proposed changes.

Eight commenters submitted testimony on §§115.252, 115.253, 115.255-115.257, and 115.259, concerning Control of Reid Vapor Pressure of Gasoline. Chevron-Products; Exxon Company, U.S.A. Houston (Exxon-Houston); EPA; EPHD; Fina, and Phillips 66 Company Bartlesville (Phillips-Bartlesville) supported the proposed rules with changes. Ashland Petroleum Company (Ashland) and the Oxygenated Fuels Association, Incorporated (OFA) generally opposed the proposed rule.

There were five commenters on §§115.352 and §115.357, concerning Fugitive Emission Control in Petroleum Refining and Petrochemical Processes. Regarding §115.357(2), the EPHD fully supported the proposed paragraph. Dow, Exxon Chemical, and TCC opposed the proposed paragraph §115.357(2). Regarding §115.357(9), EPA supported the proposed paragraph with changes. There were no comments submitted on §§115.353-115.356.

Three commenters submitted testimony on §§115.412, 115.415, 115.416, 115.417, and 115.419, concerning Degreasing and Clean-up Processes. International Cast Polymers Association (ICPA), New Day Bath Products (New Day), and Vadco Marble, Incorporated (Vadco) opposed the proposed changes.

Eleven commenters submitted testimony on §§115.421, 115.422, and 115.429, concerning Surface Coating Processes. Akzo Coatings, Incorporated (Akzo), Ameritex Chemical and Coatings Company, Incorporated (Ameritex); Crown; EPA; Gemini, JBC, Republic; Ribelin, Texwood, and Trinity generally supported the proposed revisions but suggested changes or clarifications, while GHASP generally opposed the proposed changes.

Fourteen commenters submitted testimony on §§115.442-115.449, concerning Offset Lithographic Printing. EPHD supported the rule as proposed. The Barr Company Printers (Barr) supported the proposed rule but suggested changes. Printing Industries Association of Texas (PIAT) supported the proposed rule but as a contingency measure. The City of Cleburne (Cleburne); City of Ennis (Ennis); Johnson County Economic Development Commission (Johnson); Kaufman County Commissioners Court (Kaufman); North Central Texas Council of Governments (NCTCOG); Parker County Commissioners Court (Parker); Rockwall Area Chamber of Commerce (RACC); TCC; Waxahachie City Council (Waxahachie); Weatherford Chamber of Commerce (WCC); and Weatherford/Parker County Joint Economic Development Cooperative (Weatherford) objected to the proposed extension of requirements to Ellis, Johnson, Kaufman, Parker, and Rockwall Counties.

Two commenters submitted testimony on §§115.541-115.547 and 115.549, concerning Degassing or Cleaning of Stationary, Marine, and Transport Vessels. An individual generally supported the proposed revisions but suggested changes or clarifications, while

GHASP generally opposed the proposed changes.

Fifteen commenters submitted testimony on §§115.552, 115.553, 115.555-115.557, and 115.559, concerning Petroleum Dry Cleaning Systems. Airline Cleaners (Airline), Angelus Cleaners (Angelus), Dapper Dan Laundry and Dry Cleaners (Dapper), Avon Cleaners (Avon); Comet 1 Hour Cleaners (Comet); Fine Dry Cleaning (Fine), Garden Oak Cleaners (GOC); GHASP; Greater Houston Cleaners & Laundries Association (GHCLA), Miracle Mile Dry Cleaners (Miracle); Northline Cleaners (Northline), Spear Cleaning & Laundry (Spear); Supermatic Cleaners and Launderers (Supermatic), Town & Country Cleaners (T&C), and W & O Cleaners (W&O) generally supported the proposed rules with changes.

Twenty commenters submitted testimony on §§115.600, 115.610, 115.612-115.617, and 115.619, concerning Consumer Products. EPHD and NCTCOG fully supported the proposed rules. American Automobile Manufacturers Association (AAMA), Automotive Chemical Manufacturers Council (ACMC), Chemical Specialties Manufacturers Association (CSMA), Cosmetic, Toiletry, and Fragrance Association (CTFA), EPA, Fragrance Materials Association of the U.S. (FMA), Helene Curtis, L & F Products (L&F), Pennzoil Company (Pennzoil), Procter & Gamble (P&G), Reckitt & Coleman (R&C), SC Johnson Wax (SCJ), Scott's Liquid Gold (Scott's), Sherwin Williams Company (Sherwin), Texas Automobile Dealers Association (TADA), Virbac, and 3M supported the proposed rules with changes. GHASP generally opposed the proposed rules.

Four commenters submitted testimony on the SIP document itself. They were EPA, GHASP, NCTCOG, and an individual. NCTCOG supported the SIP document and Phase II rules as proposed, and encouraged continued coordination between the TNRCC and local government. EPA supported the document with changes. EPA requested additional documentation for two mobile source programs. It has been provided in the final submission. GHASP did not support the SIP document, and requested that all rules be withdrawn and the SIP development process restarted. The individual supported the SIP document with changes, and requested that all nonattainment area airports and local governments be required to comply with all rules.

General Comments There were several comments which were general enough in nature that they applied to several different rules. These general comments will be addressed here. Where a comment was more specific in nature to a particular section, it will be addressed in the discussion under that particular section.

Once-In-Always-In (OIAI) is an EPA concept which means that once emissions from a source exceed the applicability cutoff for a particular VOC regulation in the SIP, that source is always subject to the control requirements of the regulation. The purpose of this requirement is two-fold. First, it serves to discourage a source already subject to regulation from installing minimal controls to circumvent Reasonably Available Control

Technology (RACT) requirements. Second, it improves the clarity of VOC regulations by minimizing the confusion caused by variations in production over whether a particular source is covered by a regulation.

EPA had two comments on the OIAI provision as it appears in §§115.122(4), 115.132, 115.142(3), and 115.432(a)(2). The first comment concerned the possibility that there could be situations where the pre-modification emissions, after control, could be greater than the existing exemptions, and that, in these cases, a possibility exists where a source could be exempted from control by implementing a pollution control project, but the vent gas stream could still exceed the exemption limits. They suggest adding the wording ". . . and less than the applicable exemption limits in 115.XX" after ". . . prior to the project."

The TNRCC agreed with this comment and has added the suggested language to each of the applicable sections regarding Control Requirements in §§115.122(4), 115.132(a)(4), 115.142(3), 115.422(a)(3), 115.432(a)(2), 115.532(a)(5), and 115.552(b).

EPA's second comment, with regards to OIAI, stated that the method for determination of emissions before and after the project are not well enough defined to be considered replicable procedure where the EPA can allow the state director flexibility to approve these exemptions without EPA involvement in the process. EPA recommends that modifications be made to better define how emissions are determined. EPA is particularly concerned about how the baseline is determined and the time period allowed to set that baseline.

The TNRCC disagreed with this comment. The justification and documentation for the OIAI provision would be similar to that of meeting any other exemption. EPA's approval is not required in those circumstances and should not be required here.

EPA questioned the need for the OIAI provision in §115.422(a)(3), stating that the rule governs compliant coatings.

The TNRCC disagreed with this comment. While the rule is designed to encourage compliant coatings as the primary method of meeting compliance, it also allows for alternative methods of control which may enter a scenario where OIAI is worth considering.

GHASP commented on all of the OIAI sections and objected to language which allows companies that exceed the provisions of these subsections to not control their emissions once they fall below the exceedance limit that they violated. Mrs. Baird's objected to the OIAI concept in §115.122(a)(4). GHASP agrees with §115.552(b) as it was proposed and questioned why the other OIAI provisions were not the same.

The OIAI concept is an EPA requirement. There are methods available to remove a source from the OIAI requirements, for example, a federally enforceable permit or the Alternative Means of Control (AMOC) process. On August 11, 1993, the staff met with members of the TCC and EPA Region 6 to discuss this and other issues. EPA firmly stood by its policy, which was first stated in the November 1987 SIP call and which the former Texas Air

Control Board was required to include in the RACT fixups EPA indicated the intent was to provide for federal enforcement of sources, not to allow for an exceedance of the exemption level, and to prevent the dismantling of the control device which would result in a significant increase in the emissions inventory (i.e., a throughput reduction of 5.0% could result in an emissions increase of 90% if the control device were removed). A policy memo from G. T. Helms dated August 23, 1990 states that the purpose of this requirement is to discourage a source already subject to the regulation from installing minimal ("less than RACT") controls to circumvent RACT requirements, and to improve the clarity of VOC regulations by minimizing confusing variations in production over whether a particular source is covered by a regulation. The language is the result of negotiations with EPA and the affected industries to maintain the OIAI concept while allowing an incentive for cost effective and innovative approaches to pollution prevention and waste minimization which would reduce emissions at or below the controlled levels prior to removal of control devices. Specific to §115.552(b), this omission was an oversight and the rule has been changed to maintain consistency with the agency's policy on OIAI.

GHASP requested the TNRCC define "substantially equivalent" in all subchapters of Chapter 115 regarding Alternative Control Requirements

Sections 115.123, 115.133, 115.413, 115.423, 115.433, and 115.533 were not opened for comment as a part of the Phase II rules, and, therefore, the comments are beyond the scope of this rulemaking. For the remaining sections the TNRCC position remains that this term has the meaning commonly ascribed to it in the field of air pollution control, and the TNRCC does not believe that further definition is necessary

GHASP commented on all subchapters of Chapter 115 regarding Recordkeeping Requirements, stating that all records should be kept for five years

In §§115.136, 115.156, 115.356, 115.426, 115.436, and 115.446 the portions of the rule dealing with the length of time records shall be kept were not opened for comment as a part of the Phase II rules, and therefore the comments are beyond the scope of this rulemaking. With regards to the other sections, the suggested five-year timeframe mentioned is being used for compliance history determination for permitting issues. The TNRCC Central Office keeps records of facility violations forever. The two-year period is considered sufficient for a field investigator to determine the facility's daily compliance with applicable rules for routine spot inspections, as well as, annual/biennial investigations

Definitions GHASP commented on the definition of "leak-free marine vessel" and questioned the enforceability of the reference to the applicable rules or regulations of the marine vessel's classification society or flag state. GHASP also objected to the assumption that a marine vessel operated at negative pressure is leak-free for the purpose of the cargo tank pressure/vacuum valve standard

The TNRCC believes that the definition of leak-free marine vessel is enforceable. The primary mechanism that will assure that the marine vessel is indeed leak-free is the requirement that no leaks of liquid or vapors can be detected by sight, sound, or smell. This is independent of the reference to the applicable rules or regulations of the marine vessel's classification society or flag state. The assumption that a marine vessel operated at negative pressure is leak-free is reasonable for the purpose of the cargo tank pressure/vacuum valve standard because a cargo tank which is under a vacuum will tend to prevent VOC from escaping by drawing any VOC into the tank through the pressure/vacuum valve. This assumption concerning the pressure/vacuum valve standard in no way relieves the owner or operator of the requirement that cargo tank closures (hatch covers, expansion domes, ullage openings, butterworth covers and gauging covers) receive an inspection prior to cargo transfer operations and that all such closures are properly secured such that no leaks of liquid or vapors can be detected by sight, sound, or smell.

Dow, ILTA, and TCC commented on the definition of "marine terminal" and pointed out an error in the second sentence of the definition in which "marine vessel" was inadvertently used in place of "marine terminal"

The TNRCC has corrected this language

Dow and TCC requested confirmation of the possibility that there may be more than one marine terminal at any given plant site.

The definition of marine loading facility does not preclude the possibility that there may be two or more marine terminals, perhaps even separated by miles, at any given plant site

Dow suggested that a definition of "parcel tanker" be added, and TCC objected to the deletion of the definition for leakless valve

These comments are addressed in the sections on Loading and Unloading of Volatile Organic Compounds and Fugitive Emission Control in Petroleum Refining and Petrochemical Processes, respectively

Crown, Gemini, JBC, Republic, Ribelin, Texwood, and Trinity commented on the proposed definitions concerning surface coating of wood parts and products. Trinity suggested definitions for each of their recommended coating terms. Crown, Republic, Ribelin, and Texwood supported Trinity's recommendations, with Texwood recommending a minor change to "transparent wiping and glazing stains."

The TNRCC added the recommended coating definitions (clear coat, clear sealers, final repair coat, opaque ground coats and enamels, semitransparent spray stains and toners, semitransparent wiping and glazing stains, topcoat, and wash coat) and deleted the coating definitions for lacquers, sanding sealers, and stains

Vent Gas Control The amendments to §115.121 and §115.122, concerning Emission Specifications and Control Requirements, specify that each affected bakery shall reduce total VOC emissions by at least 30% from the

1990 emissions inventory. The amendments to §115.126, concerning Monitoring and Recordkeeping Requirements, require affected bakeries to submit an initial control plan which demonstrates that the overall reduction of VOC emissions at the bakery will be at least 30% by May 31, 1996, require submission of an annual report beginning in 1997 which demonstrates that the overall reduction of VOC emissions at the bakery continues to be at least 30%, and require submission of a revised control plan for changes in the representations made in the control plan. The amendments to §115.127, concerning Exemptions, provide an exemption for smaller bakery ovens, and add an exemption for vent gas streams in the pulp and paper industry in response to a petition for rulemaking submitted by the Texas Paper Industry Environmental Council (TPIEC). The exemption for vent gas streams in the pulp and paper industry allows affected vent gas streams to continue to utilize the current 30,000 ppm exemption rather than the 612 ppm exemption which takes effect May 31, 1995. This exemption only applies until November 15, 1998, by which time the federal maximum achievable control technology (MACT) standard for the pulp and paper industry is anticipated to be in effect. The amendments to §115.129, concerning Counties and Compliance Schedules, specify the applicable counties and the compliance date for the new requirements

ABA, Mrs. Baird's, CTI, EPA, GHASP, MECA, SPPC, and TPIEC commented on the proposed revisions to §§115.121, 115.122, 115.126, 115.127, and 115.129, concerning Vent Gas Control. ABA, Mrs. Baird's, CTI, SPPC, and TPIEC generally supported the proposed changes, while EPA, GHASP, and MECA generally opposed the proposed changes.

CTI stated that the cost estimates quoted in the proposed rule preamble were low, and asserted that the cost effectiveness of the proposed bakery rules is very high on a dollars per ton controlled basis.

The cost estimates were provided by ABA and represent average costs per affected facility. Costs for larger facilities, such as CTI, may be higher than the average, while costs for smaller facilities may be lower than the average. The cost to bakeries, on a dollars per ton controlled basis, is much lower than that expended by other VOC sources in the same ozone nonattainment areas.

ABA and CTI stated that bakery oven emissions consist primarily of ethanol, and that ethanol has a relatively low reactivity compared to other VOCs.

The TNRCC agrees that bakery oven emissions consist primarily of ethanol, with lesser amounts of other VOCs such as formaldehyde. The reactivity was considered along with other factors in selecting the controls to meet the 15% reduction requirements. Unfortunately, the majority of the VOCs emitted in the various control categories have a relatively low reactivity, and therefore all categories needed to be targeted to achieve the mandated 15% reduction, net-of-growth, in the ozone nonattainment areas.

EPA, GHASP, and MECA opposed §115.122(a)(3), which requires affected bakeries to reduce total VOC emissions by at least 30% from the bakery's 1990 baseline emissions inventory by May 31, 1996. EPA stated that several bakeries have been identified during the development of this rule which exceed the major source definition for the nonattainment area in which they are located. EPA noted that non-CTG major sources were required to have instituted RACT controls as mandated by the 1990 FCAA §182(b)(2)(C), and that 30% control is not RACT for such major sources. MECA recommended that the control requirement be tightened to 95% and noted that a December 1992 EPA guidance document, *Alternate Control Technology Document For Bakery Oven Emissions (ACT)*, includes a 95% control level which is currently being achieved by at least 23 bakeries nationwide. MECA also noted that the ACT document was developed by EPA with the active involvement of ABA, GHASP and MECA stated that a 30% reduction does not represent RACT, and GHASP also stated that bakeries should be no more exempt than any other VOC source.

ABA stated that they are working with EPA to revise the ACT document. ABA anticipates that the supplemental ACT information will support their position that a 30% reduction represents RACT for bakeries which are major sources. Specifically, ABA believes that the ACT cost calculations were based upon the installation of control devices at new bakeries rather than the retrofitting of existing facilities, that developing technologies such as biofiltration and yeast changes should be reevaluated as control options, that reported control efficiency problems with existing bakery control devices should be considered, and that overall control efficiencies of 81% or better which are associated with surface coating operations do not necessarily indicate that similar control efficiencies are achievable in the bakery industry. EPA has indicated that a 30% reduction does not represent RACT for major sources, although the emission reductions are acceptable for use towards the 15% ROP SIP, and that they will expect the TNRCC to have adopted an approvable RACT rule for major source bakeries by November 15, 1994. Consequently, the TNRCC has retained the proposed 30% overall emission reduction requirement as a control measure towards reaching the mandated 15% VOC reduction for the ROP SIP. By November 15, 1994, the TNRCC will adopt amendments for major source bakeries in ozone nonattainment areas which will include the level of control specified in the ACT document in effect at that time.

In order to accommodate the inclusion of non-major source bakeries in DFW as a contingency measure, the TNRCC divided §115.122(a)(3) into subparagraphs and divided §115.126(a)(4) into paragraphs (4) and (5).

Mrs. Baird's commented that it was their understanding that the required reduction in 1990 baseline emissions could be achieved through reductions in any combination of emission sources, including mobile sources. Mrs. Baird's stated that there is no language in the proposed regulations indicating that

such reductions are allowed.

The TNRCC is presently developing Chapter 115 rules concerning the use of Mobile Emission Reduction Credits (MERCs).

EPA stated that the emission rates referenced in §115.126(a)(4) should be calculated in a manner consistent with the 1990 emissions inventory.

The TNRCC has added appropriate clarifying language.

EPA commented on §115.126(a)(4) and stated that the initial control plan and subsequent annual reports should be enforceable documents which are kept on site and made available to state, local, or federal inspectors. EPA recommended the addition of a statement that deviations from the representations in the control plan are violations of the regulations.

Section 115.126(a) already requires the owner or operator to maintain records at the facility for at least two years and make such records available to representatives of the TNRCC, EPA, or local programs. The TNRCC has added a statement to §115.126(a)(4)(C) and (a)(5)(C) that deviations from the representations in the control plans and annual reports are violations of the regulations.

ABA, CTI, MECA, and Mrs. Baird's commented on §115.127(a)(6). ABA, CTI, and Mrs. Baird's recommended that each bakery oven which emits less than 25 tons of VOC per year be exempt from the control requirements, irrespective of whether such ovens are collocated on a property with larger ovens. CTI also suggested that §115.121(a)(5) be revised accordingly. Mrs. Baird's believed that the term "combined weight" in §115.127(a)(6) could cause confusion and recommended that a reference instead be made to "total weight of VOC." MECA recommended that bakeries be exempted "if the total weight from all bakery ovens on the property, when uncontrolled, emit a combined weight of VOC less than 25 tons per year."

EPA has confirmed that the exemption should be based upon the total VOC emissions from all bakery ovens on the property, and therefore the TNRCC has revised §115.127(a)(6) accordingly. The TNRCC also revised §115.122(a)(3) for consistency.

Mrs. Baird's expressed concern that the use of an averaging time of "one year" would result in the interpretation that it is any rolling one-year period. EPA stated that it was unclear what time period would be used to judge emissions, and that to be enforceable all rules should have an averaging time specified. EPA noted that the 1990 emissions inventory is based upon summer weekday emissions, and stated that if longer than daily averaging is allowed, then it is necessary to show that the daily emissions do not exceed those projected in the SIP.

Mrs. Baird's is correct in that unless a rule specifies "calendar year," the inclusion of an averaging time of "one year" is any rolling one-year period. Production of bakery products is relatively steady throughout the year, and therefore bakery emissions do not vary

significantly from day to day. In order to avoid burdensome daily recordkeeping, the TNRCC has changed the references from "year" to "calendar year."

No comments were received on §115.129. To accommodate the inclusion of non-major source bakeries in DFW as a contingency measure, §115.129(5) was split into paragraphs (5), (6), and (7).

Water Separation. The proposed changes have been developed in response to industry's request to apply a recent revision to the federally mandated "once-in, always-in" concept to all applicable rules and has extended the compliance date for the American Petroleum Institute (API) separator rules to May 31, 1995 to allow for more time to determine if a facility will be regulated by the proposed Industrial Wastewater rule or if it will have to comply with the API separator rule. This is the latest date a CTG RACT rule, such as the API separator rule, may be complied with in accordance with the Federal Clean Air Act.

Firestone agreed with the proposed extension of the compliance date to May 31, 1995, but requests dates in §115.137, concerning Exemptions, should be changed from July 31, 1994 to May 31, 1995.

Section 115.137 was not opened as a part of this rulemaking and as a result can not be amended. The TNRCC will take the comments under advisement and revise the rule in the future if it is determined to be warranted.

Industrial Wastewater. The intent of the proposed industrial wastewater rule is to reduce the VOC concentration of an affected wastewater stream to below the applicability level before it is exposed to the atmosphere. Industrial wastewater emissions are primarily a factor of two controllable factors, the wastewater stream's flow rate and VOC concentration. The applicability levels will be adopted at a VOC concentration of 1,000 ppmw for flow rates greater than or equal to 10 liter per minute (lpm) or a VOC concentration of 10,000 ppmw for flow rates less than 10 lpm.

TCC recommended that the preamble to the final rule contain the following discussion to further clarify wastewater which has come into contact with VOC's "as part of a facility process" from other types of wastewater that may contain VOC. "The definition of "VOC wastewater" is intended to include water or wastewater which, during manufacturing or processing, comes into direct contact with VOC or results from the production or use of VOC. Examples of wastewater that is VOC wastewater (if the wastewater contains VOC) are product or feed tank drawdown; water formed during the chemical reaction or used as a reactant, water used to wash impurities from organic products or reactants; water used to cool or quench organic vapor streams through direct contact; and cooling tower blowdown water. The term "VOC wastewater" does not include water being used within a facility process, rainfall runoff, fire, safety, and other exigency use water; spills; oncontact non-contact cooling water, maintenance wastewater, and maintenance-turnaround wastewater. Maintenance wastewater is wastewater created during the maintenance

of an individual component during a period that is not process unit shutdown. This includes wastewaters from such activities as descaling of heat exchanger tubing bundles, cleaning of distillation column traps, draining of low legs or high point bleeds, and draining of pumps. Maintenance-turnaround wastewater is maintenance wastewater created during a process unit shutdown (or turnaround).⁷ DuPont explicitly stated that maintenance wastewater should be exempt.

The TNRCC agrees with TCC's approach and has included the proposed language in the preamble to the final rules which should further clarify the intent.

GCA stated that their interpretation of the rule is that Public Owned Treatment Works (POTW) are not regulated as a part of this rule even though they receive wastewater from facilities which would be affected by this rule. They request specifically exempting POTWs. TCC recommended adding language to the preamble to clarify that the intent of this rule is to make the owner or operator of the affected source category generating a wastewater stream subject to this rule the entity responsible for ensuring compliance with the rule.

It is the intent of this rule to make the owner or operator of the affected source category generating a wastewater stream subject to this rule the entity responsible for ensuring compliance with the rule. A wastewater stream is subject to this rule from the point of generation until the wastewater stream is returned to a process unit or is treated to remove VOC so that it is no longer an affected VOC wastewater stream. The owner or operator may choose to control and treat this wastewater within facilities owned or controlled by the owner or operator, or it may choose to transfer the wastewater to a third party, such as a POTW, for treatment to remove VOC. Regardless of the choice made by the owner or operator, it is the owner or operator, not the third party, who is responsible for rule compliance. The owner or operator may contract with a POTW to control and treat the wastewater in accordance with the requirements of this rule, but the POTW does not become responsible for compliance with the rule, other than its responsibility to the owner or operator through contractual relationship. In other words, the responsibility of the owner or operator does not end when the wastewater leaves the property of the owner or operator and enters the POTW. If the POTW does not handle the wastewater in accordance with the rule, it is the owner or operator which will be subject to any enforcement action, not the POTW.

Several commenters (Amoco, TCC, Mobil) suggested that the TNRCC is not obligated to follow the draft CTG for this rulemaking. Amoco encourages the TNRCC to look at the Benzene Waste National Emission Standard for Hazardous Air Pollutants (NESHAPS), the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Hazardous Organic NESHAPS (HON), and NSPS Subpart QQQ regarding Standards and Performance for VOC Emissions from Petroleum Refinery Wastewater Systems.

The workgroup consulted all related regula-

tions referenced by the comments in developing the rule.

Phillips stated that refineries which can demonstrate reductions from compliance with the NESHAP or other federal requirements should be exempt. They recommended adding language to §115.147(5) to exempt those facilities which are regulated by existing federal rules from §115.144 and §115.145, in addition to the proposed exemption from §115.142. Amoco and Goodyear stated that the TNRCC should explicitly acknowledge the reductions made under the Benzene NESHAPS program. Additionally, they recommended a specific exemption for wastewater components which meet the requirements of 40 CFR 61, Subpart FF.

The TNRCC originally planned to explicitly identify Benzene NESHAPS reduction towards the 15% requirements. However, in meeting with TCC/TMOGA representatives, concern was expressed that since there were so many problems in quantifying reductions from the Benzene NESHAPS that it would be more accurate for 15% considerations to assume a total percent reduction from the proposed wastewater rule. However, Benzene NESHAPS reductions have been explicitly credited in the BPA area where the proposed wastewater rule will not apply at this time. With regards to a specific exemption for the Benzene NESHAPS the TNRCC disagrees with the proposed argument. If a component is controlled in accordance with the Benzene NESHAPS, then it should meet the control requirements of this proposed regulation. If a component is exempted from the Benzene NESHAPS but will still trigger the control requirements of this regulation then it should be controlled as a part of the 15% reduction plan.

Roche stated that the TNRCC should delay this rule until EPA finalizes the SOCM I HON rules.

The TNRCC appreciates the spirit of the comment however, in order to take credit towards achieving the ROP requirements the rule cannot be delayed.

Several commenters (Mobil, TCC, DuPont, Firestone, and Goodyear) expressed their support for exempting the BPA nonattainment area from these rules.

DuPont stated that the TNRCC should provide maximum flexibility for affected facilities to fashion individual compliance plans. They stated that while this is not allowed in federal guidelines, the TNRCC should not be compelled to follow those guides. Chevron Products questioned how the estimated 0.27 ton/day stated in the SIP document table was arrived. They claim it is 73% of the 1990 base year inventory of 0.37 ton/day. They suggested the following alternative methods for achieving the 0.27 ton/day. The Refinery Holding Company (RHC) oil trap (0.215 ton/day) has been taken out of service and the RHC oil/water separator (0.156 ton/day) is subject to NSPS Subpart QQQ controls for VOC. Assuming a 95% control efficiency this would achieve a 0.353 ton/day reduction. The 36-acre ponds (0.064 ton/day) have been replaced with double-sealed floating roof tanks. This shows almost a 0.4 ton/day reduction

already and, therefore, the proposed rule for El Paso is not necessary.

There is flexibility within the provisions of §115.910 to allow companies a method of developing alternative controls plans to what is required by the rule. The 0.37 ton/day in the El Paso area is the sum of all industrial wastewater emissions as reported in the 1990 point source emissions inventory. The estimations reflected in the SIP are an estimation of what this rule will achieve by 1996. The information supplied by Chevron with regards to their facility will be investigated as to the enforceability and credibility of their estimations.

Chevron Products estimated the cost effectiveness of applying this rule to the El Paso refinery is approximately \$1,200/ton. They stated that this is more than 2.5 times the \$460/ton given in the proposed regulation.

Throughout the development of this regulation the TNRCC was presented with a wide range of conflicting data for estimated cost of complying. The primary source of much of this data was real life cost associated with the implementation of the Benzene NESHAP regulation. Therefore, the TNRCC discussed in the preamble of the proposed rule, a range of cost effectiveness values from EPA's suggested \$460/ton and including estimates from industry ranging from \$5,732/ton up to \$420,796/ton.

Amoco commented that TNRCC account numbers are not always the most appropriate definition of a "plant".

Currently proposed under a separate rulemaking is a definition for account. This should standardize the TNRCC's use of the term account. If the definition is changed sufficiently as a result of the comments then this rule will be revisited to ensure consistency.

Several commenters opposed the proposed applicability cutoff level of 500 ppmw VOC concentration for wastewater streams with a flow rate greater than 1 liter per minute. Exxon Chemical, Exxon Baytown, Firestone, Goodyear, Rohm and Haas, TPIEC, TCC, and DuPont recommended the level be set consistent with the proposed HON which defines an affected wastewater stream as one with a concentration of 1,000 ppmw for flow rates greater than 10 liters per minute. Monsanto recommended a VOC concentration of 5,000 ppmv, stating RACT should not be more stringent than MACT.

The TNRCC agrees with the industry position. The TNRCC rule was originally proposed at a concentration level consistent with EPA guidance documents. Since that time EPA has revised and firmed up their position of an acceptable level, therefore, the definition has been revised accordingly.

Firestone, Goodyear, TPIEC, and SPPC expressed their strong support for limiting applicability of the rule, and identifying affected sources by Standard Industrial Classification (SIC) code. Firestone, Goodyear, Rohm and Haas, TPIEC, and TCC recommend clarifying the definition of affected VOC wastewater stream to make it clear it only includes wastewater from affected source categories.

The TNRCC agrees that the intent is only to regulate those wastewater streams which are produced by the affected source categories. However, it is important to note that if an affected VOC wastewater stream is mixed with wastewater from a source category other than an affected source category, that the combined stream would be subject to the requirements of this rule. The TNRCC agrees that additional clarification is warranted and has revised the definition accordingly

EPA, Firestone, Goodyear, GCA, Monsanto, Rohm and Haas, TPIEC, and TCC commented that the definition of point of generation as it was published in the *Texas Register* was not complete.

The TNRCC had also noted this error and it has been corrected.

TCC recommended deleting the hyphen from waste-water in the definition of point of generation, to be consistent with the rest of the rule.

The definition has been revised accordingly.

TCC commented that the rule language is made unnecessarily awkward by the insertion of the complete text of certain acronyms and abbreviations. As an example, the term "affected volatile organic compounds (VOC) wastewater stream." TCC recommended defining acronyms in the definition sections §115.140 and/or §115.10, rather than in the rule language.

The practice of defining acronyms at the beginning of each section is a stylistic requirement of the *Texas Register* to aid the general public who may not be as familiar with abbreviations used within the air pollution field.

TCC stated that the preamble incorrectly identifies "SIC" as "Source Identification Code". It should be Standard Industrial Classification. SIC should be spelled out in the definition of 'affected source category'

The definition has been changed accordingly

TCC recommended deleting "(lpm)" after liters per minute, in the definition of 'point of generation', since the term is not used again.

The definition has been changed accordingly

Lubrizol requested an exemption based on RVP of less than or equal to 0.05 psia. Rohm and Haas requested an exemption based on RVP of less than or equal to 0.5 psia. Amoco commented that the TNRCC should consider a low VOC partial pressure cutoff in its applicability criteria.

Vapor pressure is a good indication of potential to emit for static systems. Wastewater streams are not static and, therefore, the Henry's Law Constant is a better indicator. This is also consistent with other wastewater regulations. There was considerable discussion with regards to a low VOC partial pressure cutoff, however, the TNRCC believes that the nature of this regulation is different from other Chapter 115 requirements which base control upon partial pressure. The determination of applicable streams is based upon VOC concentration and flow rate of the affected stream. The VOC concentration is determined using test methods which attempt to strip the VOC from the wastewater stream

There is also an exemption based upon Henry's Law Constant which will exempt those VOCs which do not strip out readily and would not volatilize into the atmosphere under normal operating conditions. The TNRCC strongly believes that these provisions should adequately address the concerns regarding VOCs with a low partial pressure.

Dow and TCC requested adding the language "or the component is maintained at a pressure less than atmospheric pressure" to the end of §115.142(1)(B), stating that, for safety reasons, components which are operated at a negative pressure must have an opening to allow for dilution air.

The TNRCC agrees with the request and the rule has been revised accordingly

TCC requested that in §115.142(1)(D) vapor control be changed to vapor recovery. The current rules do not distinguish between a vapor recovery system which is defined and a vapor control system which is not defined.

The TNRCC agrees that it would be more appropriate to use the phrase which is specifically defined and has changed §115.142(1)(D) accordingly.

TCC recommended that in §115.142(1)(D) and in §115.142(2)(F) that the TNRCC identify abbreviations for units of measure and then use those abbreviations. They also commented that the subscripts needed to be changed to superscripts.

The TNRCC agrees with the use of the abbreviations and had noted the error in the *Texas Register* where the superscripts were misprinted as subscripts. Both changes have been made to the rule.

GCA, Rohm and Haas, and TCC support the exemption of properly operated biotreatment facilities and supplied proposed language for a definition of properly operated biotreatment unit. Amoco, Exxon Baytown, and Roche support the exemption of biotreatment facilities but supplied no proposed language. EPA commented that the TNRCC needs to define properly operated biological treatment facility and wet weather retention pond.

The TNRCC agrees and has added the following definition as proposed by the commenters for a properly operated biotreatment unit: A suspended growth process that generates biomass and recycles biomass to maintain biomass concentrations in the treatment unit. The average concentration of suspended biomass maintained in the aeration basin of a properly operated biotreatment unit shall equal or exceed 1.0 kilogram per cubic meter (kg/m³, measured as total suspended solids).

DuPont commented that "Properly operated biological treatment unit" needs to be addressed as two issues: The proper operation of a treatment unit, and a suitably designed biological unit. DuPont stated that for this regulation proper operation should mean operation where the organics contained in the wastewater are biologically destroyed or transferred and not actively evaporated or transferred to the free atmosphere. DuPont suggested that a suitably designed biological unit is one that has the biological activity and

capacity to transform or destroy organics in wastewater. DuPont suggested wording for two definitions: Biological Treatment Unit-A facility (unit) that employs enhanced biological processes including suspended biomass growth and recirculated biomass to remove, destroy or detoxify organics and other dissolved and suspended components from wastewater. Proper Operation-Operation and control of units' operating parameters so as to routinely achieve its designed capacity for the removal of contaminants in compliance with various regulatory limits.

The TNRCC agrees with the concept of allowing a properly operated biological treatment unit as a means of VOC control for wastewater systems. However, as stated in the preamble to the proposed rule, it is imperative to adequately define proper operation for enforcement concerns. DuPont's recommended definition does not set a standard for removal of contaminants and thus does not adequately define proper operation. After analyzing several definitions which were submitted during the comment period the TNRCC has incorporated a definition which appropriately defines proper operation.

Firestone, Goodyear, and TPIEC supported the proposed exclusion of properly operated biotreatment units, but suggested that there are other types of non-biological treatment units which can be equally difficult to cover or otherwise control which deserve exclusion as well. Likewise, defining a properly operated biotreatment unit in a single definition might exclude other types of units that are also properly operated. TPIEC suggested identifying the various types of wastewater treatment units, both biological and non-biological. For those which have easily identifiable parameters for determining proper operation, the TPIEC suggested stating those parameters within the rule. For those units which do not have easily identifiable parameters, the TPIEC suggested that a mechanism should be spelled out within the rule to allow companies to come to the TNRCC for determination of proper operation.

The TNRCC believes that the issue is not a difficulty in covering nonbiological treatment units, but rather allowing a proven control technology without requiring redundant controls. Biological treatment units have become a recognized method of controlling VOC emissions from wastewater and have been allowed in several federal rules. Therefore, they should not be required to also be covered and routed to a control device. While other methods are becoming more technologically feasible there is still an uncertainty associated with them and, therefore, they should be controlled. The definition of a properly operated treatment unit is necessary to establish an objective standard with which all affected sources can be compared, too. Without a definition the term properly operated can become very subjective and differ from source to source, which will make enforcement by investigators difficult.

TCC commented on §115.142(1)(F) and recommended deleting the requirement for any loading or unloading to or from a portable container by pumping with submerged fill, even though both the federal Benzene

NESHAPS and the proposed HON contain a similar requirement. They asserted that this is not a MACT rule, that the NSPS Subpart QQQ does not require this, and if a new source does not need to do this then retrofitting existing sources should not be required either. Additionally, TCC stated that there is a provision in the Chapter 115 regulation governing storage tanks, which these containers would fall into as well.

The reductions were based upon the fact that the final rule would be very similar to the HON and this requirement is needed to preserve VOC reduction credits. While it is true that NSPS Subpart QQQ does not require this for new sources, it is also true that NSPS Subpart QQQ does not achieve the VOC reductions that the HON does. The TNRCC staff believes that this is not an onerous control and that it prevents the emissions associated with filling containers.

TCC commented that §115.142(3) should be reworded to maintain a consistent format.

The TNRCC believes the intent is clearer with the wording as proposed.

TCC recommended adding language to §115.142 to clarify and preclude any misinterpretation regarding the rule's intent concerning the dilution that usually occurs when one or more streams are combined.

This point was stressed within the preamble to the proposed rule and is clearly the intent. TCC's proposed language clarifies any misinterpretation and has been incorporated within the rule language.

Rohm and Haas, and TCC request that the statement of exemption for properly operated biological treatment facilities and wet weather retention basins should be moved to the opening paragraph of §115.142.

The TNRCC agrees with this request. The intent of the exemption for properly operated biological treatment facilities and wet weather retention basins is to allow exemption from the requirements of §115.142(1) and (2).

EPA expressed concern over §115.142(1)(D) which allows an exemption of vents that emit less than 100 pounds per day. They stated that this is a near blanket exemption of all vents. They question whether a 96% reduction can be achieved, as represented in Table 26 of the SIP document, with this kind of exemption. They believe the exemption of vents under 100 pounds per day would make even 90% reduction suspect. EPA stated that if the exemption is retained, then we need to include recordkeeping requirements similar to §115.126(a)(2) and (3). Firestone, Goodyear, TPIEC, and TCC support the exemption for vent gas and stated that it should include a concentration cutoff of 612 ppm as well.

The 96% reduction is an error in Table 26 and has been corrected. The comment concerning the exemption for vents is an appropriate argument and the exemption has been removed. The TNRCC cannot afford to risk losing credit for this rule and believes that the existing exemptions are sufficient.

GHASP objected to 90% minimum control in §115.142(D) and stated that it should be at least 95%.

The 90% control level was discussed at depth during the rule negotiations. It was decided that this was an appropriate level since it would be consistent with other Chapter 115 rules such as the general vent gas rule and because it would allow industry the use of vapor recovery systems in lieu of combustion which would not result in an increase in NO_x or CO emissions.

GHASP recommended changing practicable to possible in §115.142(H) to provide an incentive to fix a leak as soon as it can be done.

The TNRCC has made the recommended change.

GHASP commented that the TNRCC needs to guarantee public input in §115.142(3)(A) and (B). They want the public to have a chance to comment, if they desire, about exemptions or changes.

The public's input is received in the determination of the adequacy of control during the comment period on the rules. The determination of compliance with §§115.142(3)(A) and (B) is purely a technical review of data to ensure the intent of the regulation is still met.

Rohm and Haas supported the exemption of wet weather retention basins and requested extension to basins which receive non-VOC wastewater or wastewater that may pick up VOCs inadvertently. Mobil supports the exemption of wet weather retention basins and provided excessive cost estimates with no supporting documentation. Exxon Baytown, Dupont, TCC, Exxon Chemical, and Amoco expressed support for the exemption of wet weather retention basins.

The example cited by Rohm and Haas would appear to fall beneath the exemption for 10 Mg as well as below the applicability level of 500 ppmw now changed to 1,000 ppmw. Since these situations would be exempt through other means, there is no need to extend the exemption of wet weather retention basins to other situations.

TCC fully supports §115.143 as it was proposed.

DuPont commented that pollution prevention should be stressed more positively, therefore, the rule should allow the Executive Director the latitude to approve alternate methods of controls. Alternate methods should not incur excessive monitoring or other requirements which might be more punitive in their application than what would have been required if the source applied the more conventional controls.

TNRCC recently proposed revisions to the procedures for determining and approving alternative methods of control to accomplish Executive Director discretion and approval. The current rule references the section regarding Alternate Methods of Control.

Roche commented on §115.144(3)(F) and stated that the TNRCC should provide alternative methods to the requirements to continuously monitor and record steam stripper operational parameters such as sampling and analysis.

Provisions already exist in §115.143, relating

to Alternate Control Requirements, for the submission of proposed alternative methods.

Mobil requested adding a paragraph (3)(G) to §115.144 that allows air and nitrogen strippers. Dow recommends that monitoring requirements for pressure swing adsorbers (PSA) be specifically listed and that they include continuous monitoring for a regeneration process parameter that indicates proper functioning and a collection of a monthly VOC sample to ensure carbon effectiveness has not been reduced. Continuously monitoring the temperature in the top section of the bed provides a means of continuously assuring that the unit is performing properly and identifying potential problems before breakthrough occurs. Continuous monitoring for VOC concentration could not detect potential problems in a PSA system until after the heat of adsorption has been lost and regeneration becomes more difficult.

It is very difficult to develop a regulation which can address every unique condition specific to a plant. The TNRCC believes that the rule, as written, covers most normal conditions and if a specific control device used by a facility does not meet the language within the rule than it can apply for an alternative means of control determination, in accordance with §115.143, on a case-by-case basis.

Mobil and TCC recommended rewriting §115.144(3)(F) to require continuous monitoring and recordkeeping of process parameters that indicate proper functioning as opposed to listing the parameters to be monitored.

The proposed language is a result of the rulemaking workgroup's attempt to maintain consistency with the HON. Allowing individual companies to determine, on a case-by-case basis, which process parameters they consider necessary for indicating proper functioning invariably calls into question the enforceability of this requirement and, therefore, the VOC reductions claimed. For this provision to be enforceable there must be certain criteria spelled out so that there is no question, by affected companies or investigators, as to what minimum criteria is necessary for determining the proper operation of the steam stripper. For these reasons the language should remain as proposed.

EPA and TCC commented that §115.144 references §115.142(a) which does not appear to exist.

The reference to subsection (a) has been removed.

TCC recommended changing inspection frequency from semiannually to annually in §115.144(2)(C). They suggested this would make it more consistent with the proposed HON.

The requirement for semiannual inspections is taken verbatim from the existing tank monitoring requirements. The TNRCC will retain the semiannual inspection to maintain consistency with previous requirements for VOC storage tanks and to avoid a relaxation of this requirement.

TCC commented on §115.144(3) and recommended the addition of the phrase "as required by this subsection" to clarify that this

subsection specifies all applicable monitoring requirements and to avoid the possible misinterpretation that there is an "openended" monitoring requirement in this rule TCC also recommended the addition of the phrase "or other device" for clarification because the term "emission control device" is normally understood to refer to devices which control the VOC vapors once emitted from the wastewater and a steam stripper does not fall within this term.

The TNRCC agrees with the comments and has revised the rule accordingly

TCC requested the hyphen be deleted from the phrase "Test methods 1-4" in §115.145(1) and the word "through" be inserted

The TNRCC believes it may be even more confusing to delete the hyphen and insert the word through, as the hyphen is consistently used within the Approved Test Methods sections in all other Chapter 115 rules.

TCC requested that in §115.145(3) the TNRCC add the language ". and for monitoring a carbon canister in accordance with §115.144(3)(D) of this title (relating to Inspection and Monitoring Requirements)." to clarify that Test Method 21 may be used to monitor a carbon canister to determine if breakthrough has occurred.

The TNRCC agrees that the recommendation is appropriate and has revised the rule accordingly.

Goodyear, TPIEC, and TCC requested that the reference to Test Method 25D be deleted from §115.145(6)

The TNRCC disagrees with this request This section is only intended to be a list of approved test methods from which companies can select. Test Method 25D is an approved EPA test method for determination of VOC concentration of wastewater samples and therefore, should remain listed

Roche commented that facilities that transfer and treat VOC wastewater at or near the point of generation without exposure to the atmosphere prior to steam stripping should be exempt from maintaining records on individual streams that may be commingled and treated in a steam stripper. The focus should be the characteristics of the discharge from the steam stripper and not the individual wastewater streams at the point of generation.

The TNRCC disagrees with the comment The determination of affected wastewater streams may factor heavily in determining which if any exemptions may apply Records clearly showing which streams at a wastewater facility are above the applicability level are necessary

TCC commented on §115.146(1), requesting the addition of the language ". as needed to demonstrate compliance with §115.142 of this title (relating to Control Requirements)" to clarify and implement the intent of §§115.147(5) & (6) which provide an exemption from the specific control requirements of §115.142 if a plant has a control plan which achieves a 90% (or 80%) reduction in VOC emissions This reduction is based on the emissions inventories required by §101.10 Since the

means used to calculate these emissions inventories do not require that the characteristics of every wastewater stream be determined, it is unnecessary to expend the effort and incur the high cost of characterizing all of the wastewater streams and maintaining records of these characterizations. In essence, if an operator or owner elects to use the 90%/80% control plan option, the characteristics of the individual wastewater streams become irrelevant The recommended additional language will clarify that it is only necessary to maintain the records of wastewater characteristics to the extent that the control requirements of §115.142 apply

The TNRCC agrees with this recommendation The 90% and 80% control plan options apply to all of the wastewater from an affected source category as was reported in the 1990 base year inventory The determination of characteristics for every wastewater stream is not a requirement for determining the emissions inventory and therefore is a separate issue than the requirements of recordkeeping required for compliance with §115.142 However, if during the review of the control plans the TNRCC determines the characterization data is necessary then clearly the company would have to provide it

Roche expressed their support for the 10 Mg exemption in §115.147 DuPont agrees with the 90% control exemption as a very cost effective approach to control They recommended requiring the 1990 baseline emissions inventory be used to determine the 90% EPA commented that it is not stated in the rule how the 90% reduction will be determined

The TNRCC agrees that the reductions should specifically be tied to the 1990 baseline emissions inventory and the rule has been changed to reflect that

Rohm and Haas, and TCC recommended increasing the 10 Mg exemption cutoff to 60 Mg in §115.147(1) and (2) arguing it is more cost effective TCC further states that the cost savings associated with the 60 Mg cutoff is roughly equivalent to that savings incurred by raising the applicability level to 1,000 ppmw and 10 liter per minute, and that only one or the other is necessary

The TNRCC has raised the applicability levels in §115.140 to 1,000 ppmw and 10 liter per minute and left the exemption level at 10 Mg

Rohm and Haas strongly supported §115.147(4) regarding exemption approval for safety hazards EPA commented that the exemption in §115.147(2) allowing companies to pick and choose up to 10 Mg/year is not in the HON or Benzene NESHAPS They asserted the TNRCC cannot justify the "96%" reduction shown in the Table 26 of the SIP document with this kind of exemption

The 10 Mg/year exemption is taken from the draft CTG The draft CTG indicated the reductions associated with it would be very similar to those claimed for the HON which is what the TNRCC used in determining the estimated reductions achieved by this rule The 96% in Table 26 was an error and has been changed in response to a previous com-

ment

EPA commented on §115.147(3) and stated that it is unclear why the exemption from the rest of Chapter 115 is necessary.

This language was derived during the negotiated rulemaking as a response to industry's concerns that there was a potential confusion that some parts of this rule could be duplicative of other Chapter 115 requirements, for example the fugitive monitoring requirements or vent gas control The TNRCC is confident that where duplication occurs these provisions have been incorporated into the rule and are at least as stringent

EPA commented that since there is no replicable procedure for §115.147(4), there is no specific quantification protocol for §115.147(5) and since §115.147(6) is a relaxation of the rule, the rules need to be submitted in accordance with §115.910 for EPA approval It should also be clearly stated that if the exemption is not approved then the applicable requirements from the rule apply Finally it should be stated that deviations from the control plan are violations of the rule and that the control plan should be kept on site available to State, Local, and Federal inspectors

The TNRCC disagrees with EPA's assertion that §115.147(4) and §115.147(5) should require submittal under §115.910 for EPA approval The requirements are specific enough and replicate those kind of requirements generally required to qualify for an exemption, which does not require EPA approval The fact that §115.147(6) does require a review of economic reasonableness and could result in a level of control less than required by §115.142, does warrant a review by EPA and reference to §115.910 has been included The requirement to keep the plans on site for inspections appears to be unnecessary, since they are required to be sent to enough regulatory agencies where they would be readily accessible for inspection purposes The last comment, with regards to stating within the rule that deviations from the rule are considered violations, is warranted and has been incorporated into the rule

GHASP requested the TNRCC define "justified by the likelihood and magnitude of the potential injury and if reducing or eliminating the hazard is technologically or economically unreasonable" in §115.147(4)

The TNRCC disagrees that further definition of this phrase is warranted

GHASP stated that the control efficiency should be at least 95% in §115.147(5)(A)

The 90% control level was discussed in depth during the rule negotiations and established as appropriate for §115.142 It was decided that this was an appropriate level since it would be consistent with other Chapter 115 rules such as the general vent gas rule, and since it would allow industry to use of vapor recovery systems in lieu of combustion devices which would not result in an increase in NO_x or CO emissions It, therefore, is consistent to require an overall demonstration of 90% as well

GHASP is totally against any allowance of

80% control efficiency in §115.147(6). They stated that it is not RACT or BACT.

The 80% control efficiency is only allowed after demonstration to the Executive Director of some very stringent criteria. It is not a blanket exemption and is only allowed under specific circumstances.

GHASP requested that the TNRCC define economically unreasonable in §115.147(6)(B).

This term has a meaning commonly ascribed to it in the field of air pollution control, and the agency does not believe that further definition is necessary.

TCC recommended the addition of language to §115.147(5) and (6) specifying that the wastewater is from an affected source category and to tie the determination of the reductions back to the emissions inventory required by §101.10.

The TNRCC agrees that the reductions required by the control plans be specific to all wastewater from an affected source category since that is what is submitted in the 1990 baseline emissions inventory. Since the 1990 emissions inventory does not require the determination of what is an affected wastewater stream and since it is not appropriate to remove those streams which do not meet the definition of affected VOC wastewater streams from the reduction requirements of §115.147(5) or (6), the TNRCC agrees with TCC's comment that it is necessary to specify that the wastewater is from an affected source category. The comment regarding tying the emissions determination back to the 1990 inventory mirrors EPA's comment mentioned earlier and has been incorporated in the rule.

Firestone and Goodyear agreed with the use of Henry's Law Constant and with allowing the wastewater characteristics to be determined between the point of generation and before the stream is exposed to the atmosphere. Roche supports the use of Henry's Law Constant. TCC, Firestone, and Goodyear supported the provision that allows for the determination of wastewater characteristics at a location other than the actual point of generation and the provision concerning the mixing of wastewater streams which was occurring, or was under construction, prior to November 15, 1993.

TCC commented on §115.148(3), recommending that the temperature at which the Henry's Law Constant is determined be specified as 25 degrees Centigrade to avoid confusion. The temperature recommended is the temperature on which the justification for the value of the constant contained in the proposed rule is based.

The TNRCC agrees with the comment and has added the temperature to the rule.

GHASP requested the TNRCC define "representative samples" in §115.148(3).

This term has a meaning commonly ascribed to it in the field of air pollution control, and the TNRCC does not believe that further definition is necessary.

TCC supports the compliance date of November 15, 1996 in §115.149.

Municipal Solid Waste Landfills. In November 1993, the TNRCC adopted new §§115.152, 115.153, 115.155-115.157, and 115.159 to control VOC emissions from municipal solid waste landfill facilities (MSWLF) located in the DFW ozone nonattainment area. The TNRCC is extending the applicability of these rules to landfills located in the H/GA and El Paso ozone nonattainment areas. These regulations are part of the Phase II rules developed by the state to satisfy the 15% ROP SIP requirement. The regulations are based on EPA's proposed New Source Performance Standards (NSPS) and Emission Guidelines for MSWLF and are expected to affect the very large landfills in these areas. The standards require landfills emitting greater than 150 Megagrams per year (167 tons per year) of nonmethane organic compounds (NMOC) to install and properly operate a gas collection and control system. The collected landfill gas is to be routed to either a control device with a 98% destruction efficiency or to a treatment system which processes the collected gas for subsequent use or sale. Alternative methods to control the landfill gas may be utilized if equivalent emission reductions can be demonstrated to the satisfaction of the Executive Director. Standard methods of testing, reporting, monitoring, and recordkeeping are also adopted.

BFI recommended postponing the regulation to control landfill emissions until the final NSPS rule is promulgated. BFI commented that it would be unfair to adopt the proposed NSPS regulation without the benefit of the federal notice and comment process.

The TNRCC disagreed with postponing the regulation until the final NSPS rule is promulgated by EPA. The proposed rule is part of the Phase II rules, developed by the state in response to a requirement by EPA and the 1990 FCAA Amendments for states to develop and adopt the ROP SIP. The ROP SIP is required to achieve 15% VOC emission reductions from the 1990 base year inventory by 1996. The TNRCC has taken a proactive approach by accelerating the adoption of landfill rules consistent with the upcoming NSPS and Emissions Guidelines (EG) control requirements, so that emission reduction credits can be used towards the 15% ROP SIP. It is the Commission's experience that federal rules are often delayed due to uncontrollable factors. If the TNRCC does not act by adopting this rule, it must identify and regulate other sources from which emission reduction credits can be obtained. This is a loss of resources, knowing that the NSPS and EG requirements are soon to be imposed anyway. Although the TNRCC proposed rule is compatible with the proposed NSPS rule in its approach, the TNRCC has followed its formal rulemaking process by allowing landfill owners and/or operators the benefit of submitting testimony and participating in rulemaking through staff/industry workgroups. Historically, the TNRCC and its predecessors have valued comments submitted by the regulated community, given them ample attention, and acted upon these comments towards final adoption of their rules.

BFI commented that the TNRCC has historically refused to incorporate proposed federal standards into Texas regulations.

The TNRCC disagrees with the commenter. Review of this issue with the Legal Services Division of the TNRCC revealed that there are no legal standards that prevent the TNRCC from referencing any regulatory language published in the *Federal Register*. In its approach, however, the TNRCC must follow its formal rulemaking process by allowing the regulated community a notice and comment period on its proposed regulations.

BFI commented that the statutory basis for the proposed NSPS, upon which the Texas rule is based, is questionable. Specifically, EPA's approach to the design of the gas collection and control system, addressed in proposed Test Method 2E, does not satisfy the FCAA §111(h)(1), which requires that work practice standards be adequately demonstrated. Furthermore, EPA failed to adequately evaluate the air quality and environmental impacts of its choice of a particular technology and the cost involved in installing the gas collection and control system. BFI asked that alternative designs, which are available and adequately demonstrated, be allowed in the Texas rule.

The TNRCC contacted EPA regarding this issue and was informed that the gas collection and control system, as addressed in method 2E, is a demonstrated technology. The technology has been demonstrated in the field and proven to be a workable design with no adverse effects on human health or the environment. The TNRCC has devoted additional efforts trying to evaluate industry's concerns regarding the design methodology. The TNRCC researched the design of the gas collection and control system, as discussed in proposed Test Method 2E, to determine if there are any flawed assumptions built in the design process, and found that the isentropic and homogeneity assumptions used in proposed Test Method 2E, could not necessarily be validated for all landfills. When these assumptions are not satisfied, the design of the gas collection and control system must be modified to account for the landfill's anisotropic and direction-dependent variations. The TNRCC believes analysis of a three-dimensional flow dynamics in porous media would be the best approach to not only develop the proper design, but also calculate the gas generation rate. The complexity of performing a three-dimensional modeling analysis makes it less practical to be used as a design tool. The simplified approach, as addressed in proposed Test Method 2E, may prove to be the most common to follow. The TNRCC decided to allow owners and/or operators to develop and use alternative designs. These designs, however, must demonstrate the ability to operate in compliance with the requirements of §115.152(a)(3), and be subject to the approval of the Executive Director. Section 115.152(1) was revised to include the statement, "Alternative design methodologies to the GCCS are subject to the approval of the Executive Director."

BFI commented that EPA has not adequately demonstrated that air emissions from landfills are harmful to human health and the environ-

ment.

The TNRCC disagrees with the commenter. EPA surveyed over 1,600 landfills nationwide in an effort to quantify their emissions and determine their adverse effects on human health and welfare. EPA found that over 1.0% of the total non-methane organic compounds (NMOC) emitted into the air from all sources are generated from landfills. The TNRCC agrees that EPA may have failed to specifically quantify the effects of landfill emissions on global warming and as a source of toxicity. In its survey, however, EPA has found ample evidence that supported those conclusions. Traces of benzene and some other toxic chemicals have been observed to be emitted from landfills. Methane has long been known to be a greenhouse gas. Furthermore, 95% of the NMOC are VOC which contribute to ozone formation. Emission calculations indicate that VOC are being emitted from landfills in sufficient quantities to warrant the implementation of a regulation to limit and control the amount of gas emissions. A major emission source of VOC is that which emits 25 tons per year or more in the H/GA ozone nonattainment area and 50 tons per year or more in the El Paso ozone nonattainment area. The proposed regulation will only be applicable to landfills which emit 167 tons per year or more.

BFI commented that the cost of the gas collection and control system, proposed by EPA and adopted in the Texas regulation, exceeds the estimates set forth in the preamble of the proposed NSPS.

The TNRCC agrees that the cost estimates, published in the preamble, are average estimates that do not take into account site-specific factors. The TNRCC believes that allowing the option of using available and well demonstrated alternative designs to the gas collection and control system, may result in the development of compliance strategies that are more cost effective than have previously been anticipated.

BFI commented that the 98% reduction requirement with a flare is difficult to achieve. Furthermore, it is difficult to perform source testing on a candle flare to demonstrate compliance.

The TNRCC disagreed with the commenter. Most, if not all manufacturers guarantee 98% destruction efficiency for new open flares. No source testing is required to demonstrate compliance with the 98% destruction efficiency on a candle flare. Owners and/or operators are required to operate the flare in accordance with the requirements of 40 CFR 60, §60.18. This type of demonstrated compliance is called "Control Device Monitoring," which is based on the manufacturer's initial testing of the performance of the combustion system. If owners and/or operators elect to use a control device other than an open flare, source testing in this case will be required to demonstrate the 98% destruction efficiency. It is the responsibility of the owners and/or operators to provide evidence that standards are continuously being achieved.

BFI suggested delaying the compliance date for H/GA and El Paso areas to November 15, 1996.

The TNRCC has delayed the compliance date for H/GA and El Paso ozone nonattainment areas to November 15, 1996. This delay will give owners and/or operators enough time to design their collection systems and comply with the regulation in a timely manner. The delay will still allow the state to get the required emission reduction credits needed towards the 15% ROP SIP.

BFI suggested that the TNRCC commit itself in the preamble to revise its regulations upon the final promulgation of the NSPS.

The TNRCC has kept continuous contact with EPA, trying to remain updated on EPA's thinking regarding the rules as more information and analysis become available. The TNRCC has recently learned that EPA has completed its technical evaluation of testimony and done some additional modeling studies for air emissions from landfills. EPA is currently recommending the following changes for the final adoption of its rule: the generation rate constant, K, from 0.02 yr⁻¹ to 0.05 yr⁻¹, the generation potential, L, from 230 to 170 m³/Mg, and the nonmethane gas concentration CNMOC from 8,000 to 4,000 ppmv.

In addition, EPA is recommending raising the exemption level, based on the design capacity of the landfill, from 100,000 Mg to one million Mg and on the other hand, lower the exemption level, based on the annual emissions, from 150 Mg/yr to 50 Mg/yr. Recent EPA modeling studies have shown that most emissions are emitted from the large size landfills and that it is a more cost effective strategy to control large size landfills even if they emit relatively lower emissions on an annual basis. The TNRCC has conducted preliminary analysis to study the impact of this approach on the DFW ozone nonattainment area which is currently trying to comply with the proposed NSPS based regulation by May 31, 1995. The TNRCC found that all landfills in the DFW area which are emitting 150 Mg/yr or more and are expected to comply with the state regulation, have design capacities which exceeds one million Mg. The shift in EPA's policy is not expected to affect the DFW area landfills as far as applicability of control requirement is concerned. Furthermore, based on this preliminary analysis, staff found that the EPA's recommended changes would render the rule more stringent than what was initially proposed. The TNRCC has made the recommended changes in the default values and will await the final promulgation of the NSPS rule regarding the exemption levels. The TNRCC is confident about adopting the new set of default values since these tend to be based on technical data evaluation and are not likely to change. Determination of the proper exemption levels may still be subject to negotiations at this time.

It must be pointed out that the TNRCC will reserve the right to be more stringent than the final NSPS and EG rules as needed to meet the 15% ROP SIP. Upon promulgation of the NSPS and EG, the TNRCC will determine a course of action depending on an evaluation and analysis of the rules and the statutory mandates for the four ozone nonattainment areas in Texas.

BFI suggested that §115.153 relating to Alternate Control Requirements be revised to ensure consistency with the FCAA §§111(h)(3) and 111(d), by providing an opportunity to examine cost-effective and environmentally sound alternative designs.

The TNRCC is in the process of revising rules relating to alternate means of control (AMOC) currently contained in §115.910.

The proposed revisions to AMOC are the result of intense negotiations between industry, EPA, and the TNRCC and are applicable to all VOC regulations under Chapter 115. The proposed revisions address the issue of evaluating whether the alternative technologies are well demonstrated, environmentally sound, and cost effective. Since §115.153 references §115.910, there is no need to revise §115.153.

BFI commented that it is not necessary to maintain continuous recording of gauge pressure and oxygen/nitrogen concentrations in either the wells or the gas collection headers. BFI believes that gauge pressure, temperature, and percent methane are all that is needed to make proper adjustments to the gas collection system.

The TNRCC agrees with BFI that the percent methane along with the gauge pressure and temperature may be enough to suggest a course of action. The TNRCC, however, would like to emphasize that percent methane in the landfill gas may vary between 20% and 70% depending on the conditions of the landfill. It may not always be possible to be able to identify if air infiltration has actually occurred in the system. Nitrogen concentration measurements in the gas collection header will be a definite indicator of an air infiltration and a potential fire hazard. The TNRCC revised §115.156(2)(e) to require monthly monitoring of gauge pressure. Furthermore, the TNRCC will revise §115.156(2)(f) to delete the requirement for continuous monitoring of oxygen/nitrogen concentrations and, instead, require monitoring for the percent methane in the landfill gas. Owners or operators are, however, advised to use proposed Test Method 3C of 40 CFR 60, Appendix A to frequently check the nitrogen concentration in the landfill gas.

BFI asked that the TNRCC specifically provide for the use of energy recovery projects in the implementation of the regulations.

The TNRCC is allowing the option of subsequent use or sale of the collected landfill gas in its regulations. The TNRCC disagrees with the commenter that TNRCC specifically require energy recovery in implementing the regulation. The TNRCC believes that, in some cases, it would be more cost-effective to flare the landfill gas rather than to recover it.

BFI asked that the TNRCC adopt a flexible approach regarding the control of nitrogen compounds from sources such as flares installed to comply with the landfills NSPS or state regulation. BFI stated that flares used to control air emissions from landfills should not be subject to the lowest achievable emissions limits.

The urban airshed modeling conducted for Baton Rouge by the Louisiana Department of Air Quality and the scientific evaluation and research performed by the National Academy of Science seems to indicate that the Gulf Coast area is nitrogen oxide (NO_x) limited. This would mean that NO_x reductions would be more effective than VOC reductions in reducing peak ozone concentrations. The state regulation to control air emissions from landfills is developed to reduce VOC emissions to satisfy the 15% ROP SIP requirement. The state also has the ultimate statutory requirement of attaining the ozone standards. Any flexibility being given on NO_x emissions may undermine the overall goal of the regulations, which is to attain the standards of ozone by the statutory deadlines. Moreover, new emission sources are subject to New Source Review Standards. The TNRCC does not allow an applicability exemption from one regulation for the sake of satisfying another. Owners and/or operators electing to comply with these regulations using a candle flare would have no problem meeting the NSR requirements. Most manufacturers now guarantee 98% destruction efficiency and the operational requirements of 40 CFR 60, §60.18.

BFI recommended delaying any Title V operating permit obligation that might apply if EPA decides to include landfills in the permitting program. Moreover, BFI stated that the TNRCC should develop a Title V general permit to be used by affected landfills.

The TNRCC believes that there is no connection between the Title V requirement and the implementation of the state regulation. If EPA decides to include landfills in the permitting program, owners and/or operators in Texas shall comply with the federal requirements accordingly. The commenter is advised to address his or her questions and concerns regarding Title V requirement to the Federal Operating Permits Program of the TNRCC.

BFI noted a typographical error in §115.152(a)(1). The reference to §60.752(b)(a)(ii) should be revised to §60.752(b)(2)(ii).

The TNRCC has made the recommended change.

GHASP commented that §115.155(6) should be revised to require continuous monitoring of ambient gas concentration to ensure that the gas collection and control is functioning properly.

The TNRCC disagrees with the commenter and believes that the compliance provisions of the proposed NSPS rules §60.754, as published in the May 30, 1991, issue of the *Federal Register* (58 FR 104) are enough to demonstrate that the gas collection and control system is functioning properly.

GHASP commented that §115.156(2) should require continuous emission monitoring (CEM) testing for hydrogen sulfide (H₂S) and other landfill gases.

The TNRCC disagrees with the commenter and believes there is no need for a hardware continuous emission monitoring system (CEMS). The landfill collected gas is routed to a control device with a 98% destruction effi-

ciency. Emissions from such a control device are so small that it is cost ineffective to require a hardware CEMS.

GHASP commented that §115.156(3)(D) should require that any increase in landfill size must require a public notice and review period.

The TNRCC believes it is not appropriate to require a public notice and comment period in the rule. An owner and/or operator is required to obtain or amend a permit when planning an increase in the size or design capacity of the landfill and public notice, as appropriate, may be required by the permitting rules in Chapter 116, concerning Control of Air Pollution by Permits for New Construction or Modifications. This is consistent with the TNRCC policy regarding issuance of permits for new and/or modified emission sources.

GHASP commented that §115.157 should require that all landfills must monitor and control their emissions. No exemptions must be allowed.

The TNRCC disagrees with the commenter and believes that the regulation would be cost ineffective for small size landfills that do not generate large emissions.

The TNRCC revised §115.159(b) in order to accommodate the inclusion of municipal landfills in H/GA as a contingency measure.

Loading and Unloading of Volatile Organic Compounds. The changes to §§115.211-115.217 and 115.219 add rules which regulate emissions from marine vessel loading at marine terminals in the H/GA ozone nonattainment area. Provisions for fugitive emissions monitoring, vacuum-assisted loading, and automatic shutoff in the event of a control device malfunction at gasoline terminals in DFW, El Paso, and H/GA have also been added.

Amoco, Chevron, Dow, Mobil, Phillips, and Shell supported TCC's comments. Mobil supported the nonapplicability of the marine vessel loading rule in the BPA area.

It is important to note that extension of the marine vessel loading rules to BPA will be contemplated in the future if the emission reductions are needed to meet EPA and/or FCAA requirements. In addition, EPA has been developing a control techniques guideline (CTG) for marine vessel loading and unloading in conjunction with a hazardous air pollutant standard. In the event that the TNRCC's marine vessel loading rules are less stringent than those resulting from EPA's CTG, the TNRCC rules may need to be revised and made more stringent for consistency with the forthcoming federal requirements.

EPA commented that §115.211(a)(3) should specify whether the required emission reduction is by weight or volume. EPA also commented that the rule limits emissions to 0.09 pounds of VOC from the vapor recovery system vent per 1,000 gallons of product loaded into the marine vessel, while the proposed rule preamble refers to gasoline.

As in other Chapter 115 rules, the percent emission reductions are by weight. The proposed rule preamble inadvertently referred to

"gasoline" rather than the more generic term "VOC." For clarity, the TNRCC changed "product loaded" to "VOC loaded" in §115.211(a)(3).

Phillips, Sierra, and TCC commented on §§115.211(a)(3) and 115.212(a)(10)(A). Sierra recommended that the marine terminal control efficiency specified in §§115.211(a)(3) and 115.212(a)(10)(A) be 95% and stated that 95% control efficiency represents achievable reductions for well-maintained industrial equipment operated by trained workers, while Phillips and TCC recommended that the 95% control efficiency be changed to 90% and 10 mg/liter be changed to 10.8 mg/liter. Phillips and TCC also commented that the reference to Beaumont/Port Arthur in §115.211(a)(3) should be deleted.

The TNRCC agrees with Sierra that well-maintained and properly operated control equipment can readily achieve 95% control efficiency or better, and notes further that EPA's marine vessel loading requirements, when promulgated, may require 98% control efficiency. However, land-based loading operations and marine loading operations may in some cases share the same control equipment. For consistency with the existing 90% control requirements for land-based general VOC loading operations, the marine terminal control efficiency was changed to 90%, and the emission specification of 10 mg/liter was corrected to 10.8 mg/liter. The reference to BPA in §115.211(a)(3) was inadvertent and has been deleted.

Fina, ILTA, and Phillips commented on §115.212(a)(11). Fina and Phillips opposed the requirement for a vacuum-assisted vapor collection system and an automatic shutoff for malfunctioning control equipment at gasoline terminals. Fina stated that the associated emission reductions are unnecessary in DFW and that TNRCC should wait for EPA to finalize Maximum Achievable Control Technology (MACT) standards for gasoline distribution. Phillips recommended that §115.212(a)(11) be deleted, while ILTA recommended that the rule language be revised to accommodate new developing technologies.

The emission reductions associated with the additional requirements for gasoline terminals in DFW, El Paso, and H/GA are necessary to achieve the mandated 15% VOC emission reduction, net-of-growth, in these ozone nonattainment areas. In response to ILTA's comments, the TNRCC has deleted the reference to specific control technology in §115.212(a)(11)(A) in order to accommodate new developing technologies.

No comments were received on §115.213. This section is adopted without changes.

Amoco requested clarification of whether the inspection requirements of §§115.214(a)(1) and 115.214(a)(5)(A) apply to VOCs with low vapor pressures (less than 0.5 psia). Amoco commented that it is certainly good operating practice to always inspect and repair leaks of any nature, but that some leaks cannot be identified.

For land-based loading and unloading, low vapor pressure materials (less than 0.5 or 1.5 psia) are exempt from the control require-

ments of §115.212(a) under §115.217(a)(1)-(2). Likewise, for marine vessel loading, low vapor pressure materials are exempt from the emission specifications and control requirements of §§115.211(a) and 115.212(a) under §115.217(a)(10)(B). Although low vapor pressure materials are exempt from being controlled with add-on control devices, they are not exempt from the inspection requirements because any VOC escaping a VOC transfer operation can evaporate, thereby causing VOC emissions.

GHASP recommended that §115.214 apply to sea-based loading and unloading.

The requirements of §115.214 apply specifically to land-based VOC loading and to marine terminals. Extension of the marine vessel loading rules to include sea-based lightering operations will be contemplated in the future if the emission reductions are needed to meet EPA and/or FCAA requirements.

The TNRCC has become aware that §115.214(a)(4), which references the tank-truck leak testing requirements of §§115.234-115.237 and 115.239 of this title (relating to Control of Volatile Organic Compound Leaks From Transport Vessels), incorrectly specifies a date of November 15, 1996, while the correct compliance date of §115.239 is May 31, 1995. The TNRCC has corrected the date in §115.214(a)(4) accordingly.

TCC supported the proposed inspection requirements for marine terminals in §115.214(a)(5), while Amoco and GHASP recommended that "significant odors" in §115.214(a)(5)(A) be defined. Amoco and GHASP stated that the determination of significant odors is subjective.

This term has the meaning commonly ascribed to it in the field of air pollution control. Although the TNRCC agrees that the determination of significant odors is subjective, significant odors may be an indicator of a malfunction. This term was included in §115.214(a)(5)(A) to highlight the fact that significant odors are not a normal condition and may be a violation of the §101.4, concerning nuisance. The TNRCC does not believe that further definition is necessary.

Sierra and GHASP commented on §115.214(a)(5)(C). Sierra recommended that use of portable hydrocarbon gas analyzers be added to the marine vessel vapor leak detection requirements, while GHASP opposed allowing cargo loading to continue if the leak cannot be repaired.

Rule 115.214(a)(5)(A) requires that inspections for visible liquid leaks, visible fumes, or significant odors resulting from VOC transfer operations be conducted during each transfer. As proposed, §115.214(a)(5)(C) requires that if a vapor leak is detected by sight, sound, or smell, then a "first attempt" must be made to repair the leak. The TNRCC has added a reference to hydrocarbon gas analyzers in §115.214(a)(5)(C) because, although not required under §115.214(a)(5)(A), a facility might also use a hydrocarbon gas analyzer to detect leaks. In reference to GHASP's comments, attempting to cease loading may result in an unsafe condition or may result in more emissions than if the load-

ing is completed and the leak then repaired. In all cases, no additional loadings are allowed into the cargo tank until a successful repair has been completed and certified by a 40 Code of Federal Regulations (CFR) 61.304(f) or equivalent inspection.

GATX commented on §115.214(a)(5)(C) and stated that it is not definitive as to what type of operation requires vapor leak detection. GATX recommended that the wording "during the loading operation" be added.

The TNRCC has made the suggested clarification.

ARCO commented on §115.214(a)(5)(E) and expressed concern that the fugitive emissions monitoring requirements for marine terminals would apply to its crude oil unloading terminal.

The fugitive emissions monitoring requirements apply to marine terminals in the H/GA ozone nonattainment area. The definition of "marine terminal" in §115.10 includes only the loading of VOC into marine vessels. Therefore, ARCO's concern is unwarranted because their facility conducts only unloading operations.

ILTA and GATX commented on §115.214(a)(5)(E). ILTA stated that shore-based equipment at marine terminals should not be subject to fugitive emissions monitoring requirements because marine terminals operate under a lower pressure than refineries and product transfers at marine terminals are usually of a shorter duration than the continuous operation of refineries. GATX commented that "shore-based equipment" is not defined and recommended that a definition of "shore-based equipment" be included in §115.214(a)(5)(E).

The TNRCC disagrees with ILTA regarding fugitive emissions monitoring because any VOC escaping a process stream can evaporate, regardless of the process operating pressure or duration of the loading event. The TNRCC has added language to §115.214(a)(5)(E) which defines the affected shore-based equipment.

Phillips recommended the deletion of §115.214(a)(6), which requires gasoline terminals in the DFW, El Paso, and H/GA areas to implement a fugitive emissions monitoring program, and §115.216(a)(7), which requires these gasoline terminals to keep a variety of records.

The TNRCC agrees that the recordkeeping requirements of the proposed §115.216(a)(7)(B)-(D) are unnecessary and has deleted these requirements. The fugitive emission reductions are necessary to achieve the mandated 15% VOC emission reduction, net-of-growth, in these ozone nonattainment areas. The fugitive emission monitoring requirements of proposed §115.216(a)(7)(A) have been retained as §115.216(a)(7), and likewise have also been included in the marine terminal recordkeeping requirements as §115.216(a)(6)(D).

ILTA commented on §115.216(a)(6)(B) and stated that a copy of the certification that the marine vessel has passed an annual vapor tightness test would have to be furnished by a ship's captain or ship's agent prior to a ship entering a port.

Rule 115.216(a)(6)(B) merely requires that all marine vessel loading operations conducted with a VOC which has a vapor pressure equal to or greater than 0.5 psia under actual storage conditions must certify that the marine vessel has passed an annual vapor tightness test as required by §115.215(a)(8). Compliance with this requirement must be documented prior to initiating marine vessel loading operations, not prior to the ship entering a port.

ILTA commented on §115.216(a)(6)(C) and stated that the intent of the "first-attempt" repair log requirement was unclear. ILTA also questioned what a marine terminal is supposed to do if unable to obtain the required first-attempt repair log or if no first-attempt repairs have been made.

The TNRCC clarified the requirements of §115.216(a)(6)(C) by adding a reference to the first-attempt repair requirements of §115.214(a)(5)(C). Rule 115.214(a)(5)(C) states that if a vapor leak is detected during a loading operation, then a first attempt must be made to repair the leak, and that loading operations need not be ceased if the first attempt to repair the leak is not successful provided that the first attempt effort is documented. It is the responsibility of the owner or operator of the marine vessel to document the first-attempt effort and make available a copy of the repair log to a representative of the marine loading facility. Without the required repair log to document the first-attempt at repairing the leak, the loading operations must be ceased immediately. No additional loadings shall be made into the cargo tank until a successful repair has been completed and certified by a 40 Code of Federal Regulations (CFR) 61.304(f) or equivalent inspection.

Sierra opposed the exemption specified in §115.217(a)(4) for any plant, as defined by its TNRCC air quality account number (excluding gasoline bulk plants) having less than 20,000 gallons of VOC loaded per day and suggested that the exemption be set at 100 gallons per day.

The TNRCC has evaluated the cost-effectiveness of substantive controls for small sources and believes that exemption of insignificant emission sources is appropriate.

Phillips stated that the definition of "gasoline terminal" should be revised to exclude marine terminals or, alternatively, recommended that §115.217(a)(6) be revised to exempt marine terminals from §115.211(a)(1).

The TNRCC agrees that the definition of "gasoline terminal" should be revised as suggested, but cannot make the change at this time because no changes were proposed to the definition of gasoline terminal. Likewise, a similar change in the definition of "gasoline bulk plant" is warranted but cannot be made at this time. The TNRCC believes that revising the definitions is more appropriate than adding an exemption to §115.217(a)(6). The definitions can be revised in future rulemaking in advance of the November 15, 1996 compliance date for marine terminals.

GHASP, Sierra, and TCC commented on §115.217(a)(6)(A), which exempts unloading of marine vessels. GHASP believed that this would allow marine vessels to escape control, while Sierra stated that unloading of marine

vessels into land-based storage tanks or transport vessels should not be allowed unless vented to a control device TCC supported the exemption for marine vessel unloading.

The majority of emissions created by the transfer of VOC to and from marine vessels result from loading operations. Consequently, unloading of marine vessels is exempt from §115.212(a), although additional control requirements will be contemplated in the future if the emission reductions are needed to meet EPA and/or FCAA requirements. Nevertheless, the transfer of VOC into land-based storage tanks is governed by the existing storage tank rules, and the transfer of VOC into land-based transport vessels is explicitly governed by the existing VOC loading rules.

TCC suggested that §115.217(a)(8), which provides for an overall 90% control of emissions from general land-based VOC loading, be revised to allow averaging of marine and land-based general VOC loading operations, or alternatively, that a new §115.217(a)(12) be added (similar to §115.217(a)(9)) which would allow 80% overall control of marine vessel loading emissions on a case-by-case basis.

The TNRCC disagrees with TCC Control requirements for land-based general VOC (i.e., non-gasoline) loading facilities were initially adopted on January 27, 1972, while marine loading has been exempt from Chapter 115 since that time. Considerable controversy ensued in recent years concerning the definition of "facility" as it related to land-based VOC loading operations, and this in turn affected which VOC emissions must be controlled and which were exempt. Industry representatives had suggested that a VOC loading facility be defined as "the loading arm(s), pump(s), meter(s), shutoff valve(s), relief valve(s), and other valves contiguous with, and that are a part of, a single system used to fill a tank truck or railcar at a single geographic site." Industry representatives had further suggested the addition of language stating that "loading equipment and operations that are physically separate (i.e., do not share common piping, valves, and other loading equipment) are considered to be separate loading facilities." The industry representatives' suggested interpretation of "facility" was much narrower than the TNRCC's interpretation and was rejected because it would have, in theory, allowed an unlimited amount of VOC to be exempt from the control requirements, no matter how cost-effective controlling the associated VOC emissions might be.

In order to resolve this issue, on November 10, 1993 the TNRCC revised the basis for the 20,000 gallon per day exemption from the difficult-to-define term "facility" to "TNRCC air quality account number." This revised exemption basis in some cases resulted in a previously exempt loading operation now being subject to the control requirements. The TNRCC recognized that consideration should be given to unique situations, such as relatively small "satellite" loading and unloading operations which may be isolated on a plant property from other loading and unloading operations such that the cost of control is unreasonable. To address industry's con-

cerns, the TNRCC established the availability of exemptions (which more accurately might be termed alternate control requirements) under §115.217(a)(8) and (9) to provide relief for such unique situations. These exemptions did not include VOC being loaded into marine vessels or gasoline being loaded at gasoline terminals or gasoline bulk plants since these operations are regulated separately from the general land-based VOC loading rules. Rule 115.217(a)(8) established the availability of a 90% overall control which provided equivalent emission reductions and also provided significant flexibility to industry. Rule 115.217(a)(9), established an 80% overall control level for situations in which it was not economically reasonable to achieve at least 90% control following a detailed case-by-case review. Rule 115.217(a)(9) was established solely as a result of the impact to longstanding land-based VOC loading rules subsequent to the change from "facility" to "TNRCC air quality account number." In contrast, marine vessel loading has been exempt from the TNRCC's VOC RACT rules since their inception over 20 years ago. Consequently, the TNRCC is not allowing averaging ("bubbling") between marine and land-based loading operations since land-based loading should in most cases already be controlled. Likewise, the TNRCC is not adding a new §115.217(a)(12) (similar to §115.217(a)(9)) which would allow 80% overall control of marine loading emissions on a case-by-case basis since there has been no significant revision, such as that impacting land-based loading operations due to the facility/air quality account number change, to any TNRCC marine vessel loading rules. Industry has requested flexibility in the marine vessel loading control requirements which "will allow industry to achieve the required reductions in the most cost-effective manner possible." Rule 115.217(a)(11), which provides an option for a 90% overall control of marine terminal emissions, will provide industry with the desired flexibility while still insuring that the required emission reductions are achieved.

GHASP and Sierra opposed the exemption specified in §115.217(a)(10)(A) for marine terminals with uncontrolled VOC emissions less than 100 tons per year (TPY). GHASP suggested that the exemption level be set at 25 TPY, while Sierra suggested that the exemption level be set at 10 TPY. Chevron and TCC supported the 100 TPY exemption level but recommended that §115.217(a)(10)(A) be revised to exclude from consideration in the 100 TPY calculation all sources for which a control device was installed as of November 15, 1993. Chevron stated that in many cases control equipment for complying with the Benzene Transfer Operations NESHAP cannot also serve dual duty as a general VOC control device due to size/performance reasons and/or contamination of the recovered benzene when a nondestructive control device is used.

The cost-effectiveness data provided by industry during negotiation of the marine vessel loading rules prior to proposal indicate that the installation and operating costs of substantive controls increase greatly for marine terminals with uncontrolled VOC emissions below 100 TPY. The TNRCC believes that

exemption of marine terminals with uncontrolled VOC emissions less than 100 TPY is appropriate at this time. However, pursuant to future EPA requirements and/or future VOC emission reductions needed, the TNRCC may lower this exemption level in the future. The TNRCC agrees that emissions which are already controlled should be excluded from the determination of applicability of the 100 TPY exemption and has revised §115.217(a)(10)(A) accordingly.

Coastal, Inchcape, TCC, and TWA commented on the exemption specified in §115.217(a)(10)(B) for VOC with vapor pressure less than 0.5 psia loaded into marine vessels and stated that the vapor pressure of heavy residual oils, such as asphalt and No. 6 fuel oil, is difficult or impossible to determine using the test methods specified in §115.215. Coastal suggested that the exemption level instead be set at a flash point of 150 degrees Fahrenheit or greater as determined in accordance with ASTM Test Method D93, while TCC and TWA suggested that this exemption be adopted in a separate subparagraph as §115.217(a)(10)(E).

The TNRCC agrees that heavy residual oils, such as asphalt and Number 6 fuel oil, were not intended to be regulated under the proposed marine vessel loading rules. The suggested exemption has been added as §115.217(a)(10)(E). In addition, ASTM Test Method D93 has been added to the list of approved test methods in §115.215(a) as a new paragraph (9).

ILTA stated that for-hire marine terminals do not own the VOC cargoes transferred from the terminals to marine vessels, that exclusively for-hire terminals do not own the marine vessels, and that these for-hire terminals are not a party to any contract between the marine vessel owners or operators and product owners. ILTA concluded that exclusively for-hire marine terminals do not exercise any control-contractual, economic, legal, or otherwise-over these marine vessels.

The TNRCC agrees that for-hire marine terminals may not have direct control over marine vessels which they do not own. However, for-hire terminals have contractual agreements with the owners of the VOC cargoes. By including a clause in these contracts which requires the owners of the VOC cargoes to deliver the VOC in marine vessels which comply with the TNRCC's marine vessel loading rules, the for-hire marine terminals will in fact have indirect control over the marine vessels.

Dow, ILTA, Phillips, and TCC expressed concern that the vapor recovery systems on board of parcel tankers are inadequate to handle multiple cargo bay loading. Dow, ILTA, Phillips, and TCC stated that the problems facing the petroleum parcel tanker are safety, product contamination, and reactive chemical concerns, ship design and retrofit, forced demurrage, lack of control over ship retrofitting, and Technical Support Document data. Dow, Phillips, and TCC recommended that a case-by-case exemption for parcel tankers be added as §115.217(a)(10)(F). Dow and Phillips suggested as an alternative that "any oceangoing self-propelled parcel tanker" be exempt. ILTA also suggested that

different marine vessels, such as barges, parcel tankers, etc., should have separate definitions.

The TNRCC disagrees with the commenters. The TNRCC provided the marine vessel loading proposal to the appropriate personnel in the United States Coast Guard (USCG) headquarters in Washington, D.C. with the request that they review the rule proposal and submit any comments and/or concerns. Subsequently, USCG indicated that they had no concerns with the rules as proposed for safety or any other reasons. The commenters' concerns about multiple cargo bay loading, product contamination, and reactive chemical concerns can be resolved through careful design of vapor recovery systems. For example, reactive chemicals can be transported in dedicated cargo bays or tanks which are manifolded separately from other VOCs. The commenters' concerns about a lack of control over ship retrofitting can be resolved through inclusion of a clause in the appropriate contracts which requires the owners of the VOC cargos to deliver the VOC in marine vessels which comply with the TNRCC's marine vessel loading rules, thereby achieving indirect control over the marine vessels. Retrofitting can be done only while a ship is in dry dock, which ILTA stated occurs approximately every two years for vessel inspection and to perform any major rehabilitating maintenance, yet ILTA also expressed concern that there be a "level playing field" among competitors. Since the November 15, 1996 compliance date is over two years away, affected marine vessels (including parcel tankers) have an adequate amount of time in which to perform any modifications necessary in order to comply with the marine vessel loading requirements by the November 15, 1996 compliance deadline. In conclusion, there is no compelling reason why parcel tankers should be treated differently than any other marine vessels, and consequently there is no need for additional definitions or case-by-case exemptions.

TCC supported §115.217(a)(11), which provides an exemption from the control requirements of §115.211(a)(3) and §115.212(a)(10)(A) if the overall control of marine terminal emissions is at least 90%. GHASP opposed §115.217(a)(11) and stated that 95% control is achievable.

The TNRCC agrees with GHASP that well-maintained and properly operated control equipment can readily achieve 95% control efficiency or better, and notes further that EPA's marine vessel loading requirements, when promulgated, may require 98% control efficiency. However, land-based loading operations and marine loading operations may share the same control equipment. A 90% control efficiency was included many years ago in some Chapter 115 rules because it was considered reasonable at that time. Since nitrogen oxide (NO_x) controls may be important in the future and the major modification threshold for NO_x emissions is 25 tons per year in the Houston/Galveston ozone nonattainment area, the lower control efficiency of 90% was adopted for consistency with the existing 90% control requirements for landbased general VOC loading operations and to allow and encourage noncombustion

methods of control

EPA commented on §115.217(a)(11) and stated that quantification procedures must be included in the rule so that it is clear how the 90% reduction is calculated, including the averaging time that will be used.

The TNRCC has added language to §115.217(a)(11)(C) which states that the emission rates must be calculated in a manner consistent with the 1990 emissions inventory. The TNRCC believes that this clearly establishes the method by which the 90% reduction is calculated.

EPA commented on §115.217(a)(11)(C) and recommended the addition of a statement that deviations from the representations in the initial control plan and subsequent annual reports are violations of the regulations.

In order to insure federal approvability, the TNRCC has revised §115.217(a)(11)(C) as recommended and likewise has added new §115.217(a)(8)(D) and (9)(C) for consistency.

GHASP commented on the exemptions specified in §§115.217(b)(2) and 115.217(c)(2) and stated that "20,000 gallons of VOC loaded per day" should be changed to "20,000 gallons of VOC loaded or unloaded per day."

The TNRCC disagrees with GHASP. Rules 115.217(b)(2) and 115.217(c)(2) are exemptions for VOC loading operations, while exemptions for VOC unloading are covered in §§115.217(b)(1), 115.217(b)(3), 115.217(c)(1), and 115.217(c)(3).

TCC commented on §115.219(a)(2), concerning crude oil and condensate, and suggested that wording be added to clarify that the rule applies to land-based operations.

The TNRCC has made the suggested clarification.

Amoco, Fina, ILTA, Phillips, and TCC commented on the November 15, 1996 compliance date for marine terminals specified in §115.219(a)(5). Fina commented that EPA is under a court order to finalize marine vessel loading MACT standards by April 30, 1995 and suggested that the TNRCC delay adoption of marine vessel loading rules until EPA has finalized the MACT standards. Amoco, ILTA, Phillips, and TCC stated that the USCG must certify all marine vapor control systems and that it is uncertain whether or not USCG will be able to process all certification requests in time. ILTA noted that several marine terminals are required by TNRCC air quality permits to control marine vessel loading emissions. ILTA expressed concern that there be a "level playing field" among competitors and suggested that if implementation of the marine vessel loading requirements is delayed, then marine terminals with "collective" TNRCC air quality permits should be given equal leeway concerning any delay.

As noted previously, the TNRCC provided the marine vessel loading proposal to the appropriate personnel in USCG headquarters in Washington, D.C., and USCG subsequently indicated that they had no concerns with the rules as proposed. Fina's suggested delay would not give the affected facilities sufficient time to comply with the marine vessel loading

requirements by the November 15, 1996 compliance deadline. Also, delay of the marine vessel loading rules would not allow the TNRCC to meet EPA's May 13, 1994 deadline for submittal of the ROP SIP. Failure to meet this deadline would result in EPA's issuance of a finding of incompleteness on the ROP SIP and would further result in the initiation of a timetable for federal sanctions. Sanctions could include the loss of federal funding for pollution control programs and state highways and EPA's implementation of a federal plan for the nonattainment area.

Gasoline Reid Vapor Pressure Control. Early in the planning for achieving the rate of progress reductions in DFW and El Paso, it was clear that an automotive fuel program would be necessary. In El Paso reformulated gasoline (RFG) was the first option considered. An alternative plan was proposed by Chevron-Products where the Reid vapor pressure (RVP) of gasoline would be lowered to 7.0 pounds per square inch (psi) during the summer ozone season. The principal reason behind this proposed alternative was smaller production costs for RVP. The local El Paso community supported this proposal because of anticipated lower increases in the consumer price of gasoline.

EPA reviewed the initial modeling work performed by Chevron-Products showing equivalent reductions using RVP controlled gasoline as compared to RFG. EPA originally stated that, using the fuel formulations proposed, RVP would have to be lowered to 6.5 psi to achieve equivalent reductions to RFG. The TNRCC proposed rule controls RVP to 6.5 psi during the summer ozone season.

The principal concerns of commenters on the 6.5 psi fuel cost and fuel performance. Chevron-Products stated that there was no performance data on this fuel and El Paso would in effect become a test case for the gasoline. This was also a concern of EPHD, Phillips-Bartlesville, Chevron-Products, and Exxon-Houston stated that the 6.5 RVP fuel would present significant cold start problems in carbureted vehicles. Phillips-Bartlesville continued to state that fuel with 6.5 RVP would have greater tank headspace flammability potential at low temperatures.

Chevron-Products commented that 6.5 psi fuel would require extensive refinery modifications to produce and would result in a cost effectiveness of \$20,000-\$30,000 per ton of VOC reduced. They also stated that lowering the RVP to 6.5 for El Paso County would cause segregation of El Paso gasoline supplies from surrounding counties and emission benefits would be lost from having outside counties on 7.0 RVP fuel. Chevron-Products concluded their remarks on the 6.5 psi fuel by stating that there was an error in the EPA analysis showing that RVP would have to be lowered to this value to achieve equivalent reductions as RFG.

TNRCC proposed the 6.5 psi standard based on the best EPA information available at the time which indicated equivalent reduction to RFG. TNRCC fully understood the feasibility issue and planned to relax the standard as better projections became available.

The Mobile Source staff of TNRCC shared the concerns about the driveability of a fuel with 6.5 RVP. They also believed that refiners would see a large increase in production

costs associated with 6.5 RVP gasoline. For these reasons staff believed that 6.5 RVP fuel was not a desirable option when compared with 7.0 RVP gasoline and RFG. The staff further decided to concentrate the analysis of 7.0 RVP and RFG in the area of emission reductions and cost. The question of headspace flammability was not analyzed as it no longer was an issue. The staff agrees that a 7.0 RVP fuel produced regionwide for El Paso could yield additional emission benefits though they have not been quantified. EPA did acknowledge that guidance showing that 6.5 RVP was necessary to get equivalent reductions to RFG was in error. The rule has been revised to reflect a 7.0 RVP requirement for El Paso County

Chevron-Products stated that 7.0 psi RVP gasoline supplies 94-95% of the reductions of RFG while costing only 10-20% as much to produce. The corresponding cost effectiveness for RVP is \$1,000-\$3,000 per ton VOC controlled as opposed to \$13,000-\$18,600 for RFG. Also on the issue of cost effectiveness, Chevron-Products stated that RFG has a lower energy content than strictly RVP controlled fuels which will result in a fuel economy penalty. The cost figures are similar to those submitted by Fina. Chevron-Products believes that the May 1996 deadline for producing 7.0 RVP can easily be met, but there may be difficulty in making refinery modifications in time to meet the same deadline to produce RFG. Chevron-Products also commented that 7.0 RVP gasoline will produce emission benefits throughout the gasoline distribution and storage network due to less evaporation from the lower volatility fuel. They believe TNRCC should review the point source emission inventory to take advantage of these benefits.

At the request of TNRCC, Chevron-Products conferred with EPA to arrive at a mutually acceptable procedure for modeling the reductions from RVP and RFG. The company also supplied detailed cost information for the production of both fuels. The modeling work confirms to the satisfaction of TNRCC and EPA that RVP controlled fuel achieves the reductions as claimed by Chevron-Products. The cost information demonstrates that estimated cost increases at the gasoline pump are \$0.04 per gallon for RFG as opposed to \$0.01 per gallon for RVP. This is price only and does not include the fuel economy penalty which was included in the cost effectiveness analysis. TNRCC is anticipating reduction benefits in the gasoline distribution system through the use of lower RVP fuel, and the point source inventory is being adjusted accordingly.

TNRCC noted the original cost estimate for RFG was in the range of \$0.08-\$0.10 cost increase at the pump. OFA stated that this was an early industry and EPA estimate based on an anticipated shortage of oxygenates which did not materialize. OFA continued to state that the price differential between the fuels may become insignificant due to other market forces. OFA believes that as the price of the two fuels becomes closer, the cost effectiveness of RVP is eliminated because RFG controls toxic benzene and sulfur levels in addition to carbon monoxide and particulate. OFA also stated that much of the

VOC benefit from RVP is from evaporation and will be negated by Stage II vapor recovery.

The TNRCC believes that the plentiful supply of oxygenate is a principal reason for the narrowing of the price difference between RVP and RFG. Cost estimates submitted by Chevron-Products do allow for the adequate supply of oxygenate and the price difference of the two fuels has been adjusted accordingly. TNRCC believes the difference for the El Paso refineries remains significant and the difference in production costs will allow RVP fuel to remain cheaper than RFG despite other market forces. El Paso already pays among the higher gasoline costs in the state, and prices go up even further during the winter months when the oxygenated fuel program goes into effect for the control of carbon monoxide. RFG would be a year-round program adding additional cost to winter gasoline. RVP controlled fuel is confined to the summer months. TNRCC anticipates adequate VOC reductions from RVP as confirmed in EPA approved modeling.

Cost and reduction potential were the principal issues involved in consideration of RFG and RVP, but other issues were also raised and considered. OFA stated that RFG will provide twice the ozone benefit of RVP due to the control of benzene and other reactive hydrocarbons, and that the control of benzene in RFG results in a 35% percent reduction in this carcinogenic substance. OFA also believed that should El Paso not attain the National Ambient Air Quality Standard (NAAQS) for ozone, then El Paso will face tighter VOC controls. Chevron-Products and Fina commented that the reactivity of a VOC in an area such as El Paso makes no difference in ozone formation as the particular mix of precursor gases favors reductions in nitrogen oxides. They also stated that RFG is not cost effective in reducing human cancer and that EPA is currently working a study to reduce toxics from mobile sources. Fina commented that MTBE, used in RFG as an oxygenate, is a hazardous air pollutant and would lead to higher toxics in RFG vapors. Fina further supported the RVP concept by stating that other states (Ohio, Missouri, Indiana, Arizona, Louisiana, and Michigan) had provided an RVP option.

The early results from urban airshed modeling for El Paso indicate that the city would likely attain the NAAQS for ozone by 1999 if the projection is based on emissions from the United States alone. Part of this projection is based on the use of RVP controlled gasoline. Because of these results, the reactivity of VOC controlled by RFG becomes less important and is a secondary consideration. Because of the recognized influence of Ciudad Juarez on El Paso ozone levels, El Paso will not face tighter controls or reclassification if air monitors fail to show attainment of the NAAQS. The percentage of benzene reduction in RFG is correct, but the staff believes the lower cost of RVP controlled gasoline to be of greater concern to the El Paso local area. The staff currently has no data on the toxicity of MTBE in RFG vapors.

Phillips-Bartlesville had three other recommendations concerning the proposal. TNRCC

should use a 7.1 RVP average with a maximum of 7.4, and June 1, 1996 should be the date for summer RVP limits in El Paso. TNRCC should not set a May 1, 1996 deadline for nonretail facilities. They also recommended that TNRCC allow an equivalency policy to allow the sale of RFG or other gasoline demonstrated to provide equivalent reductions.

TNRCC emission benefit projections and required reductions are based on an anticipated RVP of 7.0 psi, and this value will be used. A 7.0 psi RVP would not allow for adequate reductions. Additionally, since a significant amount of reductions are based on reduced evaporation from the storage of lower RVP fuel, TNRCC believes that a May 1, 1996 deadline is necessary for replacement of storage tank fuel reserves. There is no reduction penalty associated with an equivalency policy, and TNRCC has added appropriate rule language.

EPHD commented that the control period for RVP controlled fuel should begin on May 1, 1995, and they opposed the exemption for storage vessels of 500 gallons or less. EPHD was also concerned about possible increases in nitrogen oxides from oxygenated fuels such as RFG.

TNRCC believes the May 1, 1996 compliance date is necessary to allow adequate time for refinery modifications, and that exempting vessels of 500 gallons or less will not significantly affect emissions. Both provisions are retained as proposed. RFG meeting federal specifications will allow no net increase of nitrogen oxides.

OFA and EPA expressed concerns about possible increases in aromatic, olefin, and sulfur levels without the federally mandated caps on these substances required for RFG.

TNRCC has conferred with EPA and the affected refiners and is convinced that there is little incentive for refiners to allow significant increases in the substances of concern, and that levels are adequately regulated under other federal requirements. TNRCC will require that refinery records be kept and available for two years.

GHASP commented that a similar rule and control period should be required for the H/GA area because of its status as a severe nonattainment area.

Under the FCAA, H/GA is required to use RFG throughout the year. This program should provide greater reductions than the El Paso RVP gasoline and is appropriate for the more serious air pollution problem in H/GA.

Two individuals submitted testimony requesting the approval of a private bus service for El Paso and the use of natural gas as an alternative fuel.

Both comments are outside the scope of this proposal and will not be addressed in this analysis.

Fugitive Emission Control. This rule was extended to the DFW nonattainment area as a part of the Phase II rules. They also revise the recently adopted exemptions concerning leakless valves. The current rule potentially exempts leakless valves from all control re-

requirements because there is no approved method for establishing what is leakless.

EPA commented that §115.357(9) references §115.352(a) which does not appear to exist.

This has been corrected by removing the "(a)" from the reference to §115.352.

DOW, Exxon Chemical, and TCC disagreed with the removal of sealless/leakless valves from the list of exempt components.

There is still no proven test to verify a component leakless, and TNRC did not receive any new information to reconsider allowing such an exemption. The TNRC believes that the leak skip provision, which was instated during the analysis of the last revision to the rule, is designed to provide sufficient relief to those entities which have components that do not leak.

Degreasing and Clean-Up Processes The changes to §§115.412, 115.415, 115.416, 115.417, and 115.419 add rules which limit acetone usage at cultured (synthetic) marble and fiber reinforced plastic (FRP) operations.

Vadco questioned whether their existing air quality permit would be void if limitations on acetone usage at polyester resin operations were included in Chapter 115.

Chapter 115 applies independently of a facility's permit status. When there are multiple restrictions on a facility for control of the same air pollutant, the facility must meet the most restrictive rule or permit provision in order to be able to comply with all applicable limitations.

ICPA, New Day, and Vadco commented on the proposed new §115.412(a)(4), concerning limitations on acetone usage at polyester resin operations. ICPA commented on §115.412(a)(4)(A) and stated that the proposed limitation of acetone usage in cultured marble operations of 2.0% of the polyester resin usage is too restrictive and recommended that the limit be raised to 5.0%. ICPA likewise commented on §115.412(a)(4)(B) and stated that the proposed limitation of acetone usage in FRP operations of 1.0% of the polyester resin usage is too restrictive and recommended that the limit be raised to 2.5%. New Day opposed the limitations of §115.412(a)(4) due to product and process variability and varying climates in the ozone nonattainment areas.

A review of 21 permits issued since 1990 to cultured marble and FRP operations in a variety of Texas locations confirmed that acetone usage at most facilities was below the proposed limitations of §115.412(a)(4)(A)-(B). Acetone usage at cultured marble operations ranged from 0.0% to 1.9% of the polyester resin usage for 10 of the 11 facilities surveyed. Acetone usage at FRP operations ranged from 0.08% to 0.78% of the polyester resin usage for six of the 10 facilities surveyed. Consequently, it is apparent that many facilities can readily meet the proposed acetone usage limits, and the remaining facilities should likewise be able to limit their acetone cleanup solvent usage to meet the limits. For consistency with Standard Exemption 113, the wording concerning usage was revised to define usage as gross usage minus waste

disposal

ICPA and Vadco commented on §115.412(a)(4)(C) and stated that some operations, such as mold release wax surface preparation and cleanup of an automatic mixer, require non-acetone solvents which do not meet the requirements of the proposed §115.412(a)(4)(C). In addition, Vadco stated that acetone is used in a process step to enhance bonding between the formed acrylic sheets and the polyester/fiberglass reinforcement and stated that there is no acceptable substitute for acetone in this process. Vadco suggested that a category be included for this manufacturing process, with acetone usage limited to 10% of the polyester resin usage for this operation, while ICPA suggested that process chemical usage be excluded from the cleanup solvent usage limitations.

The TNRC recognizes the difficulty in defining acceptable acetone substitutes and has deleted the proposed §115.412(a)(4)(C). In addition, the TNRC agrees that acetone used for process steps other than cleanup should not be included in the acetone usage limitations. Consequently, the TNRC has added language to §115.412(a)(4)(A)-(B) to clarify that only acetone used for cleanup is included in the usage limitations.

No comments were received on the proposed changes to §115.415. This section is adopted without changes.

Vadco generally supported the recordkeeping requirements of §115.416 as being good business practice. Vadco stated, however, that both cultured marble and FRP operations are conducted in their plant, and questioned which percentage (1.0% or 2.0%) they were to use in their calculations. ICPA recommended that the required recordkeeping should be adequate to delineate the process chemical usage of acetone from the cleanup usage of acetone.

Since two separate acetone usage limits apply, separate records of resin and acetone usage must be kept for the cultured marble and FRP operations. The TNRC agrees that the required recordkeeping must be adequate to delineate the process chemical usage of acetone from the cleanup usage of acetone. Section 115.416 is adopted without changes.

ICPA commented on §115.417(a)(3), which exempts polyester resin operations which have a monthly resin usage, including gelcoat, of less than one ton from the acetone limitations of §115.412(a)(4). ICPA stated that the exemption level is too low and, by way of comparison, stated that degreasing operations are exempt if the uncontrolled emission rate is less than 550 pounds per day. ICPA recommended that the exemption be raised to four tons of resin usage per month (48 tons per year).

The TNRC disagrees with ICPA. As noted in the discussion on §115.412(a)(4)(A)-(B), many facilities can readily meet the proposed acetone usage limits, and the remaining facilities should likewise be able to limit their acetone cleanup solvent usage to meet the limits. The one ton per month exemption level was chosen to exclude small facilities which have an insignificant usage of resin, such as auto body shops which may use a minor amount of resin in the repair of FRP body parts. The 550 pound per consecutive 24-hour period

exemption for degreasing operations to which ICPA referred is no longer in effect as of July 31, 1993. Currently, no exemption exists which is based upon the emission rate of degreasing operations in ozone nonattainment counties. There is no justification for raising the one ton per month exemption level. For consistency with Standard Exemption 113, the wording in §115.417(a)(3) concerning usage was revised to define usage as gross usage minus waste disposal.

No comments were received on §115.429. However, the TNRC extended the compliance date for polyester resin operations from July 31, 1994 to May 31, 1995 in order to provide the regulated community sufficient time to comply.

Surface Coating Processes The amendments to §115.421, concerning Emission Specifications, add VOC emission limits for surface coating of wood parts and products. The amendments to §115.422, concerning Control Requirements, revise the "once-in, always-in" requirement to provide additional flexibility in response to a request by the Texas Chemical Council, and clarify the wording of the cleanup requirements for automobile refinishing operations to insure consistency with Standard Exemption 124. The proposed changes to §115.429, concerning Counties and Compliance Schedules, specify the applicable counties and the compliance date for the new requirements.

Akzo, Ameritex, Crown, Gemini, JBC, Republic, Ribelin, Texwood, and Trinity commented on the proposed new §115.421(a)(13), concerning surface coating of wood parts and products. Akzo recommended that the coating limits be consistent with EPA guidance which is currently scheduled for publication in May 1994. Ameritex, Crown, Republic, and Ribelin suggested that limits (in pounds of VOC per gallon of coating) be set at 5.9 for clear topcoats, 6.5 for wash coats, 6.0 for final repair coats, 6.4 for semitransparent wiping and glazing stains, 6.8 for semitransparent spray stains and toners, 5.5 for opaque ground coats and enamels, 6.2 for clear sealers, and 7.0 for all other coatings. Gemini suggested that limits (in pounds of VOC per gallon of coating) be set at 5.8 for clear lacquers, 5.6 for opaque lacquers, 5.6 for sanding sealers, 7.0 for transparent stains, and 5.0 for varnishes. JBC suggested that the limit for sanding sealers be the same as that for clear lacquers. Texwood suggested that limits (in pounds of VOC per gallon of coating) be set at 5.8 for clear lacquer topcoats, 6.5 for wash coats, 6.2 for final repair coats, 6.6 for wiping and glazing stains, 7.0 for spray stains and toners, 5.4 for opaque lacquer/varnish, 5.6 for lacquer or vinyl sanding sealers, 4.95 for varnish sanding sealers and varnish, and 7.0 for all other coatings. Trinity suggested that limits (in pounds of VOC per gallon of coating) be set at 5.9 or 6.0 for clear topcoats, 6.5 for wash coats, 6.0 or 6.2 for final repair coats, 6.4 for semitransparent wiping and glazing stains, 6.8 for semitransparent spray stains and toners, 5.5 for opaque ground coats and enamels, 6.2 for clear sealers, and 7.0 for all other coatings. Trinity also suggested definitions for each of the coating terms.

The TNRCC added the recommended coating categories (clear coat, clear sealers, final repair coat, opaque ground coats and enamels, semitransparent spray stains and toners, semitransparent wiping and glazing stains, topcoat, and wash coat), deleted the coating categories for lacquers, sanding sealers, and stains, and incorporated the suggested coating limits into §115.421(a)(13). The VOC limit for varnish was changed from 4.5 to 5.0 pounds per gallon of coating (minus water and exempt solvent). The TNRCC also added the phrase "as defined in §115.010 of this title" after each of the wood parts and products coating terms in §115.421(a)(13) and added the appropriate definitions to §115.010. It is important to note that EPA has been developing a draft control techniques guideline (CTG) for wood parts and products coatings in conjunction with a hazardous air pollutant (HAP) standard in a formal regulatory negotiation (reg-neg) with industry and environmental representatives. Since the coating limits of §115.421(a)(13) are likely to be less stringent than those resulting from EPA's reg-neg, the TNRCC rule may need to be revised and made more stringent for consistency with the forthcoming federal requirements.

EPA commented on §115.422(1)(A) and stated that the remote reservoir should be enclosed. EPA recommended that "enclosed" be added before "remote reservoir."

The TNRCC has made this recommended clarification. Texwood commented on §115.423(a)(3), which requires that if add-on controls are used to control emissions from coating operations, the capture and abatement system must achieve an overall control efficiency of at least 80%. Texwood utilizes add-on controls to meet permit requirements at its facility and stated that an overall control efficiency of 80% is impossible to meet for the cabinet industry due to the involvement of people in the wood finishing process (i.e., wipers, sprayers, sealer sanders).

The TNRCC added a new subparagraph (C) to §115.421(a)(13) to address situations in which a wood parts and products coating facility has installed add-on controls. Facilities with add-on controls will be exempt from demonstrating that the capture and abatement system achieves an overall control efficiency of at least 80%. However, because the VOC limits for each of the coating categories were established at levels for which compliant coatings are readily available, any wood parts and products coating facility with add-on controls will be required to utilize compliant coatings irrespective of whether or not the facility has add-on controls.

No comments were received on §115.419. This section is adopted without changes.

Offset Printing This rule extends the offset printing rule requirements, which were adopted for Phase I, to the DFW and H/GA nonattainment areas.

Barr objected to the requirement for hourly recordkeeping. They suggest a daily record would be sufficient.

The TNRCC strongly believes that this is not an unreasonable requirement and it is necessary to allow for adequate determination of compliance with the rule.

PIAT commented that the latest numbers show the Offset Lithography rule is not needed for the 15% rate of progress in the DFW area and recommends removing this rule from the Phase II Rate-of-Progress submittal.

The TNRCC has clearly asserted that since this is only an interim step in attaining the ozone standards, only those controls needed to satisfy the 15% Rate-of-Progress requirement will be adopted. Therefore this rule will not be adopted for the DFW nonattainment area. However, it will remain in Chapter 115 as a contingency rule. The compliance section will reflect that this rule will become effective if the contingency provisions must be enacted.

Cleburne, Ennis, Johnson, Kaufman, NCTCOG, Parker, RACC, TCC, Waxahatche, WCC, and Weatherford objected to the proposed extension of requirements to Ellis, Johnson, Kaufman, Parker and Rockwall Counties.

In light of the fact that the Offset Lithography rule will not be adopted in the DFW nonattainment area at this time this issue is not applicable. However, if the DFW area fails to attain the ozone standard by 1996, the area will be bumped up to the next higher level of severity, contingency measures will be triggered, and the additional counties will be included in the definition of nonattainment. If that occurs, all rules including this one, will need to be extended to the additional counties. At this time, the TNRCC will remove these counties from the final rule.

The TNRCC added subsections (b) and (c) to §115.449 in order to accommodate the inclusion of offset printing in DFW and H/GA as contingency measures.

Degassing or Cleaning of Stationary, Marine, and Transport Vessels Sections 115.541-115.547 and 115.549, concerning Degassing or Cleaning of Stationary, Marine, and Transport Vessels, require vapors from degassing or cleaning of stationary, marine, and transport vessels to be controlled through vapor-tight fittings and piping to a vapor recovery system. The changes to §§115.541-115.547 and 115.549 extend coverage of these rules to the El Paso and DFW ozone nonattainment areas.

An individual commented that the title of the undesignated head, "Degassing or Cleaning of Stationary and Transport Vessels," leaves out a reference to marine vessels, which have a definition different from transport vessels.

The TNRCC has changed the title of the undesignated head to "Degassing or Cleaning of Stationary, Marine, and Transport Vessels" to more accurately reflect the content of the rules.

GHASP commented on §115.541(b) and §115.547(2) and recommended that the applicability level for marine vessels be set at 1,000 barrels rather than 10,000 barrels.

The TNRCC used cost analysis data to develop cost-effective thresholds for emission control. For marine vessels, controlling emissions above the 10,000 barrel threshold was

found to be cost effective.

An individual commented on §115.541(b)(1) and suggested that this rule would be better stated as "No person shall clean a tank that carried a VOC with a vapor partial pressure greater than or equal to 0.5 pounds per square inch absolute (3.4 kPa) unless the vapors are processed by a vapor control system."

The TNRCC agrees and has made the recommended change.

GHASP and an individual recommended that the 90% control efficiency specified in §115.541(b)(2) be changed to 95%.

The 95% control efficiency was proposed during the initial publication of this rule in the *Texas Register* on July 9, 1993 because this level is considered reasonable for a new rule. The 90% control efficiency was included many years ago in some Chapter 115 rules because it was considered reasonable at that time. Since nitrogen oxide (NO_x) controls may be important in the future and the major modification threshold for NO_x emissions is 25 tons per year in the H/GA ozone nonattainment area, the lower control efficiency of 90% was adopted to allow and encourage non-combustion methods of control.

GHASP commented that "avoidable liquid or gaseous leak" in §115.541(b)(3) should be defined.

This requirement is an existing requirement in a paragraph which is being renumbered. Unavoidable leaks are those which would occur during an upset condition as specified in §101.6.

GHASP commented on §115.541(b)(4) and recommended that "practical" be replaced with "possible."

The suggested change has been made.

GHASP commented on §115.541(b)(5) and objected to the requirement that all pressure/vacuum relief valves operate within certified limits as specified by classification society or flag state until the vapors are discharged to a vapor control system if the vessel is degassed or cleaned. GHASP questioned the enforceability of the reference to classification society or flag state.

The TNRCC believes that §115.541(b)(5) is enforceable. The primary mechanism that will assure that any emissions are minimal is the requirement that all cargo tank closures be properly secured, or maintain a negative pressure within the tank when a closure is opened. This is independent of the reference to the applicable rules or regulations of the marine vessel's classification society or flag state and in no way relieves the owner or operator of the requirement that no avoidable liquid or gaseous leaks, as detected by sight or sound, originate from the degassing or cleaning operations.

An individual commented that §115.542(b)(4) incorrectly states "19,000 parts per million by volume (ppmv) or 34,000 ppmv expressed as methane."

The TNRCC agrees that this should be "19,000 parts per million by weight (ppmw)"

expressed as methane or 34,000 ppmv * Since this rule was not proposed for revision, the correction of this typographical error can not be made at this time. However, the TNRCC will make this correction during the next round of Chapter 115 rulemaking, in advance of the 1996 compliance date for this rule.

An individual commented on §115.542(a)(5) and (b)(4) and recommended that these rules reference a level of 10% of the lower flammability limit (LFL) rather than 19,000 ppmw expressed as methane or 34,000 ppmv. The individual also commented on §115.545(10) and recommended that a test method for LFL be added in conjunction with his comments on §115.542(a)(5) and (b)(4). The individual also suggested the addition of revised language to §115.546(1)-(4) to improve enforceability.

These rules were not proposed for revision, and therefore these suggested changes can not be made at this time. However, these comments will be considered for future rulemaking. Sections 115.545 and 115.546 are adopted without changes.

GHASP commented that "reasonable measures" and "minimize" in §115.547(4) should be defined.

These terms have the meanings commonly ascribed to them in the field of air pollution control, and the TNRCC does not believe that further definition is necessary. Section 115.547 is adopted without changes.

No comments were received on §§115.543, 115.544, 115.549. Section 115.543 and §115.544 are adopted without changes. To accommodate the inclusion of vessel degassing/cleaning as a contingency measure in DFW, §115.549 was split into three subsections (i.e., §115.549(a), (b), and (c)).

Petroleum Dry Cleaning Systems The TNRCC received a number of comments on §§115.552, 115.553, 115.555-115.557, and 115.559, concerning Petroleum Dry Cleaning Systems. This is a new rule for the three ozone nonattainment areas of H/GA, DFW, and El Paso and part of Phase II rules, developed by the state to satisfy the 15% ROP SIP. The rule requires petroleum dry cleaning facilities which consume 2,000 gallons per year of petroleum solvent or more, to install a recovery dryer capable of recovering at least 85% of the consumed solvent. The rule also requires all petroleum dry cleaning facilities to comply with provisions related to handling of filtration systems, maintenance, and fugitives.

GHCLA, Dapper, Supermatic, GOC, Fine, Spear, Avon, Miracle, and Northline supported the proposed rules and the overall goal of attaining the ozone standards. These facilities, however, requested that the exemption level be raised from 2,000 gallons per year to 3,500 gallons per year. They argued that dry cleaners using under 3,500 gallons per year would face tremendous economic hardship because they don't generate enough profit to service the debt on the necessary equipment to meet the regulation. Some dry cleaners would be forced to either downsize or be driven out of business. T & C suggested setting the exemption level at 3,000 gallons

per year while W & O suggested a minimum of 4,000 gallons per year.

The TNRCC disagrees with the comments to raise the exemption level to 3,500 gallons per year. Information that the TNRCC has gathered from dry cleaning facilities and petroleum solvent vendors in the DFW and H/GA areas, suggests that 39% of the number of facilities are expected to be regulated if the exemption level is kept at 2,000 gallons per year. On the other hand, 70% of the emissions are expected to be controlled. The TNRCC believes that 2,000 gallons per year is a cost-effective exemption. It will result in a cost-effective regulation and generate reasonable emission reduction credits that can be credited towards the 15% ROP SIP requirement. The state is under a statutory requirement to reduce VOC emissions by 15% from the 1990 base year emissions inventory by 1996. The TNRCC has recently developed numerous regulations, targeting all industrial sectors including small businesses, to achieve the 15% VOC reductions and to attain the ozone standards in the Texas ozone nonattainment areas by the mandated deadlines. Failure to meet these requirements would initiate federal sanctions, such as cutting the state's highway funds and imposing a federal implementation plan (FIP) on the state.

It is TNRCC policy to consider economic impact and cost effectiveness when regulations for these sources are developed. Staff believes that the technology is available to meet the emission specifications and control requirements of the regulations. Currently, there are over 100 recovery dryers that have been sold in Texas in the past ten years. Although there is only one company in the United States that manufactures and markets recovery dryers, there are many Japanese and German companies on the market that would create and maintain enough competition for the cost of these dryers to remain stable. The TNRCC performed a cost analysis for this regulation to ensure that small facilities would not be economically burdened. A cost analysis was conducted using current equipment suppliers prices, and included performing cost effectiveness calculations and pay back period calculations for sources consuming petroleum solvents close to the exemption level. EPA's cost factors for taxes, freight, instrumentation, and installation, as published in the CTG document for petroleum dry cleaning facilities were used. Analysis was conducted for a small size facility that uses one 100 pound standard dryer and consumes an average of 2,000 gallons of petroleum solvent per year. As cost effectiveness calculations must be performed using the average life of the control equipment, in this analysis, it was estimated that the recovery dryer will have an average life of 12 years.

For this size facility which consumes an average of 2,000 gallons per year of petroleum solvent, calculations indicate a cost effectiveness of \$290 saved per ton of solvent reduced. The pay back period is calculated by balancing out the savings, generated from petroleum solvent cost credits and the credits resulted from the reduced demand on steam, with the total capital recovery cost. For the

average consumption of 2,000 gallons per year, the pay back period was calculated to be seven years. Beyond the pay back period, facilities are expected to continue to profit and generate significant savings from the recovered petroleum solvent.

The TNRCC believes that this analysis is indicative of the reasonableness of the 2,000 gallons per year exemption level. Cost analyses for most regulations that the TNRCC has adopted in the past two years, show dollars per ton figures that range between \$500 to \$5,000, in some cases, without any chance of a pay back. The TNRCC realizes that small businesses who are unable to pay for the capital cost of the recovery dryer, may run into difficulties obtaining bank loans. The savings that is generated from the reduction in solvent consumption and the reduced demand for steam will justify to loaners that these dry cleaning facilities will be able to pay back their loans in a timely manner. Owners or operators of dry cleaning facilities required to comply with the regulation are encouraged to seek assistance and advice from the Small Business Advocate's Office and the Small Business Technical Assistance Program of the TNRCC.

GHCLA asked that the Petroleum Dry Cleaning Rule be taken out of the Phase II rules and placed under the contingency rules.

The TNRCC's decision as to which rules may be placed under contingency rather than Phase II is based on the overall evaluation of the emission reduction credits that are generated from these rules towards the 15% ROP SIP and the rules cost effectiveness and economic impacts. The TNRCC has placed the dry cleaning rule under the contingency rules for the DFW, H/GA, and El Paso ozone nonattainment areas. The compliance date for dry cleaning facilities will be one year after the TNRCC publishes a notice in the *Texas Register* of its determination that the contingency rule is necessary as a result of failure to attain the National Ambient Air Quality Standards (NAAQS) for ozone or the 15% ROP SIP.

Angelus supported the regulation, but recommended that the exemption level should not be based on solvent consumption.

The TNRCC disagrees with the commenter. Solvent consumption is indicative of the size of the facility and the magnitude of savings that would be generated when standard dryers are replaced by recovery dryers. The TNRCC found that the regulation would be cost ineffective for small size facilities with low solvent consumption.

GHASP commented that the 85% recovery dryer control efficiency is too low. GHASP recommended to use 90-95% control efficiency that can be achieved via an incinerator or a carbon absorption system.

The TNRCC disagrees with the commenter. The 90-95% control efficiency would require that an incinerator or a carbon absorption system be used instead of a recovery dryer. The TNRCC has evaluated this option and found that these technologies are very expensive and beyond what is considered reasonably available technologies for this type of

facility. The cost of a carbon absorption system that can be used on a standard dryer is in the order of \$100,000 or five times the cost of a recovery dryer. The slight increase in control efficiency when using a carbon absorption system does not justify the additional increase in capital cost.

GHASP commented that the term "perceptible leaks" under §115.552(3) is misleading and must be better defined.

The TNRCC agrees that the term "perceptible leaks" could be misleading. It is intended to mean "visual, audible, or olfactory leaks." The TNRCC has redefined this term accordingly.

GHASP recommended adding the phrase "seals must be kept in good condition at all times" to §115.552(3)(B).

The TNRCC believes that the addition of this phrase is not necessary. Section 115.552(3)(A) includes language which requires weekly inspection of all equipment and system components including seals.

GHASP commented that three working days is too long to repair a leak. All repair parts should be on stock at all times. No repair time extensions should be allowed without prior notification from the TNRCC.

The rule language regarding repair of leaks is consistent with EPA's New Source Performance Standards for new and/or modified dry cleaning facilities. The TNRCC believes that facilities may run into situations where spare parts are not readily available and may face delays in ordering them. Allowing facilities an extension in this type of situations is justifiable. Fugitive emissions from petroleum dry cleaning facilities are estimated to represent less than 10% of the total emissions. The TNRCC believes it is an excessive requirement for these facilities to request a TNRCC extension every time a leak repair is needed.

GHASP asked how continuous compliance would be achieved without continuous monitoring.

Continuous compliance is achieved by the Control Device Monitoring methodology implemented and used in many of the state and federal regulations. Performance and compliance of the control technology is determined from initial testing of the control device and the manufacturer's recommendations of how it should be operated over time.

Under §115.555(a), GHASP recommended to revise the phrase "the entire flow of recovered solvent should be diverted" to "the entire flow of recovered solvent will be diverted."

The TNRCC agrees with the commenter and has revised the rule language accordingly.

GHASP commented that under §115.557, no dry cleaning facilities should be exempt from the fugitive emissions requirements.

The TNRCC agrees with the commenter. The proposed rule language requires all petroleum dry cleaning facilities to comply with the fugitive emissions requirements. Dry cleaning facilities consuming 2,000 gallons per year of petroleum solvent or less are currently exempt from the control requirements of §115.152(a)(1) only. All dry cleaning facilities

are required to comply with the control requirements of §115.152(2) and (3), pertaining to filtration systems and fugitive emissions.

Consumer Products. CTFA, Helene Curtis, and P&G argued that state rules were unnecessary and preferred that the TNRCC defer action to regulate consumer and commercial products until national regulations are adopted. ACMC proposed that the TNRCC wait to adopt regulations until EPA's extensive consumer product study is available.

The TNRCC staff does not agree that state rules are unnecessary until national regulations are adopted. State rules are necessary to comply with the Clean Air Act, §182, which declares that "the State shall submit a revision to the applicable implementation plan to provide for volatile organic compound emission reductions, within six years after the date of enactment of the Clean Air Act Amendments of 1990, of at least 15% from baseline emissions, accounting for any growth in emissions after the year in which the Clean Air Act Amendments of 1990 are enacted." This requires states to develop a ROP implementation plan to reduce VOC emissions, by 15% below 1990 base year levels, by November 15, 1996. The staff's analysis of achievable reductions indicates that reductions from consumer products are indeed necessary to meet this requirement.

Section 183 of the 1990 FCAA Amendments provides for federal rules and/or guidance from consumer products. It requires that the EPA Administrator conduct a study of emissions from consumer and commercial products by 1993, and further requires that the Administrator list categories of products accounting for 80% of VOC emissions, dividing the list into four groups and establishing priorities for regulating these groups. The Act states that "Every two years after promulgating such list, the Administrator shall regulate one group of categories until all four groups are regulated." It further provides that control technique guidelines may be issued in lieu of regulations. National rules are forthcoming, but not for most categories of consumer products until after 1996. Since most reductions from national rules will not be achieved until after 1996, they are not creditable toward the 15% ROP requirement.

The adoption of federal regulations and/or guidance in accordance with Section 183 will not be timely enough to help the State meet the 15% emission reduction requirement by 1996, so Texas consumer product rules have been proposed in advance of national rules. Deferral of rulemaking until national regulations are adopted is infeasible, and the TNRCC has thus elected to proceed with consumer and commercial product rulemaking in 1994 to meet the EPA deadline for submittal of ROP reductions.

If state rules are deemed necessary, Helene Curtis supported the rules as proposed. NCTCOG and EPHD endorsed the consumer products rule as proposed.

The adopted version of the regulation contains a few minor revisions that are intended to simplify and improve the proposal, making compliance easier while retaining most of its originally intended environmental benefits.

CTFA supported the control requirements for antiperspirants and deodorants. CTFA also supported the personal care products' proposed VOC levels, subject to resolution of relatively minor issues, as being consistent with other states and commercially and technically feasible. CTFA, EPA, P&G, and Pennzoil supported the adoption of standards that are consistent with other states, notably California, and note that the proposal achieves this. Pennzoil urged the TNRCC to continue to follow California standards for consumer product VOC reductions that occur after 1995.

Most manufacturers affected by this rule produce and distribute a single formulation nationwide for each of their products. These products enter into highly complex distribution systems, often involving independent companies that provide wholesale, retail, transportation, warehousing, inventory management, and distribution services, therefore, manufacturers often have little or no control over the geographic location at which their products are ultimately offered for retail sale. Because of this, most manufacturers cannot produce different product formulations to comply with different consumer products regulations in each state. Even if it was possible, doing so would be enormously costly and would produce little environmental benefit. Adoption of different VOC content standards in different states would clearly be unworkable.

Few, if any, states have yet adopted air quality regulations for consumer products. California currently has the only truly comprehensive regulation in the nation, adopting limits for sixteen separate product categories in a first regulatory phase in October 1990, and ten different product categories in a second phase in January 1992. Additionally, California promulgated separate regulations for antiperspirants and deodorants in November 1989. The California regulations were required by provisions of the California Clean Air Act which stipulated that the California Air Resources Board (CARB) adopt regulations to achieve the maximum feasible reductions in VOC emissions from consumer products.

Extensive supporting work, including negotiations with industry, a review of technical literature, and a comprehensive survey of consumer products, was undertaken in the development of California's regulation. Their survey solicited cost, product formulation, sales data, and other relevant information from manufacturers. Using the data from the survey, the CARB staff estimated the VOC emissions from each product category, identified products with low emissions, estimated market and emission shares for various product forms, and determined the percentage of the market for each category that was then in compliance.

The general strategy followed by California in establishing standards was to identify low VOC products already available in commerce, and direct product development in order to have similar products at essentially the same low VOC level. For each product category, CARB identified at least one product that complied with their proposed VOC content limits. This became the basis for the

control limits that were ultimately promulgated.

The TNRCC's resource limitations prevented conducting a comprehensive consumer product survey and otherwise conducting the type of exhaustive development work that CARB performed. Instead, the TNRCC staff assumed that consumer product usage patterns were essentially the same as CARB reported, but that emissions and sales for each category were proportionally smaller, based on relative population sizes. To take advantage of CARB's development work and have standards consistent with California, TNRCC's regulation includes the same VOC content limits that California adopted for most product categories.

For some categories, California has adopted future effective standards, phasing in one or two decreasing limits in subsequent years to the compliance date for the first tier of standards, which become effective by 1995. These categories include single phase aerosol air fresheners, engine degreasers, non-aerosol glass cleaners, hairsprays, nail polish removers, aerosol dusting aids, fabric protectants, aerosol household adhesives, and crawling bug insecticides. For these, the later tier of standards are forcing industry in many cases to develop technologies to make sizable reductions in VOC content in order to meet stringent regulatory requirements.

Although at least one existing product is currently available that meets present and future California limits for each category, not all of these products perform as well as manufacturers and consumers expect, leading to extensive efforts to develop effective new products that meet the California standards. Technologies to meet these standards which meet consumers' performance expectations are not yet available for many of the product categories. Other technical barriers, such as a lack of non-VOC aerosol propellants necessary to produce new product formulations, make compliance with later California standards difficult even when the technology already exists to achieve compliance. The TNRCC has not adopted these later tiered standards because they force technology development beyond what is currently readily available to many affected companies.

The TNRCC rule is intended to achieve reductions by 1996 in order to comply with the 15% ROP requirements and to help demonstrate attainment of the ambient ozone standards. Reductions beyond the year 1996, particularly technology forcing ones, are beyond the scope of this regulation. Later rules may be proposed and adopted to achieve additional reductions as the need for post-96 reductions arises. The TNRCC staff intends to stay apprised of the status of development of VOC reduction technologies in consumer products in order to assess the reasonableness of future reductions. Additional time will allow an evaluation of the advancement of technology. Then viable, technically feasible post-96 limits will be adopted where needed.

CTFA supported the innovative products provision, the alternate control requirements, and the testing provisions of the proposed rule.

The TNRCC staff endorses these provisions

as environmentally sound ways of facilitating compliance. Innovative products provisions and alternate methods of demonstrating compliance allow for a case-by-case evaluation of individual companies' circumstances, provided that a concurrent reduction in emissions of an equivalent or greater amount, or an economic hardship, can be demonstrated.

The proposed alternate control requirements, §115.613, provided for the Executive Director to grant a variance under certain conditions. However, under the TCAA, §382.028, a variance is "an exceptional remedy" that may only be granted if a rule "results in an arbitrary and unreasonable taking of property." This standard would make the granting of a variance for a consumer product under any circumstances highly unlikely. This is not the intent of §115.613, so the adopted version of the regulation refers to "alternate control requirements" procedures instead of variances.

These alternate control requirements procedures provide for one of two conditions. First, under a CARB variance, companies are allowed additional time to comply with a CARB standard after the effective date of the standard, with increments of progress specified in a variance order. A corresponding TNRCC order could be granted pursuant to the CARB variance, with terms and conditions specified in writing by the TNRCC Executive Director.

Second, an alternate control requirements order can be independently granted by the TNRCC if a company can demonstrate inability to comply because of "extraordinary reasons beyond a person's reasonable control". Strict guidelines for granting an order are specified in §115.613, which ensure that consideration is given to "the public's health and physical property associated with product emissions." This allows companies modest flexibility while still achieving significant VOC emission reductions.

The testing procedures allow for the selection of any accurate and appropriate method of determining VOC concentration in a product, including the use of records of the amount of constituent compounds used in its manufacturing process. Many of the test methods presently used to determine VOC content have yet to be validated, so product constituent methods are the most consistently reliable methods currently available. These test provisions are intended to be simple and flexible, yet ensure that the VOC content in a consumer product is accurately represented.

CTFA, CSMA, P&G, R&C, SCJ, Clorox, and Sherwin, believe that compliance should be based solely on the date of manufacture of a product, and that the November 15, 1996 date by which noncomplying products must be sold or no longer offered for sale should not be specified in the regulation.

The proposed regulation included a date by which manufacturers must produce consumer products that comply with the applicable VOC content standards, and a November 15, 1996 compliance date after which companies may no longer sell or offer for sale noncomplying products. This idea was borrowed from the California consumer product regulation, which contains a similar provision. This so called "self-through" provision is the requirement

that these commenters dispute, suggesting that it be eliminated entirely so that products manufactured before the effective date of the standards may be sold indefinitely.

The TNRCC staff held discussions with affected industries and the staff of CARB to solicit opinions on the impact of the self-through provision. As a result of these discussions, the rule was revised to allow compliance based solely on the date of product manufacture. This is a departure from the regulatory approach used by CARB. The fundamental reason for the change is to simplify compliance and enforcement.

Thousands of affected consumer product types are displayed on shelves in thousands of retail establishments around the state, each establishment offering hundreds or even thousands of individual units, resulting in millions of individual affected units. A single non-complying unit that is being offered for sale in Texas could potentially represent a violation. Because of the sheer numbers of affected units, the process of looking for violations could indeed be a massive undertaking, even without the added complexity of enforcing a self-through provision.

Without the self-through provision, the TNRCC enforcement staff would only attempt to identify non-complying units manufactured after the date specified in the table of standards, a task simplified by the fact that the rule requires dates or date codes to be displayed on the packaging or container of products manufactured after January 1, 1995. In order to enforce the self-through provisions, the enforcement staff would, after November 15, 1996, also be required to check retail establishments for noncomplying units manufactured prior to manufacturing compliance date. However, products manufactured before January 1, 1995 will not be required to display dates or date codes, so undated non-complying products could possibly be displayed alongside otherwise identical undated complying products. The complying products could be sold indefinitely, but the noncomplying products cannot, and it would be impossible for the enforcement staff to detect any formulation difference between them without testing each unit in a laboratory.

Non-complying dated products could also be displayed alongside otherwise identical complying dated products and, after November 15, 1996, only complying products may be sold. The complying products would again be impossible to differentiate from the non-complying products without a laboratory analysis or knowledge of when formulation changes were made. Companies often manufacture consumer products at different plants and in different locations, so the date that product formulations are changed to comply with regulatory limits could vary by manufacture location, and would be difficult or impossible to track on a unit-by-unit basis.

Clearly, imposing self-through provisions would involve using an enforcement scheme that would be difficult, if not impossible, to practically implement. Manufacturing processes involve uniformly producing large quantities of a product, so enforcing the date of manufacture would generally involve identifying major failures to follow regulatory provi-

sions Enforcing the sellthrough date, on the other hand, would involve attempting to identify small individual violations caused by single units found to be out of compliance, out of millions of potential violations. This immensely increases the complexity of enforcement.

Eliminating the self-through provisions would assign manufacturers the sole responsibility for compliance. This would greatly simplify the enforcement process. Because manufacturers will be required to date or date-code products, enforcement staff could simply review the manufacture date to determine when a product was manufactured and compare this with technical data solicited from and submitted by manufacturers to determine if a rule violation has occurred. Random agency testing of products and a review of testing or product constituent information provided by manufacturers would supplement these enforcement methods.

Most consumer products have highly sophisticated distribution channels, with products often passing through the hands of independent wholesalers and distributors before appearing on retail shelves. Only about 10% of wholesale establishments are managed by manufacturers themselves, most wholesale services are performed by middlemen that often buy, take title, and take possession of products for further resale to retailers or to other wholesalers. Thus, violations might not necessarily be the sole responsibility of retailers, several middlemen in a long vertical line of distributors might also be liable for selling noncomplying products after the sell-through date. Adequately enforcing the sell-through provisions would require the TNRCC staff to determine when and if transactions between wholesalers, retailers, and other distributors occurred involving noncomplying products. This would require many staff hours reviewing invoices, shipping documents, manufacturing records, and sales data. This task could easily consume more staff hours than would be available for the task of enforcing this rule.

Enforcement personnel cannot always be certain of the actual ownership of products that are offered for sale in retail stores. Some full-service wholesalers stock and maintain the inventory of products that are displayed on store racks. They own the merchandise on these racks, selling items on a consignment basis so that their retail customers do not have to pay for unsold products. Their retailers exercise little control over their product marketing and shouldn't be held liable for violations over which they have little or no control. This is an example of a type of wholesale/retail arrangement that would make enforcing sell-through provisions exceedingly difficult and complex.

Retailers, wholesalers, and distributors, which would otherwise be unaffected by this rule, would be forced to ensure that their operations are in compliance. In the United States, there are approximately 420,000 wholesale establishments with annual sales of over \$2 trillion, and a sizable number of these distribute goods in Texas. Additionally, over 99,500 retail establishments with 1993 gross sales of \$117 billion, employing over

13 million people, are located in Texas. Since the rule addresses broad, diverse product categories, a large number of these retailers sell consumer products that will be affected by this rule. The sell-through provisions would regulate thousands of businesses that would otherwise be unregulated, undoubtedly resulting in enormous capital expenditures. These companies would be required to establish management systems to monitor, track, and control the transportation, warehousing, sorting, inventory management, contracting, sales, and physical distribution of millions of individual units to ensure that products, which were not out of compliance with any regulatory provisions when manufactured, are not offered for sale after the sell-through date. This would require additional staffing, facilities, electronic data systems, and other resources, involving large unnecessary expenditures of capital.

Such expenditures would result in small reductions of emissions. Data was submitted by CSMA, based on a recent study, which measured the age from the date of manufacture of various products offered for sale at various retail outlet types. The study suggests that most products are sold within two years from the date of manufacture without the incentive of having a sell-through date. This is important because the sell-through provisions allowed almost two years for the sale of most noncomplying products under the proposed rule. At all retail outlets surveyed by the CSMA study, only 6.1% of hairsprays, 9.8% of nail polish removers, 2.6% of aerosol cooking sprays, 1.6% of glass cleaners, and 5.2% of floor waxes remained available two or more years after the date of manufacture. After three years, the remaining available amounts decrease to 1.5% or less for each of these categories. These fairly small percentages, then, represent the relative portion of emission reductions from each of these product categories that would not be achieved if the sell-through provision was eliminated. In the TNRCC staff's opinion, these amounts are not worth the added cost and complexity.

The data also shows that the sell-through period for most consumer products is less for large, high volume retailers than for small, individually owned retail establishments. For example, CSMA's survey data showed that in supermarkets, 30% of products were between two and three years old, whereas at small food stores, 80% of the product checked was over two years old. Comparison of data showed that this trend holds for individual product categories. Small retailers would have the greatest difficulty dealing with the logistics of inventory control to comply with the sell-through provisions, so the impact of the sell-through provision on smaller businesses is disproportionately large.

Reductions which result from including the sell-through provisions would be temporary, since all noncomplying products will eventually be sold and consumed within a finite period of time. Only during a short transitional phase, would products made before the manufacturer's compliance date be available and have the potential to contribute emissions. Eventually, emission levels will be exactly the same without the sell-through requirement as if the sell-through requirement was included.

Without sell-through provisions, manufacturers could conceivably stockpile a large inventory of noncomplying products just prior to their manufacturing compliance date to avoid rule compliance, and continue to sell this stockpiled inventory indefinitely. In TNRCC staff's opinion, this is an unlikely scenario. Modern inventory management techniques attempt to provide a continuous flow of goods and match the quantity of goods kept in inventory as closely as possible with sales demand. Inventory on hand cannot be too large because costs, which include inventory, insurance, warehouse space, credit, and product obsolescence, can be substantial. Companies now employ just-in-time inventory systems, with purchasers of goods ordering more frequently, in lower quantity, and using computer data linkups, to reduce inventory costs. Tremendous economic disincentives simply make stockpiling to avoid rule compliance cost prohibitive.

CSMA noted that an additional burden is created for products which have a January 1, 1996 manufacturing compliance date and for products registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), because the sell-through period is only 10 1/2 months. If a sell-through period is imposed, SCJ prefers that an additional year be added to the sell-through period for FIFRA-registered products and for the category "Glass Cleaners-All other forms".

The staff agrees with the positions expressed by SCJ and CSMA. Products registered under FIFRA have an additional year to meet the Control Requirements specified in the rule, so the sellthrough provisions, which required that noncomplying products no longer be offered for sale after November 15, 1996, imposed an unreasonable burden. In order to alleviate this burden and for other reasons, the sell-through provisions of the rule have been eliminated.

Clorox noted that the sell-through period is only eleven months for insecticide products.

The sell-through provisions have been eliminated from this rule. The staff agrees with Clorox's position that eleven months is burdensome because it doesn't allow adequate time to ensure that noncomplying products are no longer offered for sale.

Pennzoil supported the proposal to allow products manufactured prior to January 1, 1995 to be sold until November 15, 1996, noting that this should allow most manufacturers to deplete their inventories and allow distributors time to sell products already on their shelves.

The TNRCC staff agrees that allowing products to be sold until November 15, 1996 would allow most manufacturers time to deplete their inventories and allow distributors to sell products already on retail shelves. This lessens the need to include a sellthrough provision in the regulation.

Phillips suggested that a requirement be added for product manufacturers to notify wholesale purchasers of noncomplying products recently shipped that will already be in the distribution system, so that products in inventory that will not be in compliance with

the new regulation can be identified

Since compliance will be based solely on the date of manufacture, identifying noncomplying products already in the distribution system will not be necessary

3M suggested that reporting requirements of §115.616(d) be extended to any regulated consumer product sold in Texas, instead of being limited to antiperspirants and deodorants.

The intent of §115.616(d) was to require reporting for antiperspirant and deodorant products only. This requirement was included to provide information to support future possible rulemaking for antiperspirants and deodorants. For antiperspirants and deodorants, the proposed rule contained limits for high volatility organic compounds (HVOCs) only, thus regulating only the propellants used in aerosols, while other VOCs contained in antiperspirants and deodorants can be present in unlimited quantities. In order to provide the TNRCC staff with technical data to support future possible VOC reductions from these categories, the reporting requirement of §115.616(d) will be retained.

CTFA and P&G opposed the requirement in §115.616(d) for biennial registration of antiperspirants and deodorant, instead preferring a one-time registration requirement with further registrations provided on an as-needed basis.

The staff concurs with these recommendations. This requirement is intended to facilitate future rulemaking for these product categories, and the recommendations presented by CTFA and P&G would suffice to meet the staff's need for technical data. Section 115.616(d) has been revised to require one-time submittal of data for antiperspirants and deodorants, with a requirement for additional submittal of data as significant formulation changes are made.

CTFA and P&G supported deleting or modifying the most restrictive limit provision, whereby if a product is represented for use as a product for which a lower VOC standard applies, then the lower VOC standard is used for the product. CTFA and P&G supported exempting hairsprays, antiperspirants, and deodorants from the most restrictive limit provision. CSMA argued that the most restrictive VOC standard is overly restrictive, and suggested that the VOC standard which should apply to products with more than one use is the standard for the product's principal use.

The TNRCC staff conceptually agrees with the concerns expressed by these commenters, but does not agree with their specific recommendations. Most antiperspirants include the ability to reduce or minimize odor and are marketed as antiperspirant deodorants. Under the proposal, the lowest standard of the two product categories would be applied, making antiperspirants subject to 20% HVOC limits, instead of 60%. This is an unintended consequence, so the rule has been revised to exempt antiperspirants from the most restrictive limit provision, as suggested by CTFA and P&G. The TNRCC staff does not agree with the suggestion to exempt hairsprays, because hair styling products such as gels and mousses could conceivably be marketed as hairsprays in order to circumvent their regulatory limits.

CSMA presented a troublesome scenario, for which no simple resolution exists. A product which is used 99% of the time for a certain application and 1.0% of the time for another use could, in fact, be held to the standard for the category in which it is used only 1.0% of the time. Their suggested approach is to change §115.612(e) so that "any representation" becomes "any significant representation" that a product is suitable for another use would cause the lower VOC standard to apply. The TNRCC staff rejects this approach, because what constitutes a "significant representation" is ambiguous, difficult to determine, and potentially subject to continual dispute. The language of §115.612(e) is, therefore, unchanged, except to exempt antiperspirants.

A company that cannot comply with the most restrictive limit provision has the option of either changing the representation on its principal display panel, or applying for alternate control requirements in accordance with §115.613. An alternate control requirements order could then be granted, if appropriate, which would specify new terms and conditions based on "technical practicability and economic reasonableness", in lieu of a "lowest VOC standard".

CTFA suggested changing the definition of HVOC to "Any volatile organic compound that exerts vapor pressure greater than 80 mm Hg when measured at 200 degrees Centigrade." CTFA also suggested changing the definition of "Medium volatility organic compound (MVOC)" to "Any volatile organic compound that exerts vapor pressure greater than 2 mm Hg and less than or equal to 80 mm Hg when measured at 200 degrees Centigrade."

The staff agrees with this comment and has made the suggested changes. The reference to 200 degrees Centigrade was an error in the published manuscript. Referring to volatile organic compounds in the definition will provide clarification that only compounds that are defined as VOCs in §115.10 are considered HVOCs and MVOCs for the purposes of this rule.

CSMA commented that extremely burdensome and detailed product registration requirements are unnecessary, and that this detailed provision, which has been required in a similar regulation adopted by CARB, has been eliminated from the proposed rule. CSMA added that the innovative products provisions, the variance procedures, and the removal of technology forcing requirements are an improvement over the CARB regulation and an earlier draft version of the TNRCC regulation.

The staff agrees with these comments, and has worked extensively with industry to develop a workable regulation. Detailed product registration requirements were carefully considered, but were determined to be burdensome and unnecessary. The submittal of detailed information to the TNRCC is a large undertaking which does little to enhance the enforcement of this rule, and, therefore, is of little environmental benefit. The rule, as written, allows the TNRCC to obtain information required for rule enforcement upon staff's request.

The innovative products provisions and variance procedures were simplified to make administrative compliance less difficult. The variance procedures were changed to alternate control requirements procedures, to prevent applicants from having to demonstrate "an arbitrary and unreasonable taking of property", as the Texas Clean Air Act requires. The staff believes that more complicated administrative provisions would do little to reduce emissions, but would be more burdensome to industry and the TNRCC.

The technology forcing VOC content standards that have been adopted by CARB are not currently believed to be workable in Texas. Technology forcing requirements are highly controversial, and the TNRCC lacks the staff to conduct the research necessary to support their development. However, companies are undertaking efforts to develop new technologies in a number of consumer products categories. The TNRCC will continue to stay apprised of the status of these efforts so that stricter standards may be adopted in future revisions to this regulation if technology advances sufficiently, and if future implementation plans require further reductions.

CSMA and R&C recommended extending the manufacturing compliance deadline for charcoal lighter fluids to January 1, 1996, to allow manufacturers time to procure raw materials and conduct testing of new product formulations.

The staff has held meetings with R&C and CSMA, and has reached a resolution of this concern by extending the compliance deadline for charcoal lighter materials as recommended.

Charcoal lighter fluids are, by definition, materials that are used with charcoal and combusted during barbecuing, and are usually applied in liquid form. According to CARB's consumer products survey, the dominant products are petroleum distillate-based, non-petroleum-based lighter materials do not have significant market shares. Petroleum distillate-based products are comprised of 100% VOC, with properties similar to kerosene. The control limits for these products are on a pounds-VOC-per-start basis.

In order to produce petroleum-based charcoal lighter fluids that comply with the provisions of §115.612, companies must procure new, lower emitting aliphatic or naphthyl type petroleum distillates from refiners, then must submit reformulated lighter fluid to approved laboratories for detailed and time-consuming tests. Refiners might not have readily available supplies of petroleum distillates that can meet the standard, requiring additional time for procurement. Testing of formulas is time consuming because of the test's high degree of variability and dependence on satisfactory weather conditions for completion of acceptable test runs. Some companies' formulations already contain the lower emitting distillates and are certified by CARB to meet the same standards as the Texas rule, but for those that have not, these steps require greater time than the originally proposed January 1, 1995 compliance deadline allowed. The revised rule language has extended the compliance deadline for charcoal lighter materials to January 1, 1996, as these commenters have suggested. This date is still in advance of the statutory deadline for achieving the required

15% VOC reductions

Sales and consumption of lighter fluids tend to be higher during warm weather months. Because sales of this product are seasonal, much of manufacturers' inventory of noncomplying products are expected to be sold prior to November 1996, the eventual date by which the reductions are needed for the implementation plan.

CSMA, R&C, and Clorox recommended modifying the standard for charcoal lighter fluids to allow emissions of 0.020 pounds of VOC per start on average, instead of simply imposing 0.020 pounds VOC per start as an upper limit. This change is to account for the inherent statistical variability associated with established test methods when determining compliance using accepted protocol.

The TNRCC staff agrees. Due to the variability associated with the test methodology used to demonstrate compliance, the staff has agreed to the suggested change. The emissions standard for charcoal lighter fluid now requires an average of 0.020 pounds of VOC per start.

Phillips suggested that the final compliance date of January 1, 1995 for certain products be extended by at least 24 months.

The TNRCC staff disagrees with the position expressed by Phillips. The final compliance date would be January 1, 1997 for most products if it was extended by 24 months, and this would place it after the November 1996 statutory deadline for achieving 15% VOC emission reductions. For most product categories, no opposition by other companies or industry groups to the proposed January 1, 1995 deadline has heretofore been expressed, so most affected companies are presumably able to comply.

Furthermore, many companies market their products nationwide and manufacture only one formulation of each product for nationwide distribution. These companies have known for several years that virtually identical VOC content standards have been effective or will be in the near future in California, allowing adequate time to plan to meet the specified compliance deadlines in Texas.

CSMA suggested raising the standard for "glass cleaners--all other forms" from 6.0% VOC by weight, as proposed, to 8.0%.

Non-aerosol glass cleaners are specialty cleaning products intended for use on glass surfaces that are available in liquid/pump form. The proposed control limit for the so-called "glass cleaners--all other forms" category is 6.0%. CSMA argues that the 6.0% standard would be "difficult for manufacturers to reach by 1-1-95", but the rule as proposed does not require products to meet this limit until January 1, 1996. This limit and its compliance date are consistent with regulatory limits adopted in California.

CARB's 1990 consumer product survey revealed that non-aerosol glass cleaners comprised a 94% share of the glass cleaner market, with a sales-weighted average VOC content of 6.0%. Typically, they have high water content, with either ethyl alcohol or isopropyl alcohol and surfactants used to re-

move soils. Some products contain vinegar as a cleaning agent, but these contain higher VOC content levels to improve product efficacy. CARB has estimated that 73% of the non-aerosol glass cleaner market, representing 26 individual products, are currently available that comply with the proposed 6.0% standard. As proposed, this category is expected to produce statewide VOC emission reductions of 0.96 tons per day.

Based on the sales-weighted average of existing products, the number and large market share of complying products, the potential for achieving reductions, and consistency with California standards, the TNRCC staff believes that the proposed 6.0% control limit is appropriate. The relatively few noncomplying products are expected to be able to achieve compliance, primarily by the replacement of VOC solvents with water or other exempt solvents.

CSMA noted that the proposed rule exempts products which are offered to consumers free of charge from the requirement to display manufacture dates or date codes on the packaging. CSMA recommended keeping this provision as is, instead of applying it only to fragrances, as has been done in CARB consumer products regulations.

The exemption from the requirement to display dates or date codes on product packaging for free samples was drafted and proposed in error and has been removed. According to CARB's consumer products regulation, this exemption only applies to small fragrance samples. This is done because offering consumers free samples is a commonly used marketing technique in the personal fragrance industry.

CSMA has argued that eliminating this exemption would prevent member companies from offering donated products following natural disasters and other emergencies, which is not true. Companies may still offer free donated products following natural disasters, as they have occasionally done in the past, provided that they include the required labeling. Furthermore, the exemption as currently written only applies to products that are offered "for the purpose of sampling the product," so eliminating this exemption would have no effect on companies' ability to donate products since a charitable donation is not being offered for sampling purposes. The exemption only applies to labeling requirements, not to any other regulatory provision.

Products that are offered free of charge contribute VOC emissions, just as certainly as products offered for sale. Distributing free products without manufacture date labeling makes rule enforcement difficult, this would degrade the effectiveness of the rule. Without such labeling, the TNRCC's enforcement staff would be unable to determine which products are intended to be in compliance, and which products were manufactured before the effective date of the standards. No compelling reason for exempting free products has been presented. Since fragrance products are not addressed anywhere in the regulation, §115.616(a) has been revised to eliminate the exemption for free products entirely. This is consistent with the CARB regulatory scheme, and helps preserve rule effective-

ness.

CSMA suggested changing the name of the "aerosol cooking sprays" category to "cooking sprays-aerosol" for consistency with other product categories.

The TNRCC staff agrees, and has made the suggested change.

CSMA and FMA noted that the word "products" in §115.617(c) should be changed to "fragrances." CSMA also suggested removing the reference to "colorants" from this paragraph. FMA suggested deleting the exemption for colorants because colorants as generally used in consumer products are not volatile.

The TNRCC staff agrees that the word "products" should be "fragrances" in §115.617(c), and has made the suggested change. The staff also agrees to remove the reference to colorants in §115.617(c) for the reason suggested.

CTFA and P&G suggested rewording the exemption language of §115.617(c) so that fragrances contained in products in quantities up to a combined level of 2.0% VOC by weight are exempt.

Section 115.617(b), which says that "The requirements of §115.612(a) shall not apply to products and colorants up to a combined level of 2.0% VOC by weight contained in any consumer product" was drafted and proposed in error. The word "products" has been changed to "fragrances."

L&F proposed changing the definition of "air freshener" to read "Any consumer product including, but not limited to, sprays, wicks, powders, and crystals, designed for the purpose of masking odors, or freshening, cleaning, scenting, or deodorizing the air. This does not include products that are used on the human body, products that function primarily as cleaning products, or disinfectant products claiming to deodorize by killing germs on surfaces. It does include any such products that are expressly represented for use as air fresheners. To determine whether a product is an air freshener, all verbal and visual representations regarding product use on the label and packaging, and in the product's literature and advertising, may be considered. The presence of and representations about a product's fragrance and ability to deodorize (resulting from surface application) shall not constitute a claim of air freshening, nor shall comparisons with air fresheners in trade literature constitute a claim of air freshening unless such comparisons expressly refer to use of the product as an air freshener."

Based on negotiations between L&F, SCJ, and the TNRCC, the definition of "air freshener" has been revised to read as follows: "Any consumer product including, but not limited to, sprays, wicks, powders, and crystals, designed for the purpose of masking odors, or freshening, cleaning, scenting, or deodorizing the air. This does not include products that are used on the human body, products that function primarily as cleaning products, or disinfectant products claiming to deodorize by killing germs on surfaces. It does include spray disinfectants and other products that are expressly represented for

use as air fresheners To determine whether a product is an air freshener, all verbal and visual representations regarding product use on the label and packaging, and in the product's literature and advertising may be considered. The presence of and representations about a product's fragrance and ability to deodorize (resulting from surface application) shall not constitute a claim of air freshening "

This change clarifies the distinction between air fresheners and disinfectants, prevents a company from circumventing the regulatory requirements for air fresheners by including a minuscule quantity of a disinfecting substance in an air freshener in order to be classified as a disinfectant, and limits companies' ability to market disinfectant products as air fresheners without being subject to regulatory limits. The TNRCC staff fully agrees with this change and appreciates the efforts of interested parties to reach a satisfactory resolution of disagreements about the content of the air freshener definition. It was negotiated to address questions about Lysol Disinfectant Spray, a disinfectant product with potential air freshening capability which is manufactured and marketed by L&F Since Lysol is potentially a dual purpose product, controversy arose about how Lysol should be classified for the purpose of applying this regulation

The modifications to the definition of the term "air freshener" are designed to ensure that the VOC reductions to be achieved from the regulation of this category are verifiable, quantifiable, and enforceable within the meaning of EPA's guidance for approvable SIPs It is not intended to bring within this category products such as Lysol, as long as they are marketed solely as hard-surface disinfectant sprays, consistent with the terms of their federal and state registrations

The current intent of the TNRCC, based only on comments presented to the staff pursuant to this rule proposal, is not to regulate Lysol as an air freshener, but instead classify it as a surface disinfectant, which is not subject to this regulation This classification is subject to change if it is found to be "expressly represented for use" as an air freshener after the effective date of the regulation Although Lysol has, in the past, been labeled for use for spraying in the air in addition to hard surface disinfection, current registered labeling no longer contains such representation, and L&F has expressed an intent not to include it in future labeling and advertising Some older Lysol cans can still be found in commerce which display past usage claims, however, and past product marketing has supported these claims Nevertheless, based on information currently available to the staff, Lysol will be classified as a disinfectant, not an air freshener, as long as it is marketed in a manner consistent with its current registered labeling

L&F supported the decision not to include a dual-purpose air freshener/disinfectant from the proposed rule, and supported the TNRCC's intent to ensure that disinfectant claims don't circumvent air freshener VOC limitations

The TNRCC staff conducted several meetings with L&F during the development of the proposed regulation, at which L&F voiced

concerns that efforts to limit the VOC content of disinfectant products, such as Lysol Disinfectant Spray, would render the product less efficacious in its use as a surface disinfectant and disease preventative in household and institutional settings Extensive data was presented to support these arguments. The TNRCC staff, assisted by the Texas Department of Health, agreed that the product's effectiveness in destroying microorganisms under controlled test conditions is enhanced by its 79% ethanol content, and decided not to include dual-purpose air freshener/disinfectants as a product category in the proposed regulation

Although Lysol's efficacy in tests is enhanced by its ethanol content, the staffs could not conclude from L&F's data that the degree of microorganism destruction resulting from its use is necessary for most household and institutional settings, nor could a conclusion be drawn that the product is effective as a disease preventative in actual use Conclusive data was lacking, for example, that would show whether or not recontamination would occur within a short time period after Lysol's use on a surface contaminated with pathogenic bacteria These and other technical questions which remained unresolved could make disinfectants or dual-purpose air freshener/disinfectant products subject to future TNRCC regulations if the category is deemed useful for future VOC reductions in later implementation plans

L&F argued that the rule puts the TNRCC in the position of regulating labeling and advertising of disinfectant products in an intrusive manner, and infringes on the jurisdiction of government agencies which regulate disinfectants under pesticide statutes Labeling and advertising are subject to scrutiny by other governmental bodies, and must be consistent with registered uses for pesticide products

The TNRCC staff disagrees with L&F Although the proposed regulation addressed labeling and advertising of disinfectant products, it did so merely as a way of classifying products for the purpose of applying the Control Requirements It in no way restricted or limited the ability of companies to advertise and label products, nor did it in any way infringe on the jurisdiction of other agencies which regulate the labeling and advertising of pesticides For the regulation to apply regulatory standards to air fresheners but not to disinfectants, a means of differentiating between these two separate and distinct product categories is required Labeling and advertising are crucial factors in making this differentiation, because manufacturers and marketers use labeling and advertising to characterize a product and represent its uses to consumers and retailers

Nevertheless, this issue has been resolved to the satisfaction of L&F See staff's earlier response

R&C supported the definition of air fresheners contained in the proposed regulation

The proposed definition has been subject to minor modification See the staff's earlier response

SCJ favors one of the following two strategies

for the regulation of dual purpose air freshener/disinfectants including a category and an appropriate emission limit for dual purpose air freshener/disinfectant products, or eliminating the dual purpose air freshener/disinfectant category, but amending the definition of dual purpose air freshener/disinfectants to clarify the distinction between air fresheners and disinfectants such that in effect no dual purpose products exist

This issue has been resolved to the satisfaction of SCJ. The second option suggested by SCJ in this comment was the approach agreed to by the TNRCC staff See staff's earlier response

Scott's suggested that a separate category be created for wood cleaner and preservative products, with a 15% VOC limit for both aerosol and non-aerosol forms of the product The existing proposed standards should be retained for other furniture maintenance products, but they should be categorized as "furniture polishes and furniture oils"

Furniture maintenance products are waxes, polishes, conditioners, and moisturizers intended for polishing, protecting, and enhancing finished wood surfaces, available primarily in aerosols, liquids, and pump sprays CARB has estimated that aerosols comprise 72% of the market and represent 87% of the emissions from this product category Liquids and pump sprays represent only an estimated 264 pounds per day of VOC emissions statewide in Texas

The TNRCC staff has performed a simple analysis of the emission reductions achievable for both the initially proposed regulatory scheme for furniture maintenance products, and for the regulatory scheme suggested by Scott's The staff discovered that following this suggestion would actually result in fewer VOC emissions than the initial proposal and would facilitate compliance by Scott's, the largest nationwide manufacturer of wood cleaner and preservative products

This is because Scott's produces only one product formulation for both its aerosol and non-aerosol wood preservative products, and its aerosol wood preservative utilizes a non-VOC propellant Thus, applying a 15% limit to both aerosol and non-aerosol wood preservative would result in a VOC reduction for both product forms, whereas the initially proposed regulation, which applies a higher limit to "furniture maintenance products-aerosols" than it does to non-aerosol products, would only force reductions in this category for the non-aerosol product form

Under the proposed regulation, the VOC content for non-aerosol wood preservatives would be such that the largest major producer of this product, Scott's, would no longer offer it for sale in Texas This is a punitive result which was not intended by this regulation The aerosol form, however, with its higher VOC content, would remain unchanged, thus, its emissions would be higher than under the approach suggested by Scott's Usage of the aerosol form is higher, so the net result under the proposed regulation would be higher emissions than would result from applying a 15% VOC content standard to both

product forms

However, the TNRC staff is concerned about the fundamental fairness of creating a separate category without administratively soliciting public comments during the formal rulemaking process, even though the proposed rule's applicability statement was broad enough to give adequate notice to all potentially affected companies. The potential remains for including other companies' products in the new category, thereby forcing other companies to comply with control requirements which they cannot meet, a completely unintended consequence. Also, the creditable emission reductions from including this category, 264 pounds per day statewide, would be quite small.

Therefore, the control requirements for liquid furniture maintenance products were deleted. Aerosols are now the only furniture maintenance product form covered by the regulation. The rule might be re-proposed in the future to apply only one VOC standard to both aerosol and non-aerosol wood cleaner and preservative products, as Scott's has suggested. However, to avoid unintentionally forcing other companies to make reductions beyond their technical capabilities, a separate category for wood preservative products must be developed.

Pennzoil suggested that TNRC follow EPA rulemakings regarding the use of chlorinated solvents, which may be used in some products to replace VOCs.

Pennzoil is concerned that chlorinated solvents would be used to replace VOCs in the reformulation of products. Some chlorinated hydrocarbons are classified as VOCs, according to the VOC definition listed in §115.10, but others are not. This definition is consistent with EPA's. Since some chlorinated solvents are themselves VOCs, they cannot be used as a replacement for VOCs if a company's intent is to reduce overall VOC content in products. Some chlorinated solvents, such as methylene chloride, will be regulated by EPA as hazardous air pollutants and are considered toxic. Since the toxicity of chlorinated solvents varies, all chlorinated compounds might not be regulated by EPA. Chlorofluorocarbons and hydrochlorofluorocarbons are regulated by EPA as stratospheric ozone depleters and will eventually be phased out.

Regulation of non-VOC compounds for their toxicity and ozone depleting potential will occur on the federal level, where necessary. The consumer products regulation is intended to control VOCs, but does not specifically address the use of chlorinated solvents. The TNRC staff notes and appreciates Pennzoil's comment concerning detrimental health and environmental effects from chlorinated solvents, but will allow their use to be addressed by federal rulemaking.

CPA supports the exemption of "air fresheners and insecticides containing at least 98% paradichlorobenzene" from VOC content standards, and encourages the TNRC to adopt the regulations as proposed.

Reformulation of paradichlorobenzene (PDCB) products, which typically contain

greater than 98% PDCB, is not currently technically feasible, as CPA has pointed out. Insecticides and air fresheners containing greater than 98% PDCB are not currently regulated for air quality reasons by any jurisdiction in the United States. PDCB is normally used as a continuous acting pesticide and a slow-release air freshener, its effectiveness depends on its ability to volatilize. Reformulating PDCB products to lower their volatility will reduce their effectiveness.

If their volatility was somehow reduced, effective usage would require increased quantities of PDCB, which would probably result in higher emission levels and increased, rather than reduced, environmental harm.

Virbac argued that flea and tick insecticides intended for use on animals should be exempted from the regulation.

The regulation as proposed does exempt flea and tick insecticides intended for use on animals. See the definition under §115.600 for "Flea and tick insecticide".

GHASP opposed excluding pesticides used for structural pest control from the definition of "agricultural use".

Certain structural pest control products could conceivably be used "in connection with the commercial production of (an) animal or plant crop," such as products that are intended for use in barns, farm silos, etc. Ambiguity of the term "agricultural use" is reduced by excluding these structural pest control products. Products that are for "agricultural use" are not considered "insecticides" for the purpose of this rule, because the rule's intent is to regulate household, institutional, and industrial use products. Products used by licensed structural pest control operators are regulated under the Texas Structural Pest Control Act, so they are exempted from the definition of "insecticides" under §115.600. This exemption excludes these products from this regulation.

GHASP favors including commercial, industrial, and agricultural users under the definition of "consumer".

The definition for "Consumer" in §115.600 includes purchasers of consumer products "for personal, family, household, or institutional use." In this case, "institutional" use includes commercial, industrial, and agricultural users of products which are not "incorporated into the manufacture of goods or commodities." An exception to this would be the exemption from the rule of insecticides for agricultural use, as noted previously.

GHASP opposed the rule provisions that allow for waivers to be granted. If the TNRC includes waiver provisions, GHASP favors requiring public notification, public hearings, and opportunity for public comment as part of the waiver process. GHASP also suggested requiring consideration of the public's health and welfare in considering an application for a variance.

The Texas Clean Air Act §382.028 states that a variance is "an exceptional remedy" that may only be granted if a rule "results in an arbitrary and unreasonable taking of property." This standard would make the granting of

a variance for a consumer product under any circumstances highly unlikely. This is not the intent of the consumer products regulation, so the adopted version of the regulation refers to "alternate control requirements" instead of variances.

Alternate control requirements under §115.613 (b) and (c) allow consideration of individual companies' circumstances in regulatory decision making. Without the flexibility allowed by these procedures, companies could be forced to comply with rigid, inflexible, inappropriate requirements which may result in little or no environmental benefit. For some companies, the impact of this would be disastrous.

However, alternate control requirements provisions allow for subjective, practical, realistic regulatory decisions to be made based on well-documented circumstances. Under §115.613(b), alternate control requirements can be granted by the TNRC Executive Director if an applicant has already been granted a variance for an identical product by California or another state.

Under §115.613(c), the circumstances under which alternate control requirements may be allowed must be "extraordinary" and will be subject to thorough scrutiny by the TNRC staff and the public. Public hearings will be held, enabling public comment and testimony. Strict guidelines are provided for the Executive Director to follow in determining whether or not to grant an applicant's request. Contrary to this commenter's contention that "TNRC has not required, in considering a variance, the product's impact on the public's health and welfare", the rule clearly states that "the Executive Director shall consider

injury to or interference with the public's health and physical property associated with product emissions." Finally, the alternate control requirements order may be revoked or modified "for good cause" upon the application of any person, after holding a public hearing.

EPA noted that the rule needs to include acceptable replicable procedures when deviations or relaxations are allowed, otherwise any variance must be submitted to EPA for review and approval.

The regulation allows for four types of relaxations or deviations, based on individual applicants' circumstances. First, if emission reductions are "substantially equivalent or greater", the Executive Director may approve alternate compliance methods in accordance with §§115.910-115.916. These sections, when fully adopted, will address Alternate Means of Control and will include acceptable, detailed replicable procedures that allow deviations to Control Requirements to be made without EPA-approved sitespecific SIP revisions.

Second, a company which has been granted a variance for a product by CARB can be granted an "alternate control requirements" order for the identical product by the TNRC. This is done by an independent TNRC review of an application, using the CARB variance as supporting documentation. Under California regulations, the CARB variance order will only be granted if complying with

VOC limits would result in "extraordinary economic hardship"; the public interest in mitigating the hardship outweighs the public interest in avoiding emissions; and compliance with the VOC content standards can reasonably be achieved "as expeditiously as possible." If an applicant has met these standards and been granted a variance by CARB, the variance is useful for the TNRCC to consider in reviewing an applicant's request for alternate control requirements.

Third, a company may be granted an alternate control requirements order independently of any underlying CARB variance. An applicant must show "extraordinary reasons beyond the person's reasonable control", and the Executive Director, in approving such requests, must consider: "injury or interference with the public's health and physical property"; "social and economic value" of a product, "technical practicability and economic reasonableness"; and the amount of emissions from the use of a product. Public hearings on an applicant's request are required in order to solicit formal public input.

Fourth, an innovative product exemption may be granted if an applicant can show that the use of a product will result in "equal or less" VOC emissions than either: a representative consumer product which complies with the standards; or a "noncomplying representative product, if (it) had been reformulated" to comply. Innovative product exemptions are intended to allow alternative formulations that reduce emissions to a level below that which is required by the VOC content standards.

For the purposes of federal enforceability, EPA might not be subject to approval determinations made by the TNRCC Executive Director under the last three of the aforementioned conditions. If required, the TNRCC will submit exemptions and approved orders to EPA for inclusion in the state's implementation plan. The TNRCC staff is currently negotiating the terms of acceptable replicable procedures with EPA, but the outcome of these negotiations is not yet certain. Upon completion of negotiations, the staff intends to incorporate approved replicable procedures in the consumer product regulation in separate rulemaking, if necessary.

GHASP suggested including a definition for "extraordinary" and "reasonableness" under §115.613(c) and §115.613(c)(2), respectively.

The term "extraordinary" is used in §115.613(c) to explain that a person may apply for alternate control requirements due to "extraordinary reasons". The subsequent paragraphs describe "extraordinary reasons" as "facts and circumstances bearing on the reasonableness of a product's emissions", and provide specific considerations for granting an applicant's request such as "technical practicability and economic reasonableness", and "degree of injury or interference with the public's health and physical property". The TNRCC staff believes no further explanation of "extraordinary", as used in §115.613(c), is necessary.

Under §115.613(c)(2), "facts and circumstances bearing on the reasonableness of a product's emissions" are considered in granting alternate control requirements. The decision to grant a request is subjective, to be made by the Executive Director upon consideration of relevant information. "Reasonable-

ness of a product's emissions" is likewise a subjective judgement, and depends upon the facts of a particular situation. Therefore, "reasonableness" as used in this section cannot be defined with precision since it refers to a subjective evaluation made by the Executive Director based on individual circumstances. The Executive Director must, however, follow the guidelines specified in §115.613(c) in determining whether or not to grant a variance.

GHASP proposed changing §115.613(c)(3) to say "Any variance order will contain a condition that specifies increments of progress to assure timely compliance" instead of "may contain a condition."

An applicant might not be required to incrementally comply with an alternate control requirements order, so an order need not necessarily specify increments of progress. Instead, full compliance by a specified date could possibly be a condition of the order. Therefore, "may contain a condition," instead of "will contain a condition" is proper.

GHASP requested that the phrase "substantive term or condition", as used in §115.613(c)(4), be defined.

Section 115.613(c)(4) voids an alternate control requirements order if a "substantive term or condition" of the order is not complied with. The meaning of this phrase is self-evident. The TNRCC would not wish to invalidate a variance if a well-intentioned company commits a trivial omission, the administrative burden alone is enough to make this unwise. However, substantively failing to comply is reason enough to take strong action against a company. Applying this provision requires the TNRCC staff to exercise sound judgement. Each order may contain completely different provisions, the text cannot possibly detail what would be considered "substantive" in the context of the regulation.

GHASP requested that the term "similar efficacy", as used in §115.614(b)(3) to define a representative consumer product for innovative products exemptions, be defined.

A representative consumer product is used for comparison purposes in evaluating innovative product exemption requests. In order to receive an innovative product exemption, a company must show that a non-complying product actually results in equal or less VOC emissions when compared with a representative product which complies with the standards, or a non-complying representative product which would comply with the standards if it was reformulated to comply. A representative product must meet several criteria, one of which is "at least similar efficacy as other consumer products in the same category."

"Similar efficacy" must be demonstrated by an applicant claiming an exemption, and this will be reviewed on a case-by-case basis by the TNRCC staff, the final decision rests with the Executive Director. Failure to satisfactorily demonstrate that a representative product meets the "similar efficacy" criteria will result in denial of an applicant's request. Since this review depends on individual circumstances, the term "similar efficacy" is difficult to precisely define.

Furthermore, the innovative products exemption can be applied to a product in one of many diverse and unrelated product categories. A measure of a product's efficacy is different for every product category. For example, "similar efficacy" would be defined differently for an automotive product, such as a carburetor-choke cleaner, than it would be for a personal care product, such as an antiperspirant. This added complexity makes defining the term "similar efficacy" impossible.

GHASP suggested that public comment, review, and public meetings be held concerning innovative product exemption requests.

The TNRCC staff believes that holding public hearings for innovative products exemption requests would be an administratively cumbersome procedure that would offer no environmental benefit. An innovative products exemption can in no way result in any increase in emissions, because any innovative product exemption granted must, in accordance with §115.614, "result in equal or less volatile organic compound (VOC) emissions" than similar complying products. This meets EPA's equivalency criteria and is indeed a difficult standard for a company to meet. Past experience with this rule provision in California has revealed that very few manufacturers are able to meet this standard to obtain an exemption. In any case, an increase in emissions cannot result. No public impact would be associated with an innovative products exemption, so public hearings are not necessary.

GHASP argued that the provisions of §115.616(c) which allow information submitted to the TNRCC be claimed as confidential and protected from public disclosure will keep the public from obtaining useful information regarding pollution control. GHASP suggested that the TNRCC determine what information is confidential, and not regulated companies.

The intent of this requirement is to protect product information which may be considered confidential by a company in order to preserve its competitive advantage in the marketplace. Only affected companies can possibly know what information is necessary to be protected from disclosure, not the TNRCC staff.

GHASP opposed exemptions for consumer products manufactured in Texas for shipment and use outside of Texas, for products sold in Texas that are intended for shipment and use outside of Texas, for insecticides and air fresheners containing greater than 98% PDCB, and for adhesives sold in containers of one fluid ounce or less.

The TNRCC staff disagrees with GHASP's position on exemptions. Products intended for shipment and use outside Texas are outside of TNRCC's jurisdiction and are beyond the intended scope of this regulation. This regulation is intended to help achieve the national ambient air quality standards for ozone in designated nonattainment areas in Texas, the content of products intended for use outside of Texas is irrelevant.

Insecticides and air fresheners containing greater than 98% PDCB are not regulated for

air quality reasons in any jurisdiction in the United States. Reformulation of PDCB products, which typically contain greater than 98% PDCB, is not currently technically feasible. PDCB is normally used as a continuous acting pesticide and a slow-release air freshener; its effectiveness depends on its ability to volatilize. Reducing the volatility of PDCB products will reduce their effectiveness. If their volatility was somehow reduced, effective usage would require increased quantities of PDCB, which would probably result in higher emission levels from their use.

The exemption for adhesives sold in containers of one fluid ounce or less was included to exempt products commonly known as "superglue" from this regulation. According to CARB's survey, no other adhesives were marketed in such small sizes. In order to prevent manufacturers from circumventing the regulation by including several one ounce containers of adhesive in a single package, this exemption has been revised to apply to containers of one fluid ounce or less "combined net weight".

ACMC argued that the proposed limits for engine degreasers would result in an increase in emissions due to consumers using a greater quantity of a less efficacious product, or consumers substituting alternative unregulated substances, to accomplish a task.

Engine degreasers are specialty cleaning products used for cleaning engines and other mechanical parts, and are manufactured only in aerosol form. They contain VOCs which are used as propellants and solvents. Based on the CARB survey, their VOC content was found to range from 23% to 95% by weight. Degreasers may contain 1,1,1-trichloroethane, kerosene, xylene, chlorodifluoromethane (HCFC 22), butane, propane, petroleum distillates, water, detergents, and surfactants. The propellants can be HCFC 22, butane, propane, or a non-hydrocarbon such as carbon dioxide. The remaining compounds are used as cleaning agents and solvents, which are used to dissolve and emulsify grease and grime before it is rinsed away.

CARB regulations imposed a 75% standard for degreasers beginning January 1, 1993, with a future effective standard of 50% by January 1, 1996. The CARB survey identified four products, representing 2.0% of the market, that met the 75% limit. Waterbased products are currently on the market that meet the proposed limit.

The TNRCC staff reviewed the results of testing of engine degreasers of varying VOC content. One of the tests consisted of a qualitative evaluation of product efficacy on old automotive engines. The results of this test showed that a degreaser product of 95% VOC content achieved better results than degreasers of 75%, 58%, and 30% VOC. Another test demonstrated the results of various VOC content degreaser solutions when used on panels containing asphaltic and grease coatings. These tests measured the amounts of VOC used to clean panels in a timed test, and showed that the 95% VOC solution achieved superior results than 50% and 30% solutions. Thus, higher VOC content

solutions were shown to be more effective than solutions with lower VOC content, and use of solutions with exceedingly low VOC content could result in an increase in emissions due to consumers' increased product usage to achieve desired results.

Discussions with engine degreaser manufacturers and CSMA representatives led to the conclusion that 75% VOC degreasers, although slightly less efficacious in testing, performed adequately to satisfy the industry's concerns about product efficacy and the potential for consumers' excessive product usage. Thus, 75% was proposed and adopted as an acceptable compromise to both degreaser manufacturers and the TNRCC staff. Since CARB standards are lowered to 50% VOC by January 1, 1996, Texas standards for engine degreasers will be less stringent than California's future effective limits.

Manufacturers are expected to be able to comply with this limit by reformulation, the use of water based products, and/or elimination of VOC propellants. VOC propellants could be replaced by carbon dioxide, or alternative delivery systems, such as pumps, could replace aerosols because a fine spray is not needed for most cleaning applications. Statewide emission reductions from this product category are estimated to be 0.56 tons per day.

ACMC opposed adoption of standards for carburetor/choke cleaner products, arguing that their use actually decreases net emissions by causing an overall reduction of emissions from non fuel-injected automotive engines. They also claimed that most of the product, when used, is burned in the combustion chamber of an engine with exhaust gases emitted through the car's catalytic converter, thus the net emissions are a small percentage of the VOC volume in the product itself.

Carburetor/choke cleaner products, with a control limit of 75% VOC, are included in CARB's consumer product rule and a model rule that was offered as a proposal to TNRCC by CSMA. The TNRCC's proposed limits are largely based on the CARB regulation and CSMA proposal. The CARB regulatory limits were deduced after conducting an extensive survey of consumer products and a thorough analysis of the survey results. Subsequently, the CSMA model proposal was developed after considering industry's experience in striving to achieve California's regulatory limits, and received substantial concurrence from CSMA member companies. Considerable time, effort, and resources were devoted to the development of all of the proposed limits, including the limit for carburetor/choke cleaner products. The TNRCC staff's opinion is that the regulatory limits adopted by CARB and proposed by CSMA were technically sound, and their supporting analyses were sufficiently thorough.

ACMC has argued that carburetor/choke cleaners are used on older vehicles and, because they improve the operation of vehicle air/fuel intake systems, actually work to reduce vehicle emissions with the net result of fewer overall emissions. If effective products are unavailable, ACMC argues, mechanics would substitute paint thinner, gasoline, etc.,

for products that are intended for the purpose of carburetor cleaning. They added that 60% 75% of the cleaner is sprayed into internal carburetor components and drawn into engine combustion chambers when used, further reducing the emissions from the use of these products, although the staff notes that this is only true for aerosol forms of the product because liquids are not sprayed into carburetor intakes but are instead used by immersing automotive parts. The TNRCC staff conceptually agrees with ACMC, but has not seen or been provided with any data which shows that carburetor/choke cleaners complying with the 75% VOC standard, the limit proposed for this product category, do not perform effectively.

In fact, CARB reported that 24 products meeting the 75% control limit were commercially available based on their 1991 consumer products survey, representing 36% of the carburetor/choke cleaner market. Of these, 12 were aerosols and 12 were available in liquid forms. Some of these products are water-based solutions that contain lower solvent levels and a small quantity of surfactants used for cleaning, although some formulations contain 1,1,1-trichloroethane, a compound being phased out by early next century, and others contain methylene chloride, which is listed by EPA as a hazardous air pollutant.

A reasonable conclusion can be drawn from the number and market shares of complying products currently available that new complying products, in both major forms currently in use, can be formulated to meet the 75% VOC standard. Reformulating products without adding emissions from other harmful compounds is a challenge that some companies will face. The TNRCC estimates that the regulatory limits for this category would result in a statewide emission reduction of about 396 pounds per day.

ACMC noted that consumers and the automotive service industry tend to prefer to use automotive solvents which are more efficient over products which are more environmentally friendly but less effective.

The TNRCC staff has taken note of ACMC's concern and attempted to address it by proposing realistic control limits that allow effective automotive products to be offered to consumers and industrial users. For example, 75% VOC limits for engine degreasers were proposed only after technical discussions with industry representatives on the efficacy of lower VOC content products. This is a relaxation from staff's earlier intent to propose a 50% limit with a January 1, 1996 effective date. Please see staff's earlier response.

ACMC, AAMA, and TADA claimed that the proposed 80% VOC levels for automotive windshield washer fluids would not provide adequate freeze protection and would result in potential safety problems for motorists. Safety problems could extend to ambulances, school buses, etc.

Windshield washer fluids are liquids designed for the purpose of wetting and cleaning vehicle windshields. They are normally sold in either ready-to-use form, or as concentrates requiring an amount of dilution dependent on ambient temperatures. Methanol comprises the majority of VOCs used, but a small frac-

tion of the market is based on isopropanol or ammonium acetate. Their primary purpose is to impart a freezing point depression to the water used in a vehicle's washer system, thereby preventing it from freezing in low ambient temperatures. Ready-to-use fluids are normally available in concentrations of about 35% to 40% methanol by weight, with a sales weighted average believed to be about 35%.

The TNRCC regulations currently limit VOC content in washer fluids to 8.0% by weight in certain Texas counties which are designated non-attainment for the national ambient standards for ozone. The proposed regulation would apply the 8.0% standard to the entire state in order to improve the rule's effectiveness, resulting in greater creditable emission reductions in the counties where ozone is a problem. Since freeze protection is the primary purpose of the methanol contained in washer fluids, its presence is not required in its current average concentrations anywhere in Texas, particularly during the summer months and in southernmost non-attainment cities, such as Beaumont and Houston where January average monthly low temperatures exceed 40°F. Adoption of an 8.0% standard would result in an estimated 3900 tons per year of VOC reductions statewide.

The staff agrees conceptually with the concerns expressed by these commenters, but does not agree on two specific points. First, their claim that 8.0% VOC levels would result in inadequate freeze protection in the winter months in many areas of the state would be true if 8.0% methanol solutions were used exclusively, but alternatives to methanol are available. If used in 8.0% concentrations, a methanol/water solution will freeze at 23°F, a level below which much of Texas reaches during the winter months, albeit infrequently. Clearly, if methanol solutions were the only option, the argument that an 8.0% standard would provide inadequate freeze protection would be true.

However, ammonium acetates are marketed and currently in use that provide improved freeze protection with lower VOC concentrations. For example, 8.0% ammonium acetate/water solutions do not freeze until temperatures drop to 13°F or below, an adequate level of protection for most of the state. Average low temperatures for the coldest month of the year, January, only reach 33°F in Dallas and Tarrant counties, and 28°F in El Paso County. Automotive industry groups, including these commenters, have met with the TNRCC staff and have universally voiced opposition to the use of ammonium acetate solutions. Thus, the 8.0% VOC limit does not cause inadequate freeze protection per se, but the proposed limit, combined with the reluctance of industry to consider alternatives to methanol based solutions, creates a situation where inadequate freeze protection could result.

Ammonium acetates are slightly corrosive, but are used in automotive washer systems which are primarily nonmetallic and are applied to windshields and car finishes which are designed to offer protection against harsh elements. Its corrosiveness is the primary reason automotive industry groups oppose its use, although they've only conducted limited empirical studies on its effects. It could become a sound alternative to methanol, offering significant emission reductions, if further

studies are performed that would allow technical improvements to be identified and made. Industry has heretofore been reluctant to conduct such an evaluation.

Secondly, even under ambient temperatures below the freeze point for vehicle washer fluids, these commenters' claims of inadequate safety have not been demonstrated. The TNRCC staff has no basis to dispute their claim that inadequate freeze protection would result in safety problems for motorists, but no safety statistics, documentation, studies, or other evidence has been offered in support of this argument. How significant additional risks, if any, would be is unclear. Automotive transportation involves inherent risks that cannot be completely eliminated. Sound decision making requires accepting manageable risks, trying to minimize hazards, and recognizing that no activity is absolutely risk free. This requires analytical information about the safety risks involved, rather than the unsupported arguments these commenters offer.

Other important unresolved safety-related issues exist. For example, washer solution is likely to freeze in a car's washer system before being applied to its windshield. Freezing that occurs inside of a car's system would mitigate potential safety hazards, because the freezing itself would not cause restricted driver visibility. For a safety hazard to exist, motorists must continue to drive a vehicle with an icy or dirty windshield after a loss of visibility has occurred. The fact that motorists may be unlikely to do this lessens the effectiveness of these commenters' argument.

If the potential for reduced motorists' safety was abundantly clear, why does the automotive industry continue to oppose the use of ammonium acetates? The result of the automotive industry's opposition could conceivably contribute to inadequate public safety. Industry has told the staff that ammonium acetates would invalidate new car warranties. If so, preserving new car warranties should be weighed against the potential public safety hazards this creates. AAMA, TADA, and ACMC have raised emotional questions involving public safety. In order to make informed decisions about an issue involving safety, government and industry decision makers need relevant technical and/or statistical data on which to make a realistic assessment of risks, not emotional arguments.

As the ROP plan was revised, a relaxation of the washer fluid limit became practicable. Due to this, and to facilitate rulemaking progress, the staff decided to increase the limit to 23.5% by weight as a compromise with automotive industry groups. Nevertheless, if additional reductions are necessary to support future development of the ROP plan, the standards for washer fluids might be lowered upon staff's re-evaluation. If so, the use of alternatives to methanol washer fluids could again become an issue. In the opinion of the TNRCC staff, ammonium acetates offer a sound way to achieve emission reductions with acceptable drawbacks, even though their use poses technical problems that warrant further study. The use of ammonium acetate, even with its inherent drawbacks, may become an acceptable compromise to make for

the sake of air quality. Technical improvements would make it a more attractive option.

Future air quality needs may also require reductions in the VOC content allowed for windshield washer fluids, even if industry's only viable alternative is to continue offering methanol-based solutions with lower VOC content. The revised regulation establishes 23.5% VOC limits for washer fluids. Methanol solutions of 23.5% will provide freeze protection to 0°F, a degree of protection that the staff believes is unnecessary. The TNRCC will reconsider other regulatory options in future rulemaking pursuant to SIP development efforts.

AAMA claimed that the current limitation for washer fluids places a disproportionate burden on this category for achieving necessary VOC reductions.

Although a cursory review of reductions achievable from the proposed consumer products regulation would suggest that washer fluids are responsible for a disproportionate share, the reason for such a seemingly disproportionate amount is that the VOC content of washer fluids can be feasibly reduced by a greater amount than most other consumer product categories. Washer fluids accounted for approximately 42% of the estimated reductions from consumer products under the proposed regulation.

Most windshield washer fluid solutions contain methanol, a VOC, in concentrations of about 35% to 40% by weight. This provides freeze protection to about -25 degrees Fahrenheit to -35 degrees Fahrenheit. Clearly, this degree of freeze protection is unnecessary in Texas climates, so VOC concentrations in currently used washer fluid solutions are significantly higher than necessary. VOC standards were proposed for statewide applicability that equalled the limits already adopted in certain parts of Texas. The result was that an estimated 3,900 tons per year in VOC reductions were available from washer fluids. This represented approximately 42% of the proposed 9,400 tons per year estimated from all consumer product categories.

The draft ROP plan estimated that almost all of these reductions were necessary to achieve the statutory 15% reduction from all VOC control measures. Thus, the TNRCC staff continued to advocate the proposed 8.0% limit for washer fluids, with its associated reductions. As the ROP plan was revised and a relaxation of the washer fluid limit became practicable, the staff increased the limit to 23.5% by weight. This limit received the concurrence of automotive industry groups and will resolve their concerns of inadequate freeze protection.

AAMA claimed it would need to conduct extensive testing to determine if ammonium acetate solutions, which are possible alternatives to methanol-based solutions, are compatible with existing automotive systems.

The TNRCC staff concurs with the need to conduct testing of ammonium acetate solutions. Industry currently lacks empirical evidence on which to assess the viability of ammonium acetate as an alternative to methanol-based solutions. The use of ammo-

niium acetate is a possible way of offering motorists adequate freeze protection while reducing VOC emissions, but technical problems, such as its inherent corrosiveness, prevent its wide acceptance by the automotive industry and consumers. Because of this, it was not viewed by the TNRCC staff as a currently reasonable alternative to methanol, and the VOC standards for washer fluids were increased to enhance freeze protection. Solutions to technical problems associated with ammonium acetate might be possible in the future, or their drawbacks might be viewed as an acceptable compromise to make for the sake of air quality. The potential for future VOC reductions from the substitution of ammonium acetate for methanol is such that it warrants further study by the automotive industry. See the staff's earlier response.

TADA objects to the current rule limiting automotive windshield washer fluids to 8.0% VOC, and the proposal to make the 8.0% standard applicable statewide.

To facilitate rulemaking progress, the staff decided, after discussions with industry, to compromise and accept an increase of the VOC content standards for washer fluids to 23.5% by weight. This limit received the concurrence of automotive industry groups.

TADA argued that adoption of an 8.0% VOC limit would result in a loss of new car warranty coverage, costing motorists \$130-\$160 per vehicle. AAMA said that the current VOC limitations for washer fluids would result in a loss of warranty coverage of automotive wiper systems for Texas motorists.

After discussions with industry, the staff decided to increase the VOC content standards for washer fluids to 23.5% by weight. This limit received the concurrence of automotive industry groups and will presumably not cause invalidation of new car warranties, since it allows for adequate freeze protection in Texas climates. See the staff's earlier response.

TADA, AAMA, and ACMC suggested a windshield washer rule that is seasonal. Additionally, ACMC suggested conducting a study of seasonal sales and/or use of washer fluids, and AAMA suggested control measures, such as labeling and notification, be undertaken to improve rule effectiveness.

After discussions with industry, the staff decided to increase the VOC standards for washer fluids to 23.5% VOC by weight, making seasonal limits for this category unnecessary. Seasonal limits would reduce the rule's effectiveness, resulting in fewer creditable emission reductions in the state's ROP implementation plan. However, this concept, combined with lower VOC content standards, may be considered in future rulemaking as additional VOC reductions are needed.

TADA noted that the rule does not provide for Texas drivers who travel to other states with colder climates.

After discussions with industry, the staff decided to increase the VOC content standards for washer fluids to 23.5% by weight.

This limit received the concurrence of auto-

otive industry groups and will provide freeze protection to 0 degrees Fahrenheit. See the staff's earlier response.

TADA noted that the rule does not provide for resale of vehicles from other states which contain noncomplying windshield washer fluids.

The TNRCC staff agrees, and has revised the rule to exempt washer fluid already contained in vehicles which are registered or licensed in other states and that are offered for subsequent sale, from the control limits of the regulation.

TADA suggested that the TNRCC take responsibility for notifying the public of the freezing point for complying solutions, and notify the public of potential hazards and loss of new car warranties. Phillips suggested requiring product manufacturers to label windshield washer fluids to indicate that it may freeze at higher temperatures than previous fluids.

Notifying the public of the hazards of product usage, being involved in product warranty issues, and providing usage directions for consumer products are all functions that are beyond the scope of the TNRCC's authority. This function is usually best performed by manufacturers, marketers, distributors, retailers, and promotion planners, even when the need for providing notification arises from regulatory requirements imposed by the TNRCC or any other governmental agency.

EPA suggested moving the applicability requirements (§115.610) to the beginning of the rule.

The consumer products regulation was arranged to be consistent with the organization of other TNRCC regulations. The staff retains the proposed organization of these rule sections.

EPA suggested adding the clarifying clause "as defined in Section 115.600" after use of the term "consumer products" in the Applicability and Control Requirements section.

Section 115.600 of the regulation, concerning Definitions, clearly states that "the following terms, when used in this undesignated head, relating to Consumer Products, shall have the following meanings, unless the context clearly indicates otherwise." Therefore, the clarifying clause, which EPA suggests be placed after the term "consumer products" in the applicability section, is redundant because the rule already states that the term "consumer products" has the meaning given to it by §115.600.

Furthermore, if the suggested changes were made, the phrase "as defined in Section 115.600" would have to be placed, for consistency purposes, after the use of every term in the rule which has a definition associated with it in §115.600. This would be cumbersome, so the TNRCC staff believes that the proposed language is sufficiently clear as written.

CSMA argued that a product form used to determine emissions for an innovative products exemption should be determined at the time of filing for the exemption, if filed earlier than the effective date of the table of standards.

The TNRCC agrees, and has changed §115.614(b)(2) to require representative products be of the same product form, unless the form was nonexistent on the date the exemption is applied for, instead of on the "effective date of the standards".

CSMA suggested changing the innovative products exemption to terminate the exemption in case of a reformulation, only if the reformulation resulted in an increase in product emissions.

The TNRCC staff disagrees with this suggested change. The original exemption application, according to the rule, must contain supporting documentation that adequately establishes the emission levels from an innovative product, including physical test methods and consumer testing, if any, used to demonstrate product usage. Additionally, applicants must provide adequate information for the Executive Director to establish enforceable conditions. The enforceable conditions could include things such as VOC content, dispensing rates, application rates, and other parameters.

Any deviation from the information submitted in support of the initial application which results in revised emission estimates, even those that result in estimated emission decreases, will require a review of the claimed emission levels and the basis for the applicant's claim. This is to allow for review of tests, test methods, and documentation of the applicants newly claimed product emission levels to establish staff's concurrence or disagreement with claimed emission levels. The Executive Director must also determine if new enforceable conditions are necessary, and this requires a review of data on product emissions, product usage, formulation, etc. Not reviewing the claims of manufacturers could result in lax regulatory oversight of the innovative products exemption process, and potentially overstated claims by manufacturers.

P&G supported adding language that would allow an exemption for a product that has been granted an innovative products exemption elsewhere, with the exemption given an expedited review.

The new language suggested by P&G, allowing an exemption of a product if it has already been granted an exemption by another jurisdiction, is already part of the regulation. Section 115.614, which was revised slightly from the proposed version, states that "If an applicant has been granted an exemption for an innovative product by another state or federal agency whose criteria for exemption meet or exceed those provided for in subsection (a), the applicant may submit such an exemption as part of the application under this section. In such a case, the Executive Director shall make its determination under this subsection within 45 days after the application has been deemed complete." A determination made within 45 days constitutes an expedited review under this section.

State Implementation Plan. An individual commented that all airports located in nonattainment Texas counties should be asked to voluntarily comply with the same regulations that are imposed upon small busi-

ness and industry

Many Regulation V rules do apply to airports, and are in place at Texas nonattainment area airports. For example, rules dealing with fuel storage, loading and unloading, and Stage II vapor recovery of gasoline have been implemented at the airports. The new, federally-mandated "Stage III" aircraft engines will reduce VOC emissions at airports because the engines are more fuel efficient. Additionally, conversion of the airport vehicle fleet to cleaner-burning natural gas will take place at all Texas nonattainment area airports.

Dallas/Fort Worth (DFW) Airport has also implemented double-sealed floating roof fuel tanks and sealed fuel transfer systems. The DFW airport has controlled VOC emissions as much as possible without a major redesign of the nation's airline fleet.

TNRCC Air Program staff have visited the DFW airport, inspected their air pollution control equipment, and have also met with local government officials to listen to and resolve any concerns at the local level. TNRCC continues to look for reductions from all sources in the nonattainment areas. Further airport regulations at the state or national level may be implemented in the future.

The same individual suggested that the 134 agencies of government located within the DFW counties should be asked to voluntarily comply with the same imposed regulations.

Many of the rules proposed as part of the ROP SIP are specific for a particular industry or business (such as petroleum refineries or dry cleaners) and would not apply to a local government agency. However, state and local governments are not exempt from compliance with any rules that have a more general applicability. For example, these might include the consumer products rule, architectural coatings rule, and fleet conversions to cleaner-burning natural gas.

There is a major voluntary program in DFW designed to prevent or reduce the severity of ozone exceedances. Known as Ozone Alert Days, these days are declared whenever a potential ozone exceedance day is forecast for the DFW area. The information is broadcast to citizens, local government, small business, and industry. The community is asked to minimize activities (such as lawn-mowing or painting) that could raise the level of VOC. Additionally, free public transportation is provided on ozone alert days to encourage ridership, thereby decreasing vehicle miles traveled (VMT). This program was initiated last year and will be continued in 1994. TNRCC supports and provides technical knowledge to these local government efforts, but does not have sufficient resources at this time to implement other voluntary reduction programs. It may be necessary for interested citizen or industry groups to organize and implement voluntary reduction programs.

Each month, staff meets with the NCTCOG to facilitate communication between the TNRCC and local government agencies. The public is welcome to attend these meetings. Staff continues to support the individual's desire to apply pollution controls equitably among different segments of the community.

The NCTCOG endorsed TNRCC's proposed Phase II options for the SIP as listed in the document, which represent the consensus of the Air Quality Advisory Committee and the Air Quality Policy Subcommittee. The NCTCOG further supported a partnership with the TNRCC to inform the utmost number of elected officials, businesses, and citizens of our clean air goals and involve them in the necessary initiatives to achieve them.

TNRCC is pleased to have the support of NCTCOG for the ROP SIP and accompanying rules, and will continue to endorse a partnership approach to the development and implementation of pollution control strategies in all nonattainment areas.

EPA stated that several measures in the plan have not been included in Tables 16, 19, 22, and 25. Since EPA will need to know the rule effectiveness, control efficiency, and rule penetration assumed for each of the area and point controls, all of the measures in the plans should be included in these tables. Measures that were not included were municipal landfill controls, fugitive controls, marine vessel loading, offset lithography, bakery controls, vessel cleaning, and acetone substitution.

The referenced tables are focused on controls involved in RACT catch-ups and rule effectiveness improvements. Calculations for additional controls are included in Appendix I which contains the rule effectiveness, control efficiency, and rule penetration for the control measures in question.

EPA commented that in their previous comment letter dated August 27, 1993, they had indicated that the state should show the calculation demonstrating vehicle inspection and maintenance (I/M) corrections are not required for DFW and El Paso. EPA stated that Texas had responded to this comment by referring to earlier statements by EPA that these programs were acceptable. However, because of the FCAA provision that prohibits credit from being taken for improvements in required I/M programs, EPA believes that it is necessary for the state to document through calculation that credit for I/M corrections are not being taken.

TNRCC agrees with previous audit findings by EPA that the DFW I/M design had problems with data reporting. TNRCC asserts that EPA's compliance rate of 62% is accurate for base year modeling, but that this figure should be revised upward to 70% for the I/M correction modeling. The I/M correction demonstration for DFW will be made and provided for as part of the 1996 attainment demonstration. TNRCC had received a letter from EPA Region 6 which stated that El Paso complies with I/M reporting and design requirements during the 1990 calendar year. TNRCC is currently negotiating with EPA to use this letter as the required documentation that El Paso does not need to perform an I/M correction. If EPA does not approve this strategy, TNRCC plans to calculate and submit this correction by July 15, 1994. Documentation supporting this position can be found in Appendix M.

EPA further commented that the plan does not include the MOBILE 5a input and output

statements for documentation of the noncreditable emission reductions due to Federal Motor Vehicle Control Programs (FMVCP) and RVP for calculation of the adjusted base year testimony, the calculation of reductions due to I/M programs, Tier 1, reformulated gasoline, and RVP. According to EPA, the plan does include documentation through the MOBILE model of transportation control measures (TCM) in Houston, but does not appear to document TCM reductions in other areas. EPA further stated that for their review purposes it is not necessary to make separate runs for each of these individual measures. It is only necessary to show with the model that the total mobile emissions in 1996 are less than the target level of emissions.

Noncreditable FMVCP/RVP calculations documentation, MOBILE model files for each of the nonattainment areas, the 1996 projection inventory, and MOBILE model files are included in Appendix L. One individual requested that these rules be withdrawn and that TNRCC start all over again.

The regulation development process is intensive and time-consuming. It involves extensive research, coordination with different internal departments, and coordination with external actors such as EPA, the regulated community, the public, and local government. A significant portion of the time built into the rulewriting timetable is devoted to activities such as *Texas Register* publication, public hearings, workgroups, and public comment periods, all of which are designed to foster public participation in the regulatory process. Withdrawing all of the proposed rules at this point will not allow the TNRCC to meet EPA's May 13, 1994 deadline for the ROP completeness determination. Severe sanctions may attach to any state which does not meet its completeness determination by May 15, 1994. These sanctions include the loss of millions of dollars in federal highway funds and EPA grants for pollution control programs.

Additionally, it is necessary to give affected industry, small business and the public sufficient time to implement the requirements of any proposed rule. When rulemaking is unduly delayed, it has the potential to delay rule implementation, which is unacceptable to staff, EPA, and many environmental groups.

Texas has made an exceptional commitment to meeting FCAA deadlines and milestones, and TNRCC intends to continue with effective and timely rulemaking.

Subchapter A. Definitions

• 30 TAC §115.10

The amendment is adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.10 Definitions. Unless specifically defined in the Texas Clean Air Act (TCAA) or in the rules of the Commission, the terms used by the Commission have the meanings

commonly ascribed to them in the field of air pollution control. In addition to the terms which are defined by the TCAA, the following terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise

Alcohol (used in offset lithographic printing)—For the purposes of complying with §§115.442, 115.443, 115.445, 115.446, and 115.449 of this title (relating to Offset Lithographic Printing), an alcohol is any of the hydroxyl-containing organic compounds with a molecular weight equal to or less than 74.12, (which includes methanol, ethanol, propanol, and butanol)

Bakery oven—An oven for baking bread or any other yeastleavened products.

Clear coat (used in wood parts and products coating)—A coating which lacks opacity or which is transparent and uses the undercoat as a reflectant base or undertone color

Clear sealers (used in wood parts and products coating) —Liquids applied over stains, toners, and other coatings to protect these coatings from marring during handling and to limit absorption of succeeding coatings.

Continuous monitoring—Any monitoring device used to comply with a continuous monitoring requirement of this chapter will be considered continuous if it can be demonstrated that at least 95% of the required data is captured.

Final repair coat (used in wood parts and products coating) —Liquids applied to correct imperfections or damage to the topcoat

Leak-free marine vessel—A marine vessel whose cargo tank closures (hatch covers, expansion domes, ullage openings, butterworth covers and gauging covers) were inspected prior to cargo transfer operations and all such closures were properly secured such that no leaks of liquid or vapors can be detected by sight, sound, or smell. Cargo tank closures shall meet the applicable rules or regulations of the marine vessel's classification society or flag state. Cargo tank pressure/vacuum valves shall be operating within the range specified by the marine vessel's classification society or flag state and seated when tank pressure is less than 80% of set point pressure such that no vapor leaks can be detected by sight, sound, or smell. As an alternative, a marine vessel operated at negative pressure is assumed to be leak-free for the purpose of this standard.

Marine loading facility—The loading arm(s), pumps, meters, shutoff valves, relief valves, and other piping and valves that are part of a single system used to fill a marine vessel at a single geographic site. Loading equipment that is physically separate (i.e., does not share common piping, valves, and other loading equipment) is considered to be a separate marine loading facility.

Marine loading operation—The transfer of oil, gasoline, or other volatile organic

liquids at any affected marine terminal, beginning with the connections made to a marine vessel and ending with the disconnection from the marine vessel.

Marine terminal—Any marine facility or structure constructed to load oil, gasoline, or other volatile organic liquid bulk cargo into a marine vessel. A marine terminal consists of one or more marine loading facilities.

Opaque ground coats and enamels (used in wood parts and products coating)—Colored, opaque liquids applied to wood or wood composition substrates which completely hide the color of the substrate in a single coat.

Polyester resin materials—Unsaturated polyester resins, such as isophthalic, orthophthalic, halogenated, bisphenol A, vinyl ester, or furan resins; cross-linking agents; catalysts; gel coats; inhibitors; accelerators, promoters; and any other material containing volatile organic compounds used in polyester resin operations.

Polyester resin operation—A facility which fabricates or reworks products by mixing, pouring, hand laying-up, impregnating, injecting, forming, winding, spraying, laminating, molding, curing, resin transfer, and/or pultrusion by using unsaturated polyester resin materials with fiberglass, fillers, or any other reinforcement materials.

Semitransparent spray stains and toners (used in wood parts and products coating)—Colored liquids applied to wood to change or enhance the surface without concealing the surface, including but not limited to, toners and nongrain-raising stains.

Semitransparent wiping and glazing stains (used in wood parts and products coating)—Colored liquids applied to wood that require multiple wiping steps to enhance the grain character and to partially fill the porous surface of the wood.

Shellacs (used in wood parts and products coating) —Coatings formulated solely with the resinous secretions of the lac beetle (*Laccifer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

Surface coating processes—Operations which utilize a coating application system.

(A)-(L) (No change.)

(M) **Wood parts and products coating**—The coating of wood parts and products, excluding factory surface coating of flat wood paneling.

Topcoat (used in wood parts and products coating)—A coating which provides the final protective and aesthetic properties to wood finishes

Varnishes (used in wood parts and products coating) —Clear wood finishes formulated with various resins to dry by chem-

ical reaction on exposure to air.

Wash coat (used in wood parts and products coating)—A low solids clear liquid applied over semitransparent stains and toners to protect the color coats and to set the fibers for subsequent sanding or to separate spray stains from wiping stains to enhance color depth.

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 May 4, 1994.

TRD-9440493

Mary Ruth Holder
Director, Legal Division
Texas Natural Resource
Conservation
Commission

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For further information, please call: (512) 239-0615

Subchapter B. General Volatile Organic Compound Sources Vent Gas Control

• 30 TAC §§115.121, 115.122, 115.126, 115.127, 115.129

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.121. Emission Specifications

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following emission specifications shall apply.

(1)-(4) (No change)

(5) In the Dallas/Fort Worth, El Paso, and Houston/ Galveston areas, VOC emissions from bakery ovens, as defined in §115.10 of this title (relating to Definitions), shall be controlled properly in accordance with §115.122(a)(3) of this title (relating to Control Requirements)

(b) -(c) (No change.)

§115.122. Control Requirements.

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following control requirements shall apply.

(1)-(2) (No change.)

(3) For the Dallas/Fort Worth,

El Paso, and Houston/Galveston areas, volatile organic compound (VOC) emissions from each bakery with a bakery oven vent gas stream(s) affected by §115.121(a)(5) of this title shall be reduced as follows.

(A) Each bakery in the Houston/Galveston area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year shall reduce total VOC emissions by at least 30% from the bakery's 1990 baseline emissions inventory by May 31, 1996.

(B) Each bakery in the Dallas/Fort Worth area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 100 tons per calendar year shall reduce total VOC emissions by at least 30% from the bakery's 1990 baseline emissions inventory by May 31, 1996.

(C) Each bakery in the Dallas/Fort Worth area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year, but less than 100 tons per calendar year, shall reduce total VOC emissions by at least 30% from the bakery's 1990 baseline emissions inventory in accordance with the schedule specified in §115.129(a)(7) of this title (relating to Counties and Compliance Schedules).

(D) Each bakery in the El Paso area with a total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, equal to or greater than 25 tons per calendar year shall reduce total VOC emissions by at least 30% from the bakery's 1990 baseline emissions inventory in accordance with the schedule specified in §115.129(a)(8) of this title.

(4) Any vent gas stream that becomes subject to the provisions of paragraphs (1), (2), or (3) of this subsection by exceeding provisions of §115.127(a) of this title (relating to Exemptions) shall remain subject to the provisions of this subsection, even if throughput or emissions later fall below the exemption limits unless and until emissions are reduced to at or below the controlled emissions level existing prior to implementation of the project by which throughput or emission rate was reduced and less than the applicable exemption limits in §115.127(a) of this title, and.

(A)-(B) (No change.)

(b)-(c) (No change.)

§115.126. *Monitoring and Recordkeeping*

Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the owner or operator of any facility which emits volatile organic compounds (VOC) through a stationary vent shall maintain records at the facility for at least two years and shall make such records available to representatives of the Texas Natural Resource Conservation Commission (TNRCC), United States Environmental Protection Agency (EPA), or any local air pollution control agency having jurisdiction in the area upon request. These records shall include, but not be limited to, the following

(1)-(3) (No change)

(4) For bakeries affected by §115.122(a) (3)(A)-(B) of this title (relating to Control Requirements), the following additional requirements apply.

(A) The owner or operator of each bakery shall submit an initial control plan no later than May 31, 1995 to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction which demonstrates that the overall reduction of VOC emissions from the bakery's 1990 baseline emissions inventory will be at least 30% by May 31, 1996. At a minimum, the control plan shall include the emission point number (EPN) and the facility identification number (FIN) of each bakery oven and any associated control device, a plot plan showing the location, EPN, and FIN of each bakery oven and any associated control device, and the 1990 VOC emission rates (consistent with the bakery's 1990 emissions inventory) The projected 1996 VOC emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(B) In order to document continued compliance with §115.122(a)(3) of this title, the owner or operator of each bakery shall submit an annual report no later than March 31 of each year, starting in 1997, to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction which demonstrates that the overall reduction of VOC emissions from the bakery's 1990 baseline emissions inventory during the preceding calendar year is at least 30% after May 31, 1996. At a minimum, the report shall include the EPN and FIN of each bakery oven and any associated control device, a plot plan showing the location, EPN, and FIN of each bakery oven and any associated control device, and the VOC emission rates. The emission rates for the

preceding calendar year shall be calculated in a manner consistent with the 1990 emissions inventory

(C) All representations in initial control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the bakery submits a revised control plan to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall include documentation that the overall reduction of VOC emissions from the bakery's 1990 baseline emissions inventory continues to be at least 30%. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory

(5) For bakeries affected by §115.122(a)(3)(C)-(D) of this title, the following additional requirements apply

(A) No later than six months after the TNRCC publishes notification in the *Texas Register* as specified in §115.129(a)(7) of this title (relating to Counties and Compliance Schedules), the owner or operator of each bakery shall submit an initial control plan to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction which demonstrates that the overall reduction of VOC emissions from the bakery's 1990 baseline emissions inventory will be at least 30%. At a minimum, the control plan shall include the EPN and the FIN of each bakery oven and any associated control device, a plot plan showing the location, EPN, and FIN of each bakery oven and any associated control device, and the 1990 VOC emission rates (consistent with the bakery's 1990 emissions inventory). The projected VOC emission rates shall be calculated in a manner consistent with the 1990 emissions inventory

(B) In order to document continued compliance with §115.122(a)(3) of this title, the owner or operator of each bakery shall submit an annual report no later than March 31 of each year to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction which demonstrates that the overall reduction of VOC emissions from the bakery's 1990 baseline emissions inventory during the preceding calendar year is at least 30%. At a minimum, the report shall include the EPN and FIN of each bakery oven and any associated

control device, a plot plan showing the location, EPN, and FIN of each bakery oven and any associated control device, and the VOC emission rates. The emission rates for the proceeding calendar year shall be calculated in a manner consistent with the 1990 emissions inventory.

(C) All representations in initial control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the bakery submits a revised control plan to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall include documentation that the overall reduction of VOC emissions from the bakery's 1990 baseline emissions inventory continues to be at least 30%. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(b) (No change.)

§115.127 Exemptions

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following exemptions apply:

(1)-(2) (No change.)

(3) In Dallas, Harris, and Tarrant Counties, and after May 31, 1995 in ozone nonattainment counties other than Dallas, Harris, and Tarrant, the following vent gas streams are exempt from the requirements of §115.121(a)(2) of this title:

(A) (No change.)

(B) until May 31, 1995 in Harris County, a vent gas stream specified in §115.121(a)(2) of this title with a concentration of volatile organic compound (VOC) less than 0.44 pounds per square inch absolute (psia) true partial pressure (30,000 parts per million),

(C) until November 15, 1998 for facilities which have been assigned the code number 26 as described in the document Standard Industrial Classification (SIC) Manual, 1972, as amended by the 1977 Supplement, a vent gas stream specified in §115.121(a)(2) of this title with a concentration of VOC less than 0.44 psia true partial pressure (30,000 parts per million), and

(D) a vent gas stream specified in §115.121(a)(2) of this title with a concentration of VOC less than 0.009 psia true partial pressure (612 ppm)

(4)-(5) (No change.)

(6) Bakeries are exempt from the requirements of §115.121(a)(5) and §115.122(a)(3) of this title (relating to Emission Specifications and Control Requirements) if the total weight of VOC emitted from all bakery ovens on the property, when uncontrolled, is less than 25 tons per calendar year.

(b)-(c) (No change.)

§115.129. *Counties and Compliance Schedules.* All affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas shall be in compliance with this undesignated head (relating to Vent Gas Control) in accordance with the following schedules:

(1)-(4) (No change.)

(5) All affected bakeries in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall be in compliance with §115.121(a)(5), §115.122(a)(3), §115.126(a)(4), and §115.127(a)(6) of this title (relating to Emission Specifications, Control Requirements; Monitoring and Recordkeeping Requirements, and Exemptions), as soon as practicable, but no later than May 31, 1996.

(6) All bakeries in Collin, Dallas, Denton, and Tarrant Counties affected by §115.122(a)(3)(B) of this title shall be in compliance with §115.121(a)(5), §115.122(a)(3), §115.126(a)(4), and §115.127(a)(6) of this title as soon as practicable, but no later than May 31, 1996.

(7) All bakeries in Collin, Dallas, Denton, and Tarrant Counties affected by §115.122(a)(3)(C) of this title shall be in compliance with §115.121(a)(5), §115.122(a)(3)(C), §115.126(a)(5), and §115.127(a)(6) of this title as soon as practicable, but no later than one year after the Texas Natural Resource Conservation Commission (TNRCC) publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the November 15, 1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act (FCAA), §172(c)(9).

(8) All bakeries in El Paso County affected by §115.122(a)(3)(D) of this title shall be in compliance with §115.121(a)(5), §115.122(a)(3)(D),

§115.126(a)(5), and §115.127(a)(6) of this title as soon as practicable, but no later than one year, after the TNRCC publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the November 15, 1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the FCAA, §172(c)(9).

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 May 4, 1994

TRD-9440494

Mary Ruth Holder
Director, Legal Division
Texas Natural Resource
Conservation
Commission

Effective date: May 27, 1994

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For further information, please call (512) 239-0615

Water Separation

• 30 TAC §115.132, §115.139

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.132 Control Requirements

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, no person shall use any single or multiple compartment volatile organic compound (VOC) water separator which separates materials containing VOC obtained from any equipment which is processing, refining, treating, storing, or handling VOC, unless each compartment is controlled in one of the following ways:

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

(4) Any water separator that becomes subject to the provisions of paragraphs (1), (2), or (3) of this subsection by exceeding provisions of §115.137(a) of this title (relating to Exemptions) will remain subject to the provisions of this subsection, even if throughput or emissions later fall below the exemption limits unless and until emissions are reduced to at or below the controlled emissions level existing prior to implementation of the project by which throughput or emission rate was reduced and less than the applicable exemption limits in §115.137(a) of this title, and

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or standard exemption required by Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification). If a standard exemption is available for the project, compliance with this subsection must be maintained for 30 days after the filing of documentation of compliance with that standard exemption; or

(B) if authorization by permit or standard exemption is not required for the project, the owner/operator has given the Texas Natural Resource Conservation Commission 30 days' notice of the project in writing.

(b)-(c) (No change.)

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

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Mary Ruth Holder
Director, Legal Division
Texas Natural Resource
Conservation
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For further information, please call (512) 239-0615

Industrial Wastewater

• 30 TAC §§115.140, 115.142-115.149

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRC with the authority to adopt rules consistent with the policy and purposes of the TCAA

§115.140. Definitions. The following terms, when used in this undesignated head, shall have the following meanings, unless the context clearly indicates otherwise.

Affected source category—Any of the following source categories.

(A) organic chemicals, plastics, and synthetic fibers manufacturing industry under Standard Industrial Classification (SIC) codes 2821, 2823, 2824, 2865, and 2869,

(B) pesticides manufacturing industry under SIC code 2879,

(C) petroleum refining indus-

try under SIC code 2911,

(D) pharmaceutical manufacturing industry under SIC codes 2833, 2834, and 2836;

(E) hazardous waste treatment, storage, and disposal facilities industry under SIC codes 4952, 4953, and 4959

Affected volatile organic compounds (VOC) wastewater stream—A VOC wastewater stream from an affected source category with either a VOC concentration greater than or equal to 10,000 parts per million by weight (ppmw) or a VOC concentration greater than or equal to 1,000 ppmw and a flow rate greater than or equal to 10 liters per minute (2.64 gallons per minute), as determined in accordance with §115.148 of this title (relating to Determination of Wastewater Characteristics)

Plant—All facilities included within the same Texas Natural Resource Conservation Commission account number.

Point of generation—The location where a VOC wastewater stream exits a process unit.

Properly operated biotreatment unit—A suspended growth process that generates biomass and recycles biomass to maintain biomass concentrations in the treatment unit. The average concentration of suspended biomass maintained in the aeration basin of a properly operated biotreatment unit shall equal or exceed 1.0 kilogram per cubic meter (kg/m³), measured as total suspended solids

Volatile organic compounds (VOC) wastewater—Water which, as part of a facility process, has come into contact with VOC and is intended for treatment, disposal, or discharge without further use in the process unit

§115.142. Control Requirements. For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, any person who is the owner or operator of an affected source category within a plant shall comply with the following control requirements. Any component of a wastewater storage, handling, transfer, or treatment facility, if the component contains an affected volatile organic compounds (VOC) wastewater stream, shall be controlled in accordance with either paragraph (1) or (2) of this section, except for a properly operated biotreatment unit and a wet weather retention basin. The control requirements shall apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream is either returned to a process unit or is treated to remove VOC so that the wastewater stream no longer meets the definition of an affected VOC wastewater stream. For wastewater streams which are combined and then

treated to remove VOC, the amount of VOC to be removed from the combined wastewater stream shall be at least the total amount of VOC that would be removed to treat each individual affected VOC wastewater stream so that they no longer meet the definition of affected VOC wastewater stream. For this undesignated head, a component of a wastewater storage, handling, transfer, or treatment facility shall include, but is not limited to, wastewater storage tanks, surface impoundments, wastewater drains, junction boxes, lift stations, weirs, and oil-water separators.

(1) The wastewater component shall meet the following requirements.

(A) All components shall be fully covered or be equipped with water seal controls

(B) All openings shall be closed and sealed, except when the opening is in actual use for its intended purpose or the component is maintained at a pressure less than atmospheric pressure

(C) All liquid contents shall be totally enclosed

(D) If any cover, other than a junction box cover, is equipped with a vent, the vent shall be equipped with either a vapor recovery system which maintains a minimum control efficiency of 90% or a system which prevents the flow of VOC vapors from the vent during normal operation. Any junction box vent shall be equipped with a vent pipe at least 90 centimeters (cm) (36 inches (in)) in length and no more than 10.2 cm (4.0 in) in diameter

(E) All gauging and sampling devices shall be vapor-tight except during gauging or sampling

(F) Any loading or unloading to or from a portable container by pumping shall be performed with a submerged full pipe

(G) All seals and cover connections shall be maintained in proper condition. For purposes of this rule, "proper condition" means that covers shall have a tight seal around the edge and shall be kept in place except as allowed by this undesignated head, that seals shall not be broken or have gaps, and that sewer lines shall have no visible gaps or cracks in joints, seals, or other emission interfaces

(H) If any seal or cover connection is found to not be in proper condi-

tion, the repair or correction shall be completed as soon as possible but within 15 days of detection, unless the repair or correction is technically impossible without requiring a unit shutdown, in which case the repair or correction shall be made before the end of the next unit shutdown.

(2) The wastewater component shall be equipped with a floating roof or internal floating cover which meets the following requirements.

(A) All openings in an internal or external floating roof except for automatic bleeder vents and rim space vents shall provide a projection below the liquid surface or be equipped with a cover, seal, or lid. Any cover, seal, or lid shall be in a closed (i.e., no visible gap) position at all times except when the opening is in actual use for its intended purpose.

(B) Automatic bleeder vents shall be closed at all times except when the roof is floated off or landed on the roof leg supports

(C) Rim vents, if provided, shall be set to open only when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

(D) Any emergency roof drain shall be provided with a slotted membrane fabric cover that covers at least 90% of the area of the opening

(E) There shall be no visible holes, tears, or other openings in any seal or seal fabric

(F) Secondary seals shall be the rim-mounted type (i.e., the seal shall be continuous from the floating roof to the tank wall) The accumulated area of gaps that exceed 1/8 in (0.32 cm) in width between the secondary seal and tank wall shall be no greater than 1.0 in.² per foot (21 cm²/meter) of tank diameter;

(3) Any wastewater component that becomes subject to this section by exceeding the provisions of §115.147 of this title (relating to Exemptions) or an affected VOC wastewater stream as defined in §115.140 of this title (relating to Definitions), will remain subject to the requirements of this section, even if the component later falls below those provisions unless and until emissions are reduced to at or below the controlled emissions level existing prior to the implementation of the project by which throughput or emission rate was reduced and less than the applicable exemption levels in §115.147 of this title, and:

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or standard exemption required by Chapter 116 of this title (relating to Control of Air Pollution By Permits for New Construction or Modification). If a standard exemption is available for the project, compliance with this subsection must be maintained for 30 days after the filing of documentation of compliance with that standard exemption; or

(B) if authorization by permit or standard exemption is not required for the project, the owner or operator has given the Texas Natural Resource Conservation Commission 30 days' notice of the project in writing.

§115.144. Inspection and Monitoring Requirements. For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, any person who is the owner or operator of a facility subject to the control requirements of §115.142 of this title (relating to Control Requirements), shall comply with the following inspection and monitoring requirements.

(1) All seals and covers used to comply with §115.142(1) of this title, shall be inspected according to the following schedules to ensure compliance with §115.142(1)(G)-(H) of this title:

(A) initially and semiannually thereafter to ensure compliance with §115.142(1)(G) of this title; and

(B) upon completion of repair to ensure compliance with §115.142(1)(G)-(H) of this title.

(2) Floating roofs and internal floating covers used to comply with §115.142(2) of this title, shall be subject to the following requirements. All secondary seals shall be inspected according to the following schedules to ensure compliance with §115.142(2)(E)-(F) of this title.

(A) If the primary seal is vapor-mounted, the secondary seal gap area shall be physically measured annually to ensure compliance with §115.142(2)(F) of this title

(B) If the tank is equipped with a metallic type shoe or liquid-mounted primary seal, compliance with §115.142(2)(F) of this title may be determined by visual inspection

(C) All secondary seals shall be visually inspected semiannually to en-

sure compliance with §115.142(2)(E)-(F) of this title.

(3) Monitors shall be installed and maintained as required by this subsection to measure operational parameters of any emission control device or other device installed to comply with §115.142 of this title. Such monitoring and parameters shall be sufficient to demonstrate proper functioning of those devices, and include the monitoring and parameters listed in subparagraphs (A)-(F) of this paragraph, as applicable. In lieu of the monitoring and parameters listed in subparagraphs (A)-(F) of this paragraph, other monitoring and parameters may be approved or required by the Executive Director.

(A) for an enclosed combustion device (including, but not limited to, a thermal incinerator, boiler, or process heater), continuously monitor and record the temperature of the gas stream either in the combustion chamber or immediately downstream before any substantial heat exchange;

(B) for a catalytic incinerator, continuously monitor and record the temperature of the gas stream immediately before and after the catalyst bed;

(C) for a condenser (chiller), continuously monitor and record the temperature of the gas stream at the condenser exit;

(D) for a carbon adsorber, continuously monitor and record the VOC concentration of exhaust gas stream to determine if breakthrough has occurred. If the carbon adsorber does not regenerate the carbon bed directly in the control device (e.g., a carbon canister), the exhaust gas stream shall be monitored daily or at intervals no greater than 20% of the design replacement interval, whichever is greater, or as an alternative to conducting monitoring, the carbon may be replaced with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorber.

(E) for a flare, continuously monitor for the presence of a flare pilot light using a thermocouple or any other equivalent device to detect the presence of a flame; and

(F) for a steam stripper, continuously monitor and record the steam flow rate, the wastewater feed mass flow rate,

the wastewater feed temperature, and condenser vapor outlet temperature

§115.147. Exemptions. For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following exemptions shall apply.

(1) Any plant with an annual volatile organic compounds (VOC) loading in wastewater, as determined in accordance with §115.148 of this title (relating to Determination of Wastewater Characteristics), less than or equal to 10 megagrams (Mg) (11.03 tons) shall be exempt from the control requirements of §115.142 of this title (relating to Control Requirements)

(2) At any plant with an annual VOC loading in wastewater, as determined in accordance with §115.148 of this title greater than 10 Mg (11.03 tons), any person who is the owner or operator of the plant may exempt from the control requirements of §115.142 of this title one or more affected VOC wastewater streams for which the sum of the annual VOC loading in wastewater for all of the exempted streams is less than or equal to 10 Mg (11.03 tons)

(3) Unless specifically required by this undesignated head, any component of a wastewater storage, handling, transfer, or treatment facility to which the requirements of this undesignated head applies shall be exempt from the requirements of any other portion of this chapter

(4) If compliance with the control requirements of §115.142 of this title would create a safety hazard in a component of a wastewater storage, handling, transfer, or treatment facility, the owner or operator may request the Executive Director to exempt that component from the control requirements of §115.142 of this title. The Executive Director shall approve the request if justified by the likelihood and magnitude of the potential injury and if the Executive Director determines that reducing or eliminating the hazard is technologically or economically unreasonable based on the emissions reductions that would be achieved

(5) Wastewater components are exempt from the control requirements of §115.142 of this title if the overall control of VOC emissions at the account from wastewater from affected source categories is at least 90% less than the 1990 baseline emissions inventory, and the following requirements are met.

(A) The owner or operator of the wastewater component shall submit a control plan no later than March 15, 1995 to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction, which demon-

strates that the overall control of VOC emissions at the account from wastewater from affected source categories will be at least 90% less than the 1990 baseline emissions inventory by November 15, 1996. At a minimum, the control plan shall include the applicable emission point number (EPN), the facility identification number (FIN), the calendar year 1990 emission rates of wastewater from affected source categories (consistent with the 1990 emissions inventory), a plot plan showing the location, EPN, and FIN associated with a wastewater storage, handling, transfer, or treatment facility, and the projected calendar year 1996 VOC emission rates. The projected 1996 VOC emission rates shall be calculated in a manner consistent with the 1990 emissions inventory

(B) In order to maintain exemption status under this paragraph, the owner or operator shall submit an annual report no later than March 31 of each year, starting in 1997, to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction, which demonstrates that the overall control of VOC emissions at the account from wastewater from affected source categories during the preceding calendar year is at least 90% less than the 1990 baseline emissions inventory. At a minimum, the report shall include the EPN, FIN, the throughput of wastewater from affected source categories, a plot plan showing the location, EPN, and FIN associated with a wastewater storage, handling, transfer, or treatment facility, and the VOC emission rates for the preceding calendar year. The emission rates for the preceding calendar year shall be calculated in a manner consistent with the 1990 emissions inventory

(C) All representations in initial control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the wastewater component submits a revised control plan to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall include documentation that the overall reduction of VOC emissions at the account from wastewater from affected source categories continues to be at least 90% less than the 1990 baseline emissions inventory. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory

(6) The owner or operator of wastewater components subject to the control requirements of §115.142 of this title may request an exemption determination from the Executive Director in accordance with §115.910 of this Chapter (relating to Determination of Alternate Means for Control) if the overall control of VOC emissions at the account from wastewater from affected source categories is at least 80% less than the 1990 baseline emissions inventory, and the following requirements are met

(A) Each request for an exemption determination shall be submitted to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction. Each request shall demonstrate that the overall control of VOC emissions at the account from wastewater from affected source categories will be at least 80% less than the 1990 baseline emissions inventory. The request shall include the applicable EPN, the FIN, the calendar year throughput of wastewater from affected source categories, the VOC emission rates, and a plot plan showing the location, EPN, and FIN associated with a wastewater storage, handling, transfer, or treatment facility. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory

(B) The Executive Director shall approve the exemption for specific wastewater components if it is determined to be economically unreasonable to control the associated emissions subject to these rules, all reasonable controls are applied, and the overall control of VOC emissions at the account from wastewater from affected source categories is at least 80% less than the 1990 baseline emissions inventory. The Executive Director may subsequently direct the holder of an exemption under this paragraph to reapply for the exemption if there is good cause to believe that it has become economically reasonable to meet the requirements of §115.142 of this title (relating to Control Requirements). Within three months of an Executive Director request, the holder of an exemption under this paragraph shall reapply for their exemption. If the reapplication for an exemption is denied, the holder of the exemption shall meet the requirements of §115.142 of this title (relating to Control Requirements) as soon as practicable, but no later than two years from the date of denial

(C) All representations in initial control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a

change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the wastewater component submits a revised control plan to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall include documentation that the overall reduction of VOC emissions at the account from wastewater from affected source categories continues to be at least 80% less than the 1990 baseline emissions inventory. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

§115.148 Determination of Wastewater Characteristics. The determination of the characteristics of a wastewater stream for purposes of this undesignated head shall be made as follows.

(1) The characteristics shall be determined at a location between the point of generation and before the wastewater stream is exposed to the atmosphere, treated for volatile organic compounds (VOC) removal, or mixed with another wastewater stream. For wastewater streams which, prior to November 15, 1993, were either actually being mixed or construction had commenced which would result in the wastewater streams being mixed, this mixing shall not establish a limit on where the characteristics may be determined.

(2) The flow rate of a wastewater stream shall be determined on the basis of an annual average by one of the following methods:

(A) the highest annual quantity of wastewater managed, based on historical records for the most recent five years of operation, or for the entire time the wastewater stream has existed if less than five years but at least one year,

(B) the maximum design capacity of the wastewater component,

(C) the maximum design capacity to generate wastewater of the process unit generating the wastewater stream,

(D) measurements that are representative of the actual, normal wastewater generation rates.

(3) The VOC concentration of a wastewater stream shall be determined on the basis of a flow-weighted annual average by one of the following methods, or by a combination of the methods. If the Executive Director determines that the VOC concentration cannot be adequately determined

by knowledge of the wastewater, or by bench-scale or pilot-scale test data, the VOC concentration shall be determined in accordance with subparagraph (C) of this paragraph, or by a combination of the methods in subparagraphs (A), (B), and (C) of this paragraph. VOC with a Henry's Law Constant less than 7.5×10^5 atm-m³/mole at 25 degrees Celsius shall not be included in the determination of VOC concentration.

(A) Knowledge of the wastewater. Sufficient information to document the VOC concentration. Examples of information include material balances, records of chemical purchases, or previous test results.

(B) Bench-scale or pilot-scale test data. Sufficient information to demonstrate that the bench-scale or pilot-scale test concentration data are representative of the actual VOC concentration.

(C) Measurements. Collect a minimum of three representative samples from the wastewater stream and determine the VOC concentration for each sample in accordance with §115.145 of this title (relating to Approved Test Methods). The VOC concentration of the wastewater stream shall be the flow-weighted average of the individual samples.

(4) The annual VOC loading in wastewater for a wastewater stream shall be the annual average flow rate determined in paragraph (2) of this section multiplied by the annual average VOC concentration determined in paragraph (3) of this section.

(5) The annual VOC loading in wastewater for a plant shall be the sum of the annual VOC loading in wastewater for each affected VOC wastewater stream.

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.

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Mary Ruth Holder
Director, Legal Division
Texas Natural Resource
Conservation
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For further information, please call (512) 239-0615

◆ ◆ ◆
Municipal Solid Waste Landfills

• 30 TAC §§115.152, 115.153, 115.155-115.157, 115.159

The amendments are adopted under the

Texas Health and Safety Code (Version 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.152 Control Requirements

(a) For the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas as defined in §115.10 of this title (relating to Definitions), no person shall operate or allow the operation of a municipal solid waste landfill (MSWLF) unless each owner or operator of a MSWLF calculates the nonmethane organic compounds (NMOC) emission rate for the landfill using the procedures provided in §60.753 of the proposed federal rules published in the May 30, 1991, issue of the *Federal Register* (58 FR 104). The volatile organic compound emission rate shall be calculated and recalculated annually using the following default values: Generation Rate Constant, $K = 0.05$ 1/year; Generation Potential, $L_0 = 170$ m³/Mg; Nonmethane Gas Concentration, $C_{NMOC} = 4,000$ ppmv. If at any time the calculated NMOC emission rate exceeds 150 Megagrams (Mg) per year, the owner or operator shall:

(1) install a gas collection and control system (GCCS) subject to the requirements of §60.752(b)(2)(u) of the proposed federal rules published in the May 30, 1991, issue of the *Federal Register* (58 FR 104). Alternative design methodologies to the GCCS are subject to the approval of the Executive Director,

(2) control NMOC gas emissions in one of the following ways:

(A) the total collected gas is routed to an open flare designed and operated in accordance with 40 Code of Federal Regulations, §60.18,

(B) the total collected gas is routed to a control device which reduces the total collected gas emissions by 98% or to less than 20 parts per million by volume, or

(C) the total collected gas is routed to a gas treatment system which processes the collected gas for subsequent use or sale. The sum of all emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of subparagraph (A) of this paragraph.

(3) operate the GCCS in compliance with §60.754 of the proposed federal rules published in the May 30, 1991, issue of the *Federal Register* (58 FR 104).

(b) The GCCS may be capped or removed if all of the following conditions are met:

(1) the landfill shall no longer accept waste and shall be permanently closed;

(2) the GCCS shall have been in continuous operation for at least 15 years, and

(3) the calculated NMOC emission rate shall be less than 150 Mg per year on three successive test dates. The test dates shall be no closer than three months apart, and no longer than six months apart

§115.156 Monitoring and Recordkeeping Requirements For the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas, the following recordkeeping requirements shall apply.

(1) For municipal solid waste landfills (MSWLF), which are not subject to the requirements of §115.152 of this title (relating to Control Requirements), the owner or operator of each landfill shall maintain complete and up-to-date records sufficient to demonstrate continuous compliance with the applicable exemption criteria including, but not limited to, an annual calculation of the non-methane organic compounds (NMOC) emissions rate and any other necessary operational information.

(2) For MSWLF, which are subject to the requirements of §115.152 of this title, the owner or operator of each landfill shall install and maintain monitors to continuously measure and record operational parameters of any emission control device installed to meet applicable control requirements. Such records must be sufficient to demonstrate proper functioning of those devices to design specifications, including but not limited to

(A) the exhaust gas temperature immediately downstream for any direct-flame incinerator or enclosed flare;

(B) the gas temperature immediately upstream and downstream for any catalytic incinerator or chiller;

(C) the NMOC concentration for any carbon adsorption system exhaust gas to determine if breakthrough has occurred;

(D) the gas flowrate to the combustion device.

(E) monthly readings of the gauge pressure at each well in the gas collection header.

(F) the percent methane con-

centration at each well in the gas collection header; and

(G) the dates and reasons for any maintenance and repair of the required gas collection and control system and control devices and the estimated quantity and duration of NMOC emissions during such activities

(3) Each owner or operator of a MSWLF shall annually submit an emissions inventory report as required by §101.10 of this title (relating to Emissions Inventory Requirements) This report shall include:

(A) calculation of the NMOC emission rate.

(B) a map or plot of the landfill, providing the size and location, and identifying all areas where waste may be landfilled according to the provisions of the permit;

(C) the maximum design capacity.

(D) notification of any increase in the size of the landfill The increase may result from:

(i) an increase in the permitted area or depth of the landfill;

(ii) a change in the operating procedures, or

(iii) any other means which will increase the maximum design capacity of the landfill, and

(E) notification of closure

(i) For purposes of this subchapter, closure means that waste is no longer being placed in the landfill, and no additional wastes will be placed in the landfill without filing a notification of modification, as prescribed by the TNRCC.

(ii) Landfills that are closed permanently between reporting periods shall report as directed by §101.10 of this title and continue reporting until the calculated NMOC emission rate falls below 150 Mg per year on three successive test dates. The test dates shall be no closer than three months apart, and no longer than six months apart.

§115.157. Exemptions For the Houston/Galveston, El Paso, and Dallas/Fort Worth ozone nonattainment areas, the following facilities are exempt

(1) any municipal solid waste landfill (MSWLF) with a capacity of less than 100,000 Mg (111,000 tons),

(2) any MSWLF which closed or stopped receiving waste prior to November 8, 1987, and does not have the capacity to receive more waste

§115.159 Counties and Compliance Schedule.

(a) All affected municipal solid waste landfills (MSWLFs) in Collin, Dallas, Denton, and Tarrant Counties shall be in compliance with this undesignated head as soon as practicable, but no later than May 31, 1995

(b) All affected MSWLFs in El Paso County shall be in compliance with this undesignated head as soon as practicable, but no later than November 15, 1996

(c) All affected MSWLFs in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall be in compliance with this undesignated head as soon as practicable, but no later than one year after the Texas Natural Resource Conservation Commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the National Ambient Air Quality Standard (NAAQS) for ozone by the November 15, 1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act (FCAA) §172(c)(9)

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.

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For further information, please call (512) 239-0615

◆ ◆ ◆
Subchapter C. Volatile Organic
Compound Transfer Operations

Loading and Unloading of
Volatile Organic Compounds

• 30 TAC §§115.211-115.217,
115.219

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with

the policy and purposes of the TCAA.

§115.211 Emission Specifications

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following emission specifications shall apply.

(1) Emission limitations for gasoline terminals, as defined in §115.10 of this title, are as follows:

(A) Volatile organic compound (VOC) emissions from gasoline terminals shall be reduced to a level not to exceed 0.33 pound of VOC from the vapor recovery system vent per 1,000 gallons (40 mg/liter) of gasoline transferred, and

(B) After November 15, 1996, VOC emissions from gasoline terminals shall be reduced to a level not to exceed 0.09 pound of VOC from the vapor recovery system vent per 1,000 gallons (10.8 mg/liter) of gasoline transferred.

(2) The maximum loss of VOC due to product transfer at a gasoline bulk plant, as defined in §115.10 of this title, is limited to 1.2 pounds per 1,000 gallons (140 mg/liter) of gasoline transferred.

(3) After November 15, 1996 in the Houston/Galveston area, VOC emissions from marine terminals, as defined in §115.10 of this title, shall be reduced to a level not to exceed 0.09 pounds of VOC from the vapor recovery system vent per 1,000 gallons (10.8 mg/liter) of VOC loaded into the marine vessel or maintain a overall process control efficiency of at least 90%.

(b) (No change.)

§115.212 Control Requirements

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following control requirements shall apply:

(1)-(4) (No change.)

(5) All land-based loading and unloading of VOC shall be conducted such that

(A)-(B) (No change.)

(6)-(7) (No change.)

(8) No person shall permit the transfer of gasoline from a transport vessel into a gasoline bulk plant storage tank, unless the following requirements are met:

(A)-(C) (No change.)

(9) No person shall permit the transfer of gasoline from a gasoline bulk plant into a transport vessel, unless the following requirements are met:

(A)-(D) (No change.)

(10) After November 15, 1996 for marine terminals in the Houston/Galveston area, the following control requirements shall apply:

(A) Control device(s) shall reduce VOC emissions by at least 90% by weight from uncontrolled conditions or to a level not to exceed 0.09 pounds of VOC from the vapor recovery system vent per 1,000 gallons (10.8 mg/liter) of VOC loaded.

(B) Only certified leak-free marine vessels shall be used for loading operations.

(C) All gauging and sampling devices shall be vapor-tight except for necessary gauging and sampling.

(11) After November 15, 1996 for gasoline terminals in the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following control requirements shall apply:

(A) Each vapor recovery device serving a loading rack shall be upgraded to include a vacuum assisted vapor collection system followed by a vapor recovery system. For the purposes of this paragraph, a vacuum assisted vapor collection system is defined as a blower system which produces a vacuum at the transport vessel to prevent fugitive emissions during loading operations.

(B) Each vapor recovery system shall be instrumented in such a way that the pump(s) transferring fuel to the transport vessels will not operate unless the vapor recovery system is properly connected and properly operating. No transport vessel loading shall take place at a loading rack when the vapor recovery systems serving that loading rack is out of service or is not operating in accordance with the manufacturer's parameters.

(12) Any loading or unloading operation that becomes subject to the provisions of this subsection by exceeding provisions of §115.217(a) of this title (relating to Exemptions) will remain subject to the provision of this subsection, even if throughput or emissions later fall below exemption limits unless and until emissions are reduced to at or below the controlled emissions level existing prior to implementation of the pro-

ject by which throughput or emission rate was reduced and less than the applicable exemption limits in §115.217(a) of this title; and

(A)-(B) (No change.)

(b) (No change.)

(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following requirements shall apply:

(1)-(5) (No change.)

§115.214. Inspection Requirements.

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following inspection requirements shall apply:

(1) Inspection for visible liquid leaks, visible fumes, or significant odors resulting from land-based volatile organic compounds (VOCs) transfer operations shall be conducted during each transfer by the owner or operator of the VOC loading and unloading operation or the owner or operator of the transport vessel.

(2) Land-based VOC loading or unloading through the affected transfer lines shall be discontinued immediately when a leak is observed and shall not be resumed until the observed leak is repaired.

(3) Gasoline tank-truck tanks being loaded shall have been leak tested within one year, in accordance with the requirements of §§115.234-115.237 and 115.239 of this title (relating to Control of Volatile Organic Compound Leaks From Transport Vessels) as evidenced by prominently displayed certification, affixed near the United States Department of Transportation certification plate.

(4) After May 31, 1995, all tank-truck tanks loading or unloading VOC having a true vapor pressure greater than or equal to 0.5 pounds per square inch absolute under actual storage conditions shall have been leak tested within one year in accordance with the requirements of §§115.234-115.237 and 115.239 of this title as evidenced by prominently displayed certification affixed near the United States Department of Transportation certification plate.

(5) After November 15, 1996 for marine terminals in the Houston/Galveston area, the following inspection requirements shall apply:

(A) Inspection for visible liquid leaks, visible fumes, or significant odors resulting from VOC transfer operations shall be conducted during each transfer by the owner or operator of the VOC loading

and unloading operation or the owner or operator of the marine vessel

(B) If a liquid leak is detected during the loading operation and can not be repaired immediately (for example, by tightening a bolt or packing gland), then the transfer operation shall cease until the leak is repaired.

(C) If a vapor leak is detected by sight, sound, smell, or hydrocarbon gas analyzer during the loading operation, then a "first attempt" shall be made to repair the leak. Cargo loading operations need not be ceased if the first attempt to repair the leak, as defined by §115.10 of this title (relating to Definitions), to less than 10,000 parts per million by volume (ppmv) or 20% of the lower explosive limit is not successful provided that the first attempt effort is documented by the owner or operator of the marine vessel as soon as practicable and a copy of the repair log made available to a representative of the marine loading facility. No additional loadings shall be made into the cargo tank until a successful repair has been completed and certified by a 40 Code of Federal Regulations (CFR) 61.304(f) or equivalent inspection

(D) The intentional bypassing of a vapor control device during marine loading operations is prohibited

(E) All shore-based equipment is subject to the fugitive emissions monitoring requirements of §§115.352-115.359 of this title (relating to Fugitive Emission Control in Petroleum Refining and Petrochemical Processes). For the purposes of this paragraph, shore-based equipment includes, but is not limited to, all equipment such as loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves between the marine loading facility and the associated land-based storage tanks, excluding working emissions from the storage tanks

(6) After November 15, 1996, each gasoline terminal, as defined in §115.10 of this title, in the Dallas/Fort Worth, El Paso, and Houston/Galveston areas is subject to the fugitive emissions monitoring requirements of §§115.352-115.359 of this title.

(b) (No change.)

§115.215. *Approved Test Methods.*

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, compliance with §115.211(a) and §115.212(a) of this title (relating to Emission Specifications; and

Control Requirements) shall be determined by applying the following test methods, as appropriate:

(1)-(6) (No change.)

(7) determination of true vapor pressure using American Society for Testing and Materials (ASTM) Test Methods D32389, D2879, D4953, D5190, or D5191 for the measurement of Reid vapor pressure, adjusted for actual storage temperature in accordance with the American Petroleum Institute (API) Publication 2517, Third Edition, 1989;

(8) 40 CFR 61.304(f) for determination of cargo tank pressurization;

(9) ASTM Test Method D93 for the measurement of flash point, or

(10) minor modifications to these test methods approved by the Executive Director.

(b) (No change)

§115.216. *Monitoring and Recordkeeping Requirements.*

(a) For volatile organic compound (VOC) loading or unloading operations in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas affected by §115.211(a) and §115.212(a) of this title (relating to Emission Specifications; and Control Requirements), the owner or operator shall maintain the following information at the plant as defined by its Texas Natural Resource Conservation Commission (TNRCC) air quality account number for at least two years and shall make such information available upon request to representatives of the TNRCC, United States Environmental Protection Agency, or any local air pollution control agency having jurisdiction in the area

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

(4) For gasoline bulk plants.

(A) -(D) (No change)

(5) For VOC loading or unloading operations other than gasoline terminals, gasoline bulk plants, and marine terminals, a daily record of each transport vessel loaded or unloaded, including,

(A) the certification number of each tank-truck loaded or unloaded and the date of the last leak testing required by §115.214(a)(4) of this title,

(B)-(C) (No change)

(6) After November 15, 1996 for marine terminals in the Houston/Galveston area:

(A) a daily record of all marine vessels loaded at the affected terminal, including,

(i) the name, registry of the marine vessel, and the legal owner or operator of the marine vessel;

(ii) the chemical name and amount of VOC cargo loaded, and

(iii) the conditions of the tanks prior to being loaded (i.e., cleaned, crude oil washed, gas freed, etc.) and the prior cargo carried by the marine vessel

(B) all marine vessel loading operations conducted with a VOC which has a vapor pressure equal to or greater than 0.5 pounds per square inch absolute under actual storage conditions must certify that the marine vessel has passed an annual vapor tightness test as required by §115.215(a)(8) of this title (relating to Approved Test Methods) A copy of each marine vessel's certification shall be kept on file by the marine terminal for a minimum of two years.

(C) a copy of each marine vessel's first attempt repair log required by §115.214(a) (5)(C) of this title shall be maintained on file by the marine terminal for a minimum of two years.

(D) records of the results of the required fugitive monitoring and maintenance program, including appropriate dates, test methods, instrument readings, repair results, and corrective action taken. Records of flange inspections are not required unless a leak is detected.

(7) For gasoline terminals in the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, records of the results of the required fugitive monitoring and maintenance program shall include appropriate dates, test methods, instrument readings, repair results, and corrective action taken. Records of flange inspections are not required unless a leak is detected

(8) Affected persons shall maintain the results of any testing conducted in accordance with the provisions specified in §115.215(a) of this title

(b) (No change.)

§115.217. *Exemptions.*

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following exemptions apply.

(1)-(2) (No change.)

(3) Until November 15, 1996, any plant, as defined by its Texas Natural

Resource Conservation Commission (TNRCC) air quality account number, excluding gasoline bulk plants, having less than 20,000 gallons (75,708 liters) of VOC loaded per day (averaged over any consecutive 30-day period) with a true vapor pressure greater than or equal to 1.5 pounds per square inch absolute (psia) under actual storage conditions is exempt from the requirements of §115.212(a) of this title. The owner or operator of any VOC loading operation for which the VOC loading operation was previously exempt under §115.217(a)(2) of this title (as in effect October 16, 1992) from the control requirements of this undesignated head, and which does not otherwise qualify for exemption under this paragraph, shall:

(A) (No change)

(B) qualify for the exemption under paragraph (8) of this section; or

(C) apply for the exemption under paragraph (9) of this section no later than September 15, 1994.

(4) After November 15, 1996, any plant, as defined by its TNRCC air quality account number, excluding gasoline bulk plants, having less than 20,000 gallons (75,708 liters) of VOC loaded per day (averaged over any consecutive 30-day period) with a true vapor pressure greater than or equal to 0.5 psia under actual storage conditions is exempt from the requirements of §115.212(a) of this title

(5) All loading and unloading of liquefied petroleum gas only (regulated by the Safety Rules of the Liquefied Petroleum Gas Division of the Texas Railroad Commission) is exempt from the requirements of §115.212(a) of this title

(6) The following are exempt from the requirements of §115.212(a) of this title.

(A) all unloading of marine vessels, and

(B) until November 15, 1996, all loading of marine vessels and all loading and unloading of crude oil and condensate

(7) Gasoline bulk plants which have a gasoline throughput less than 4,000 gallons (15,142 liters) per day averaged over any consecutive 30-day period are exempt from the provisions of §115.211(a)(2), §115.212(a) (9), and §115.216(a)(4) of this title (relating to Emission Specifications, Control Requirements, and Monitoring and Recordkeeping Requirements)

(8) VOC loading operations

other than gasoline terminals, gasoline bulk plants, and marine terminals are exempt from the control requirements of §115.212(a) (1) and (2) of this title if the overall control of emissions at the account from the loading of VOC (excluding VOC loading into marine vessels and VOC loading at gasoline terminals and gasoline bulk plants) with a true vapor pressure between 0.5 and 11 psia under actual storage conditions is at least 90%, and the following requirements are met.

(A)-(C) (No change)

(D) All representations in initial control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the VOC loading operation submits a revised control plan to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall demonstrate that the overall control of emissions at the account from the loading of VOC with a true vapor pressure between 0.5 and 11 psia under actual storage conditions continues to be at least 90%. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(9) The owner or operator of a VOC loading operation subject to the control requirements of §115.212(a)(1) or (2) of this title may request an exemption determination from the Executive Director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if the overall control of emissions at the account from the loading of VOC (excluding VOC loading into marine vessels and VOC loading at gasoline terminals and gasoline bulk plants) with a true vapor pressure between 0.5 and 11 psia under actual storage conditions is at least 80%, and the following requirements are met.

(A)-(B) (No change)

(C) All representations in initial control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the VOC loading operation submits a revised control plan to the TNRCC Austin Office (Office of Air Quality), the

appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall demonstrate that the overall control of emissions at the account from the loading of VOC with a true vapor pressure between 0.5 and 11 psia under actual storage conditions continues to be at least 80%. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(10) The following are exempt from the requirements of §115.211(a) and §115.212(a) of this title:

(A) marine terminals with uncontrolled VOC emissions less than 100 tons per year. Emissions from marine vessel loading operations which were routed to a control device that was installed as of November 15, 1993 are excluded from this calculation. Compliance with this exemption shall be demonstrated through the recordkeeping and reporting requirements of the annual emissions inventory submitted by the owner or operator of the marine terminal;

(B) all throughput of VOC with a vapor pressure less than 0.5 psia loaded into marine vessels,

(C) marine loading operations which use a vapor balance system to control emissions from the marine vessel to fixed roof storage tank(s). For the purposes of this paragraph, vapor balance system is defined as a closed system that transfers vapor displaced by incoming cargo from the tank of a vessel receiving cargo into a tank of the vessel or facility delivering cargo via an arrangement of piping and hoses used to collect vapor emitted from a vessel's cargo tanks and transport the vapor to a vapor processing unit;

(D) non-dedicated loading lines when commodities with a true vapor pressure less than 0.5 psia are transferred, provided that after transfer of VOC with a true vapor pressure greater than or equal to 0.5 psia these non-dedicated loading lines are cleaned, purged, and the residual vapors controlled of VOC with a true vapor pressure greater than or equal to 0.5 psia, and

(E) all throughput of VOC with a flash point of 150 degrees Fahrenheit or greater loaded into marine vessels.

(11) Marine terminals are exempt from the control requirements of §115.211(a)(3) and §115.212(a)(10)(A) of this title if the overall control of emissions at the marine terminal from the loading of VOC with a true vapor pressure between

0.5 and 11 psia under actual storage conditions into marine vessels is at least 90%, and the following requirements are met.

(A) The owner or operator of the marine terminal shall submit a control plan no later than March 31, 1995 to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction which demonstrates that the overall control of emissions at the marine terminal from the loading of VOC with a true vapor pressure between 0.5 and 11 psia under actual storage conditions into marine vessels will be at least 90% by November 15, 1996. For each marine loading facility and any associated control device at the marine terminal, the control plan shall include the emission point number (EPN), the facility identification number (FIN), the calendar year 1994 throughput of VOC with a true vapor pressure between 0.5 and 11 psia under actual storage conditions, a plot plan showing the location, EPN, and FIN of each marine loading facility and any associated control device, and the calendar year 1994 controlled and uncontrolled emission rates.

(B) In order to maintain exemption status under this paragraph, the owner or operator of the marine terminal shall submit an annual report no later than March 31 of each year, starting in 1997, to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction which demonstrates that the overall control of emissions at the marine terminal from the loading of VOC with a true vapor pressure between 0.5 and 11 psia under actual storage conditions into marine vessels during the preceding calendar year is at least 90% after November 15, 1996. For each marine loading facility and any associated control device at the account, the report shall include the EPN, the FIN, the throughput of VOC with a true vapor pressure between 0.5 and 11 psia under actual storage conditions for the preceding calendar year, a plot plan showing the location, EPN, and FIN of each marine loading facility and any associated control device, and the controlled and uncontrolled emission rates for the preceding calendar year.

(C) All representations in initial control plans and annual reports become enforceable conditions. It shall be unlawful for any person to vary from such representations if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator of the marine terminal submits a

revised control plan to the TNRCC Austin Office (Office of Air Quality), the appropriate TNRCC Regional Office, and any local air pollution control program with jurisdiction within 30 days of the change. All control plans and reports shall demonstrate that the overall control of emissions at the marine terminal from the loading into marine vessels of VOC with a true vapor pressure between 0.5 and 11 psia under actual storage conditions continues to be at least 90%. The emission rates shall be calculated in a manner consistent with the 1990 emissions inventory.

(b) For all persons in Gregg, Nueces, and Victoria Counties, the following exemptions apply.

(1) (No change.)

(2) Any plant, as defined by its TNRCC air quality account number, having less than 20,000 gallons (75,708 liters) of VOC loaded per day (averaged over any consecutive 30-day period) with a true vapor pressure greater than or equal to 1.5 psia under actual storage conditions is exempt from the requirements of §115.212(b) of this title. The owner or operator of any VOC loading operation for which the VOC loading operation was previously exempt under §115.217(b)(2) of this title (as in effect October 16, 1992) from the control requirements of this undesignated head, and which does not otherwise qualify for exemption under this paragraph, shall:

(A)-(C) (No change.)

(3)-(5) (No change.)

(c) For all persons in Aransas, Bexar, Calhoun, Matagorda, San Patricio, and Travis Counties, the following exemptions apply.

(1) (No change.)

(2) Any plant, as defined by its TNRCC air quality account number, having less than 20,000 gallons (75,708 liters) of VOC loaded per day (averaged over any consecutive 30-day period) with a true vapor pressure greater than or equal to 1.5 psia under actual storage conditions is exempt from the requirements of §115.212(c) of this title. The owner or operator of any VOC loading operation for which the VOC loading operation was previously exempt under §115.217(c)(2) of this title (as in effect October 16, 1992) from the control requirements of this undesignated head, and which does not otherwise qualify for exemption under this paragraph, shall:

(A) -(C) (No change.)

(3)-(5) (No change.)

§115.219. Counties and Compliance Schedules.

(a) All affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth,

El Paso, and Houston/Galveston areas shall be in compliance with this undesignated head (relating to Loading and Unloading of Volatile Organic Compounds) in accordance with the following schedules.

(1) All affected persons shall be in compliance with §115.211(a)(1)(B), §115.212(a)(2) and (4), §115.214(a)(4), and §115.217(a)(2) and (4) of this title (relating to Emission Specifications; Control Requirements; Inspection Requirements; Approved Test Methods; and Exemptions) as soon as practicable, but no later than November 15, 1996.

(2) All loading and unloading of crude oil and condensate to and from transport vessels, as defined in §115.10 of this title (relating to Definitions), shall be in compliance with §115.211(a), §115.212(a), §115.213(a), §115.214(a), §115.215(a), §115.216(a), and §115.217(a) of this title (relating to Emission Specifications; Control Requirements; Alternate Control Requirements; Inspection Requirements; Monitoring and Recordkeeping Requirements; Approved Test Methods; and Exemptions) as soon as practicable, but no later than November 15, 1996.

(3) All persons affected by the deletion of the allowance for nonvapor-tight conditions during sampling and gauging shall be in compliance as soon as practicable, but no later than November 15, 1996.

(4) All affected persons shall be in compliance with §115.216(a)(5) of this title as soon as practicable, but no later than May 31, 1994.

(5) All affected marine terminals in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall be in compliance with §115.211(a), §115.212(a), §115.213(a), §115.214(a), §115.215(a), §115.216(a), and §115.217(a) of this title as soon as practicable, but no later than November 15, 1996.

(6) All affected gasoline terminals in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Harris, Liberty, Montgomery, Tarrant, and Waller Counties shall be in compliance with §115.211(a)(11), §115.214(a)(6), and §115.216(a)(7) of this title as soon as practicable, but no later than November 15, 1996.

(b) (No change.)

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 May 4, 1994.

TRD-9440498

Mary Ruth Holder
Director, Legal Division
Texas Natural Resource
Conservation
Commission

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For further information, please call: (512) 239-0615

◆ ◆ ◆
Control of Reid Vapor Pressure of Gasoline

- 30 TAC §§115.252, 115.253, 115.255, 115.257, 115.259

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with authority to adopt rules consistent with the policy and purpose of the TCAA.

§115.252. *Control Requirements.* For the El Paso area as defined in §115.10 of this title (relating to Definitions), the following control requirements shall apply.

(1) No person shall place, store, or hold in any stationary tank, reservoir, or other container any gasoline, which may ultimately be used in a motor vehicle in the El Paso area with a Reid vapor pressure (RVP) greater than 7.0 pounds per square inch absolute (psia) or that does not meet the United States Environmental Protection Agency (EPA) specifications for reformulated gasoline.

(2) No person shall transfer or allow the transfer of gasoline, which may ultimately be used in a motor vehicle in the El Paso area with a RVP greater than 7.0 psia or that does not meet EPA specifications for reformulated gasoline to or from any storage vessel or tank-truck tank at any gasoline terminal, bulk plant, or motor vehicle fuel dispensing facility.

(3) All adjustments in the operation of affected facilities and all transfers or alterations of noncompliant gasoline must be completed as necessary to conform with the provisions of this rule during the following periods of each calendar year:

(A) June 1-September 16 of each year for motor vehicle fuel dispensing facilities; and

(B) May 1-September 16 of each year for all other affected facilities.

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.

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Director, Legal Division
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For further information, please call: (512) 239-0615

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Subchapter D. Petroleum Refining and Petrochemical Processes

Fugitive Emission Control in Petroleum Refining and Petrochemical Processes

- 30 TAC §§115.352-115.357, 115.359

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.357. *Exemptions.* For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following exemptions shall apply.

(1) (No change.)

(2) Storage tank valves, pressure relief valves equipped with a rupture disc or venting to a control device, components in continuous vacuum service, and valves that are not externally regulated (such as in-line check valves) are exempt from the requirements of this undesignated head.

(3)-(8) (No change.)

(9) Valves rated greater than 10,000 pounds per square inch gauge (psig) are exempt from the requirements of §115.352(4) of this title (relating to Control Requirements).

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.

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Mary Ruth Holder
Director, Legal Division
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For further information, please call: (512) 239-0615

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Subchapter E. Solvent-Using Processes

Degreasing and Clean-Up Processes

- 30 TAC §§115.412, 115.415-115.417, 115.419

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.412. *Control Requirements.*

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following control requirements shall apply.

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

(4) In the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, acetone usage at polyester resin operations, as defined in §115.10 of this title, is limited as follows (with usage defined as gross usage minus waste disposal).

(A) Monthly usage of acetone for cleanup at cultured (synthetic) marble operations is limited to no more than 2.0% by weight of the total monthly polyester resin usage, including gelcoat.

(B) Monthly usage of acetone for cleanup at fiber reinforced plastic manufacturing operations is limited to no more than 1.0% by weight of the total monthly polyester resin usage, including gelcoat.

(b) (No change.)

§115.417. *Exemptions.*

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following exemptions shall apply.

(1)-(2) (No change.)

(3) A polyester resin operation with a monthly resin usage, including gelcoat, of less than one ton is exempt from §115.412(a)(4) of this title (relating to Control Requirements). For the purposes of this paragraph, usage is defined as gross usage minus waste disposal.

(4)-(6) (No change.)

(b) (No change.)

§115.419. *Counties and Compliance Schedules.* All affected polyester resin operations in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Harris, Liberty, Montgomery, Tarrant, and Waller Counties shall be in compliance with §§115.412(a)(4), 115.416(a)(3)-(4), and 115.417(a)(3) of this title (relating to Control Requirements; Recordkeeping Require-

ments; and Exemptions) as soon as practicable, but no later than May 31, 1995.

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.

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Director, Legal Division
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For further information, please call: (512) 239-0615

Surface Coating Processes

• 30 TAC §§115.421, 115.422, 115.429

The amendments are adopted under the Texas Health and Safety Code (VERNON 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.421. Emission Specifications.

(a) No person in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston Areas as defined in §115.10 of this title (relating to Definitions) may cause, suffer, allow, or permit volatile organic compound (VOC) emissions from the surface coating processes as defined in §115.10 of this title affected by paragraphs (1)-(13) of this subsection to exceed the specified emission limits. These limitations are based on the daily weighted average of all coatings delivered to each coating line, except for those in paragraph (10) of this subsection which are based on paneling surface area and those in paragraph (11) of this subsection which are based on the VOC content of architectural coatings sold or offered for sale.

(1)-(12) (No change.)

(13) Surface coating of wood parts and products.

(A) After November 15, 1996 in the Dallas/Fort Worth, El Paso, and Houston/Galveston areas, VOC emissions from the coating of wood parts and products shall not exceed the following limits for each surface coating type:

(i) 5.9 pounds per gallon (0.71 kg/liter) of coating (minus water and exempt solvent) for clear topcoats, as defined in §115.10 of this title;

(ii) 6.5 pounds per gallon

(0.78 kg/liter) of coating (minus water and exempt solvent) for wash coats, as defined in §115.10 of this title;

(iii) 6.0 pounds per gallon (0.72 kg/liter) of coating (minus water and exempt solvent) for final repair coats, as defined in §115.10 of this title;

(iv) 6.6 pounds per gallon (0.79 kg/liter) of coating (minus water and exempt solvent) for semitransparent wiping and glazing stains, as defined in §115.10 of this title;

(v) 6.9 pounds per gallon (0.83 kg/liter) of coating (minus water and exempt solvent) for semitransparent spray stains and toners, as defined in §115.10 of this title;

(vi) 5.5 pounds per gallon (0.66 kg/liter) of coating (minus water and exempt solvent) for opaque ground coats and enamels, as defined in §115.10 of this title;

(vii) 6.2 pounds per gallon (0.74 kg/liter) of coating (minus water and exempt solvent) for clear sealers, as defined in §115.10 of this title;

(viii) for shellac, as defined in §115.10 of this title:

(I) 5.4 pounds per gallon (0.65 kg/liter) of coating (minus water and exempt solvent) for clear shellac; and

(II) 5.0 pounds per gallon (0.60 kg/liter) of coating (minus water and exempt solvent) for opaque shellac;

(ix) 5.0 pounds per gallon (0.60 kg/liter) of coating (minus water and exempt solvent) for varnish, as defined in §115.10 of this title; and

(x) 7.0 pounds per gallon (0.84 kg/liter) of coating (minus water and exempt solvent) for all other coatings.

(B) All VOC emissions from solvent washings shall be included in determination of compliance with the emission limitations in subparagraph (A) of this paragraph, unless the solvent is directed into containers that prevent evaporation into the atmosphere.

(C) The requirements of §115.423(a)(3) of this title (relating to Alternate Control Requirements) do not apply at wood parts and products coating facilities if:

(i) a vapor recovery system is used to control emissions from wood parts and products coating operations; and

(ii) all wood parts and

products coatings comply with the emission limitations in subparagraph (A) of this paragraph.

(b) (No change.)

§115.422. Control Requirements. For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following control requirements shall apply.

(1) In Dallas and Tarrant Counties, and after July 31, 1994 in ozone nonattainment counties other than Dallas and Tarrant, the owner or operator of any automobile refinishing operation shall minimize volatile organic compound emissions during equipment clean-up by utilizing the following procedures:

(A) install and operate a system which totally encloses spray guns, cups, nozzles, bowls, and other parts during washing, rinsing, and draining procedures. Non-enclosed cleaners may be used if the vapor pressure of the cleaning solvent is less than 100 millimeters of mercury (mm Hg) at 68 degrees Fahrenheit and the solvent is directed towards a drain that leads directly to an enclosed remote reservoir;

(B) keep all wash solvents in an enclosed reservoir that is covered at all times, except when being refilled with fresh solvents; and

(C) keep all waste solvents and other cleaning materials in closed containers.

(2) (No change.)

(3) Any surface coating operation that becomes subject to the provisions of §115.421(a) of this title (relating to Emission Specifications) by exceeding the provisions of §115.427(a) of this title (relating to Exemptions) shall remain subject to the provisions in §115.421(a) of this title, even if throughput or emissions later fall below exemption limits unless and until emissions are reduced to at or below the controlled emissions level existing prior to implementation of the project by which throughput or emission rate was reduced and less than the applicable exemption limits in §115.427(a) of this title, and:

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or standard exemption required by Chapter 116 of this title. If a standard exemption is available for the project, compliance with this subsection must be maintained for 30 days after the filing of documentation of compliance with that standard exemption; or

(B) if authorization by permit or standard exemption is not required for the project, the owner/operator has given the TNRCC 30 days notice of the project in writing.

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.

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TRD-9440502 Mary Ruth Holder
Director, Legal Division
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Commission

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For further information, please call (512) 239-0615

◆ ◆ ◆
Graphic Arts (Printing) by Rotogravure and Flexographic Processes

◆ ◆ ◆
• 30 TAC §115.432

The amendment is adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.432 Control Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following control requirements shall apply.

(1) (No change.)

(2) Any graphic arts facility that becomes subject to the provisions of paragraph (1)(A), (B), or (C) of this subsection by exceeding provisions of §115.437(a) of this title (relating to Exemptions) will remain subject to the provisions of this subsection, even if throughput or emissions later fall below exemption limits unless and until emissions are reduced to at or below the controlled emissions level existing prior to implementation of the project by which throughput or emission rate was reduced and less than the applicable exemption limits in §115.437(a) of this title and.

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or standard exemption required by Chapter 116 of this title (relating to Control of Air Pollution by Permit for New Construction or Modification). If a standard exemption is available for the

project, compliance with this subsection must be maintained for 30 days after the filing of documentation of compliance with that standard exemption; or

(B) if authorization by permit or standard exemption is not required for the project, the owner/operator has given the Texas Natural Resource Conservation Commission 30 days' notice of the project in writing.

(3) (No change.)

(b) (No change.)

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

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◆ ◆ ◆
Offset Lithographic Printing

◆ ◆ ◆
• 30 TAC §§115.442, 115.443, 115.445, 115.446, 115.449

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA

§115.449 Counties and Compliance Schedules.

(a) All affected persons in El Paso County shall be in compliance with §115.442 of this title (relating to Control Requirements), §115.443 of this title (relating to Alternate Control Requirements), §115.445 of this title (relating to Testing Requirements), and §115.446 of this title (relating to Monitoring and Recordkeeping Requirements) as soon as practicable, but no later than November 15, 1996

(b) All affected persons in Collin, Dallas, Denton, and Tarrant Counties shall be in compliance with §115.442, §115.443, §115.445, and §115.446 of this title as soon as practicable, but no later than one year, after the Texas Natural Resource Conservation Commission (TNRCC) publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the November 15,

1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act (FCAA), §172(c)(9).

(c) All affected persons in Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties shall be in compliance with §115.442, §115.443, §115.445, and §115.446 of this title as soon as practicable, but no later than one year, after the TNRCC publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the NAAQS for ozone by the November 15, 1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the FCAA, §172(c)(9).

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◆ ◆ ◆
**Subchapter F. Miscellaneous Industrial Sources
Pharmaceutical Manufacturing Facilities**

◆ ◆ ◆
• 30 TAC §115.532

The amendment is adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA

§115.532. Control Requirements.

(a) For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the owner or operator of a synthesized pharmaceutical manufacturing facility shall provide the following specified controls

(1)-(4) (No change.)

(5) Pharmaceutical manufacturing facility. Any pharmaceutical manufacturing facility that becomes subject to the provisions of paragraphs (1)-(4) of this subsection by exceeding provisions of §115.537(a) of this title (relating to Exemptions) will remain subject to the provisions of this subsection, even if throughput or

emissions later fall below exemption limits unless and until emissions are reduced to at or below the controlled emissions level existing prior to implementation of the project by which throughput or emission rate was reduced and less than the applicable exemption limits in §115.537(a) of this title and:

(A) the project by which throughput or emission rate was reduced is authorized by any permit or permit amendment or standard permit or standard exemption required by Chapter 116 of this title (relating to Control of Air Pollution by Permit for New Construction or Modification.) If a standard exemption is available for the project, compliance with this subsection must be maintained for 30 days after the filing of documentation of compliance with that standard exemption; or

(B) if authorization by permit or standard exemption is not required for the project, the owner/operator has given the Texas Natural Resource Conservation Commission 30 days' notice of the project in writing.

(b) (No change)

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.

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◆ ◆ ◆
Degassing or Cleaning of Stationary and Transport Vessels

• 30 TAC §§115.541-115.547, 115.549

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.541. Emission Specifications.

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following emission specifications shall apply to degassing during or in

preparation of cleaning.

(1)-(2) (No change.)

(b) For all persons in the Beaumont/Port Arthur and Houston/Galveston areas as defined in §115.10 of this title, the following emission specifications shall apply to degassing during or in preparation of cleaning for all VOC marine vessels, as defined in §115.10 of this title, with a nominal storage capacity of 10,000 barrels (420,000 gallons) or more.

(1) No person shall degas or clean a tank that carried a VOC with a vapor partial pressure greater than or equal to 0.5 pounds per square inch absolute (3.4 kPa) unless the vapors are processed by a vapor control system.

(2) The vapor control system shall maintain a control efficiency of at least 90%.

(3) When conducting degassing or cleaning operations, no avoidable liquid or gaseous leaks, as detected by sight or sound, shall originate from the degassing or cleaning operations.

(4) The intentional bypassing of a vapor control device used during degassing or cleaning is prohibited. Any visible VOC leak originating from the vapor control device or other associated product recovery device shall be repaired as soon as possible.

(5) All VOC marine vessels, as defined in §115.10 of this title, shall have all cargo tank closures properly secured, or maintain a negative pressure within the tank when a closure is opened, and shall have all pressure/vacuum relief valves operating within certified limits as specified by classification society or flag state until the vapors are discharged to a vapor control system if the vessel is degassed or cleaned.

§115.542. Control Requirements.

(a) For all persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following control requirements shall apply to stationary storage tanks and transport vessels.

(1)-(5) (No change.)

(b) (No change.)

§115.549. Counties and Compliance Schedules.

(a) All affected persons in the Brazoria, Chambers, El Paso, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, and Waller Counties shall be in compliance with this undesignated head as soon as practicable, but no later than November 15, 1996.

(b) All affected persons in Collin, Dallas, Denton, and Tarrant Counties shall be in compliance with this undesignated head as soon as practicable, but no later than one year; after the Texas Natural Resource Conservation Commission (TNRCC) publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the national ambient air quality standard (NAAQS) for ozone by the November 15, 1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act (FCAA), §172(c) (9).

(c) All affected persons in El Paso County shall be in compliance with this undesignated head as soon as practicable, but no later than one year, after the TNRCC publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the NAAQS for ozone by the November 15, 1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the FCAA, §172(c)(9).

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.

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◆ ◆ ◆
Petroleum Dry Cleaning Systems

• 30 TAC §§115.552, 115.553, 115.555-115.557, 115.559

The new sections are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.552. Control Requirements.

(a) For the Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the owner or operator of any dry cleaning facility which uses petroleum-based solvents shall not operate the facility unless the following requirements are satisfied.

(1) Dryers. The owner or operator of a dry cleaning facility shall either:

(A) install, maintain, and operate a solvent-recovery dryer that recovers at least 85% by weight of the used petroleum solvent;

(B) install, maintain, and operate a petroleum dry-to-dry dryer that recovers at least 85% by weight of the used petroleum solvent; or

(C) route the exhaust air stream from the standard dryer to any other properly functioning control device which reduces the total emissions of volatile organic compounds (VOC) to the atmosphere by at least 85% by weight.

(2) Filtration systems. The owner or operator of a petroleum solvent filtration system shall either:

(A) install, maintain, and operate a cartridge filtration system according to the manufacturer's recommendations. The owner or operator shall drain all filter cartridges in their closed housings for at least eight hours before their removal; or

(B) maintain and operate a regenerative filter or any other filtration medium according to the manufacturers' recommendations. The owner or operator shall drain the filter medium in its closed housing for at least eight hours before its removal. Upon removal, the owner or operator shall directly place the filter medium in disposable vapor tight containers or bags and shall keep these containers or bags vapor tight at all times until they are properly landfilled.

(3) Fugitive emissions. The owner or operator shall ensure that:

(A) there are no visual, audible, or smellable leaks from any portion of the dry cleaning equipment. Visual inspection of all equipment and system components shall be conducted at least weekly;

(B) all washer and dryer traps, access doors, and other parts of the equipment where solvent may be exposed to the atmosphere are kept closed at all times except when required for proper operation or maintenance;

(C) all solvent-contaminated waste materials are stored in closed containers prior to proper disposal;

(D) repair of any visual, au-

dible, or olfactory leak in any portion of the equipment shall be completed within three working days from the time the leak is detected. If necessary repair parts are not on hand, the owner or operator shall order the necessary parts within three working days and shall repair the leak no later than three working days after the parts arrive.

(b) Any petroleum solvent dry cleaning facility that becomes or is currently subject to the control requirements of subsection (a) of this section by exceeding the exemption limit of §115.557 of this title (relating to Exemptions) shall remain subject to the provisions of this section, even if its consumption of petroleum solvent later falls below the exemption level unless and until its uncontrolled solvent consumption is reduced to at or below its solvent consumption level prior to lifting controls and less than the applicable exemption levels in §115.557 and:

(1) the project by which solvent consumption was reduced is authorized by any permit or permit amendment or standard permit or standard exemption required by Chapter 116 of this title (concerning Control of Air Pollution by Permits for New Construction or Modification.) If a standard exemption is available for the project, compliance with this subsection shall be maintained for 30 days after the filing of documentation of compliance with that standard exemption; or

(2) if authorization by permit or standard exemption is not required for the project, the owner/operator has given the Texas Natural Resource Conservation Commission 30 days notice of the project in writing.

§115.555. Testing Methods and Procedures.

(a) To demonstrate initial compliance with the provisions of §115.552(a)(1)(A) of this title (relating to Control Requirements), the owner or operator of an affected facility shall perform an initial test to verify that the flow rate of recovered solvent from the recovery dryer is no greater than 1.7 fluid ounces per minute (50 milliliters per minute) at the termination of the recovery cycle. The test shall be conducted for the duration of one week during which no less than 50% of the dryer loads shall be monitored for their final recovered solvent flow rate. The location point for measuring the flow rate of recovered solvent shall be the outlet of the solvent-water separator. Near the end of the recovery cycle the entire flow of recovered solvent shall be diverted to a graduated cylinder. As the recovered solvent collects in the graduated cylinder the elapsed time is monitored and recorded in periods of greater than or equal to one minute. At the same time, the volume of solvent in the

graduated cylinder is monitored and recorded to determine the volume of recovered solvent that is collected during each time period. The recovered solvent flow rate is calculated by dividing the volume of solvent collected per period by the length of time elapsed during the period and converting the results with appropriate factors into units of ounces or milliliters per minute. The recovery cycle and the monitoring procedure should continue until the flow rate of solvent is less than or equal to 1.7 fluid ounces per minute (50 milliliters per minute).

(b) To demonstrate initial compliance with the provisions of §115.552(a)(1)(C) of this title (relating to Control Requirements), the owner or operator of an affected facility shall apply the following test methods, as appropriate:

(1) Test Methods 1-4 (40 Code of Federal Regulations (CFR) 60, Appendix A) for determining flow rate, as necessary;

(2) Test Method 18 (40 CFR 60, Appendix A) for determining gaseous organic compound emissions by gas chromatography;

(3) Test Method 25 (40 CFR 60, Appendix A) for determining total gaseous non-methane organic emissions as carbon,

(4) Test Methods 25A (40 CFR 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; or

(5) one of the above test methods with minor modifications as approved by the Executive Director.

§115.559. Counties and Compliance Schedules.

(a) All affected petroleum solvent dry cleaning facilities in the Dallas/Fort Worth, Houston/Galveston, and El Paso areas, as defined in §115.10 of this title, shall be in compliance with this undesignated head as soon as practicable, but no later than one year, after the Texas Natural Resource Conservation Commission publishes notification in the *Texas Register* of its determination that this contingency rule is necessary as a result of failure to attain the National Ambient Air Quality Standard (NAAQS) for ozone by the November 15, 1996 attainment deadline or failure to demonstrate reasonable further progress as set forth in the 1990 Amendments to the Federal Clean Air Act §172(c)(9)

(b) Any petroleum solvent dry cleaning facility that becomes subject to the control requirements of §115.552(a)(1) of this title (relating to Control Requirements) by exceeding the exemption threshold as identified in §115.557 of this title (relating

to Exemptions) shall be in compliance as soon as practicable, but no later than two years from the time the exemption level was exceeded.

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.

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Subchapter G. Consumer-related Sources

Consumer Products

- 30 TAC §§115.600, 115.610, 115.612-115.617, 115.619

The amendments are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

§115.600. Definitions. Unless specifically defined in the Texas Clean Air Act (TCAA) or in the rules of the Commission, the terms used by the Commission have the meanings commonly ascribed to them in the field of air pollution control. In addition to the terms which are defined by the TCAA, the following terms, when used in this undesignated head, relating to Consumer Products, shall have the following meanings, unless the context clearly indicates otherwise.

Aerosol product—A pressurized spray system that dispenses product ingredients by means of a propellant or mechanically induced force. This does not include pump sprays.

Agricultural use—The use of any pesticide or method or device for the control of pests in connection with the commercial production, storage, or processing of any animal or plant crop. This does not include the sale or use of pesticides in properly labeled packages or containers which are intended for home use, use in structural pest control, industrial use, or institutional use. The following are for the purposes of this subchapter only.

(A) Home use means use in a household or its immediate environment.

(B) Structural pest control means a use requiring a license under the Texas Structural Pest Control Act, Article 135B-6.

(C) Industrial use means use for or in a manufacturing, mining, or chemical process, or use in the operation of factories, processing plants, and similar sites.

(D) Institutional use means use within the confines of, or on property necessary for the operation of buildings such as hospitals, schools, libraries, auditoriums, and office complexes.

Air freshener—Any consumer product including, but not limited to sprays, wicks, powders, and crystals, designed for the purpose of masking odors, or freshening, cleaning, scenting, or deodorizing the air. This does not include products that are used on the human body, products that function primarily as cleaning products, or disinfectant products claiming to deodorize by killing germs on surfaces. It does include spray disinfectants and other products that are expressly represented for use as air fresheners. To determine whether a product is an air freshener, all verbal and visual representations regarding product use on the label and packaging, and in the product's literature and advertising may be considered. The presence of and representations about a product's fragrance and ability to deodorize (resulting from surface application) shall not constitute a claim of air freshening.

All other forms—All consumer product forms for which no form-specific volatile organic compound (VOC) standard is specified in §115.612(a) of this title (relating to Control Requirements). Unless specified otherwise by the applicable VOC standard, this includes, but is not limited to, solids, liquids, wicks, powders, crystals, and cloth or paper wipes (towelettes).

Antiperspirant—Any product including, but not limited to, aerosols, roll-ons, sticks, pumps, pads, creams, and squeezebottles, that is intended by the manufacturer to be used to reduce perspiration in the human axilla by at least 20% in at least 50% of a target population.

ASTM—The American Society for Testing and Materials.

Automotive windshield washer fluid—Any liquid designed for use in a motor vehicle windshield washer fluid system either as an anti-freeze or for the purpose of cleaning, washing, or wetting the windshield(s). This does not include any fluid which is placed in the washer fluid system of a motor vehicle prior to the time of initial sale.

Bait station insecticide—A container enclosing an insecticidal bait, where the bait is designed to be ingested by insects and is

composed of solid material feeding stimulants with less than 5.0% active ingredients.

Bathroom and tile cleaner—A product designed to clean tile or surfaces in bathrooms. This does not include products specifically designed to clean toilet bowls or toilet tanks.

Carburetor-choke cleaner—A product designed to remove dirt and other contaminants from a carburetor. This does not include products designed to be introduced directly into the fuel lines or fuel storage tank prior to introduction into the carburetor.

Charcoal lighter material—Any combustible material designed to be applied on, incorporated in, added to, or used with charcoal to enhance ignition. This does not include any of the following:

(A) electrical starters and probes;

(B) metallic cylinders using paper tinder;

(C) natural gas; and

(D) propane.

Construction and panel adhesive—Any one-component household adhesive having gap filling capabilities, and which distributes stress throughout the bonded area resulting in a reduction or elimination of mechanical fasteners. These materials are applied from caulking cartridges.

Consumer—Any person who purchases or acquires any consumer product for personal, family, household, or institutional use. Persons acquiring a consumer product for resale are not considered consumers of that product.

Consumer product—Any substance, product, or article, held by any person, the use, consumption, storage, disposal, or destruction of which may result in the release of volatile organic compounds. This does not include fuels, fuel additives, motor vehicles, non-road vehicles, non-road engines, or architectural coatings.

Contact adhesive—Any household adhesive that:

(A) is nitrile-based, or contains polychlorobutadiene (neoprene, chloroprene, bayprene), or latex; and

(B) when applied to two substrates, forms an instantaneous, non-repositionable bond; and

(C) when dried to touch, exhibits a minimum 30minute bonding range; and

(D) bonds only to itself without the need for reactivation by solvents or heat.

Container/packaging—The part or parts of the consumer or institutional product which serve only to contain, enclose, incorporate, deliver, dispense, wrap, or store the chemically formulated substance or mixture of substances which is solely responsible for accomplishing the purposes for which the product was designed or intended. This includes any article onto or into which the principal display panel is incorporated, etched, printed, or attached.

Cooking spray aerosols—Any aerosol product designed either to reduce sticking on cooking and baking surfaces or to be applied on food, or both.

Crawling bug insecticide—Any insecticide product that is designed for use against ants, cockroaches, or other household crawling arthropods, including, but not limited to, mites, silverfish, or spiders. This does not include products designed to be used exclusively on humans or animals.

Deodorant—Means any product including, but not limited to, aerosols, roll-ons, sticks, pumps, pads, creams, and squeezebottles, that is intended by the manufacturer to be used to minimize odor in the human axilla by retarding the growth of bacteria which cause the decomposition of perspiration.

Device—Any instrument or contrivance (other than a firearm) which is designed for trapping, destroying, repelling, or mitigating any pest or any other form of plant or animal life (other than man and other than bacteria, virus, or other microorganism on or in living man or other living animals); but not including equipment used for the application of pesticides when sold separately therefrom.

Disinfectant—Any product intended to destroy or irreversibly inactivate infectious or other undesirable bacteria, pathogenic fungi, or viruses on surfaces or inanimate objects and whose label is registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 United States Code 136, et seq). This does not include any of the following

(A) products designed solely for use on humans or animals,

(B) products designed for agricultural use;

(C) products designed solely for use in swimming pools, therapeutic tubs, or hot tubs; and

(D) products which, as indicated on the principal display panel or label, are designed primarily for use as bathroom and tile cleaners, glass cleaners, general purpose cleaners, toilet bowl cleaners, or

metal polishes.

Distributor—Any person to whom a consumer product is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

Double-phase aerosol air freshener—An aerosol air freshener with the liquid contents in two or more distinct phases that requires the product container be shaken before use to mix the phases, producing an emulsion.

Dusting aid—A product designed to assist in removing dust and other soils from floors and other surfaces without leaving a wax or silicone-based coating. This does not include products which consist entirely of compressed gases for use in electronic or other specialty areas.

Engine degreaser—A cleaning product designed to remove grease, grime, oil, and other contaminants from the external surfaces of engines and other mechanical parts.

Executive Director—The Executive Director of the Texas Natural Resource Conservation Commission, or his or her delegate.

Fabric protectant—A product designed to be applied to fabric substrates to protect the surface from soiling from dirt and other impurities or to reduce absorption of water into the fabric's fibers. This does not include silicone-based products whose function is to provide water repellency, or products designed for use solely on fabrics which are labeled "for dry clean only" and sold in containers of ten fluid ounces or less

Flea and tick insecticide—Any insecticide product that is designed for use against fleas, ticks, their larvae, or their eggs; not including products that are designed to be used exclusively on humans or animals and their bedding.

Flexible flooring material—Asphalt, cork, linoleum, nowax, rubber, seamless vinyl, and vinyl composite flooring

Floor polish or wax—A wax, polish, or any other product designed to polish, protect, or enhance floor surfaces by leaving a protective coating that is designed to be periodically replenished. This does not include spray buff products, products designed solely for the purpose of cleaning floors, floor finish strippers, products designed for unfinished wood floors, or coatings subject to architectural coatings regulations.

Flying bug insecticide—Any insecticide product that is designed for use against flying insects or other flying arthropods, including, but not limited to, flies, mosquitoes, moths, or gnats. This does not include wasp and hornet insecticide, or products that are designed to be used exclusively on humans or animals.

Fragrance—A substance or complex mixture of aroma chemicals, natural essential oils, and other functional components with a combined vapor pressure not in ex-

cess of 2 millimeters mercury at 20 degrees Centigrade, which is added to a consumer product to impart an odor or scent or to counteract a malodor.

Furniture maintenance product—A wax, polish, conditioner, or any other product designed for the purpose of polishing, protecting, or enhancing finished wood surfaces other than floors. This does not include dusting aids, products designed solely for the purpose of cleaning, and products designed to leave a permanent finish such as stains, sanding sealers, and lacquers.

Gel—A colloid in which the disperse phase has combined with the continuous phase to produce a semisolid material, such as jelly.

General purpose adhesive—Any non-aerosol household adhesive designed for use on a variety of substrates, not including contact adhesives or construction and panel adhesives.

General purpose cleaner—A product designed for general all-purpose cleaning, in contrast to cleaning products designed to clean specific substrates in certain situations. This includes products designed for general floor cleaning, kitchen or countertop cleaning, and cleaners designed to be used on a variety of hard surfaces. This does not include non-water-based degreasers.

Glass cleaner—A cleaning product designed primarily for cleaning surfaces made of glass. This does not include products designed solely for the purpose of cleaning optical materials used in eyeglasses, photographic equipment, scientific equipment, or photocopying machines.

Hairspray—A consumer product designed primarily for the purpose of dispensing droplets of a resin on and into a hair coiffure which will impart sufficient rigidity to the coiffure to establish or retain the style for a period of time.

Hair mousse—A hairstyling foam designed to facilitate styling of a coiffure and provide limited holding power.

Hair styling gel—A high viscosity, often gelatinous, product that contains a resin and is designed for the application to hair to aid in styling and sculpting of the hair coiffure.

High volatility organic compound (HVOC)—Any volatile organic compound that exerts a vapor pressure greater than 80 millimeters mercury when measured at 20 degrees Centigrade.

Household adhesive—Any household product that is used to bond one surface to another by attachment. This does not include products used on humans and animals, adhesive tape, contact paper, wallpaper, shelf liners, or any other product with an adhesive incorporated onto or in an inert substrate.

Household product—Any consumer product that is primarily designed to be used inside or outside of living quarters or

residences that are occupied or intended for occupation by individuals, including the immediate surroundings.

Initial sale—The bargain, sale, transfer, or delivery with intent to pass an interest therein, other than a lien, of a motor vehicle which has not been previously registered or licensed in Texas or elsewhere; and such a bargain, sale, transfer, or delivery, accompanied by registration or licensing of said vehicle in Texas or elsewhere, shall constitute the first sale of said vehicle, irrespective of where such bargain, sale, transfer, or delivery occurred.

Insect repellent—A pesticide product that is designed to be applied on human skin, hair, or attire worn on humans in order to prevent contact with or repel biting insects or arthropods.

Insecticide—A pesticide product that is designed for use against insects or other arthropods, but excluding products that are:

(A) for agricultural use;

(B) for use in maintaining building structures; or

(C) restricted materials that require a permit for use and possession.

Insecticide fogger—Any insecticide product designed to release all or most of its content, as a fog or mist, into indoor areas during a single application.

Institutional product—A consumer product that is designed for use in the maintenance or operation of an establishment that manufactures, transports, or sells goods or commodities, or provides services for

profit; or is engaged in the nonprofit promotion of a particular public, educational, or charitable cause. Establishments include, but are not limited to, government agencies, factories, schools, hospitals, sanitariums, prisons, restaurants, hotels, stores, automobile service and parts centers, health clubs, theaters, or transportation companies. Institutional products do not include household products and products that are incorporated into or used exclusively in the manufacture or construction of the goods or commodities at the site of the establishment.

Label—Any written, printed, or graphic matter affixed to, applied to, attached to, blown into, formed, molded into, embossed on, or appearing upon any consumer product or consumer product package, for purposes of branding, identifying, or giving information with respect to the product or to the contents of the package.

Laundry prewash—A product that is designed for application to a fabric prior to laundering and that supplements or contributes to the effectiveness of laundry detergents and/or provides specialized performance.

Laundry starch product—A product that is designed for application to a fabric, either during or after laundering, to impart and prolong a crisp, fresh look and may also act to help ease ironing of the fabric. This includes, but is not limited to, fabric finish, sizing, and starch.

Lawn and garden insecticide—An insecticide product designed primarily to be used in household lawn and garden areas to protect plants from insects or other arthropods.

Liquid—A substance or mixture of substances which is capable of flow as determined under the American Society for Testing and Materials (ASTM) D-4359-90. This does not include powders or other materials that are composed entirely of solid particles.

Manufacturer—Any person who imports, manufactures, assembles, produces, packages, repackages, or relabels a consumer product for distribution or sale in Texas.

Medium volatility organic compound (MVOC)—Any volatile organic compound that exerts a vapor pressure greater than two millimeters mercury and less than or equal to 80 millimeters mercury when measured at 20 degrees Centigrade.

Nail polish—Any clear or colored coating designed for application to the fingernails or toenails and including, but not limited to, lacquers, enamels, acrylics, base coats, and top coats.

Nail polish remover—A product designed to remove nail polish and coatings from fingernails or toenails.

Non-aerosol product—Any product that is not dispensed by a pressurized spray system.

Nonresilient flooring—Flooring of a mineral content which is not flexible, including but not limited to, terrazzo, marble, slate, granite, brick, stone, ceramic tile, and concrete.

Oven cleaner—Any product designed to clean or remove dried food deposits from oven walls.

Percent-by-weight The total weight of volatile organic compound (VOC) except those VOCs exempted under §115.617 of this title (relating to Exemptions), expressed as a percentage of the total net weight of the product exclusive of the container or package as calculated according to the following equation:

$$\text{Percent-By-Weight} = \frac{(B - C)}{A} * 100$$

Where:

A = net weight of unit (excluding container and packaging)

B = weight of VOCs, per unit

C = weight of VOCs, exempted under §115.617,
per unit

Pesticide—Includes any substance or mixture of substances labeled, designed, or intended for use in preventing, destroying, repelling, or mitigating any pest, or any substance or mixture of substances labeled, designed, or intended for use as a defoliant, desiccant, or plant regulator, provided that the term pesticide will not include any substance, mixture of substances, or device which the United States Environmental Protection Agency does not consider to be a pesticide.

Principal display panel or panels—That part, or those parts of a label that are so designed as to most likely be displayed, presented, shown, or examined under normal and customary conditions of display or purchase. Whenever a principal display panel appears more than once, all requirements pertaining to the principal display panel shall pertain to all such principal display panels.

Product category—The applicable category which best describes the product as listed in this section.

Product form—The applicable form which most accurately describes the product's dispensing form, including aerosol products, gels, liquids, pump sprays, and solids.

Propellant—A liquefied or compressed gas that is used in whole or in part, such as a co-solvent, to expel a liquid or any other material from the same self-pressurized container or from a separate container.

Pump spray—A packaging system in which the product ingredients within the

container are not under pressure and in which the product is expelled only while a pumping action is applied to a button, trigger, or other actuator.

Restricted materials—Any pesticides established for restricted use under Section 3(d) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 United States Code 136, et seq.

Retailer—Any person who sells, supplies, or offers consumer products for sale directly to consumers.

Retail outlet—Any establishment at which consumer products are sold, supplied, or offered for sale directly to consumers.

Single-phase aerosol air freshener—An aerosol air freshener with the liquid contents in a single homogeneous phase and which does not require that the product container be shaken before use.

Shaving cream—An aerosol product which dispenses a foam lather intended to be used with a blade or cartridge razor in the removal of facial or other bodily hair, or other wet-shaving system.

Solid—A substance or mixture of substances which, either whole or subdivided (such as the particles comprising a powder), is not capable of flow as determined under the American Society for Testing and Materials (ASTM) D-4359-90.

Spray buff product—A product designed to restore a worn floor finish in conjunction with a floor buffing machine and special pad.

Subsequent sale—The bargain, sale, transfer, or delivery, with intent to pass an interest therein, other than a lien, of a motor

vehicle which has been registered or licensed outside of Texas, save and except when such vehicle is not required under law to be registered or licensed in Texas or elsewhere; and any such bargain, sale, transfer, or delivery of a motor vehicle after same has been registered or licensed shall constitute a subsequent sale, irrespective of where bargain, sale, transfer, or delivery occurred.

Usage directions—The text or graphics on the product's label or accompanying literature which describes to the end user how and in what quantity the product is to be used.

Wasp and hornet insecticide—Any insecticide product that is designed for use against wasps, hornets, yellow jackets, or bees by allowing the user to spray a high-volume directed stream or burst from a safe distance at the intended pest or its hiding place.

Wax—A material or synthetic thermoplastic substance generally of high molecular weight hydrocarbons or high molecular weight esters of fatty acids or alcohols, except glycerol and high polymers (plastics). Wax includes, but is not limited to, substances derived from the secretions of plants and animals such as carnauba wax and beeswax, substances of a mineral origin such as ozocerite and paraffin, and synthetic polymers such as polyethylene.

Wood floor wax—Wax-based products for use solely on wood floors.

§115.610. Applicability. Except as provided in §115.617 of this title (relating to

Exemptions), this subchapter shall apply to any person who sells, offers for sale, supplies, distributes, or manufactures consumer products for use in the State of Texas.

§115.612. Control Requirements.

(a) Volatile Organic Compound (VOC) content limits are as follows:

(1) Except as provided in §§115.613, 115.614, and 115.617 of this title (relating to Alternate Control Requirements, Innovative Products, and Exemptions), no person shall sell, supply, offer for sale, distribute, or manufacture for use in Texas any consumer product which was manufactured after January 1, 1995 (January 1, 1996 for Nail Polish Removers, and Glass Cleaners--All Other Forms) and contains VOC in excess of the limits specified in Table III.

Table III

CONSUMER PRODUCT VOLATILE ORGANIC COMPOUNDS (VOC) LIMITATION

<u>Product Category</u>	<u>Percent-by-weight VOC</u>
Air Fresheners	
Single-Phase Aerosols	70
Double-phase Aerosols	30
Liquids/Pump Sprays	18
Solids/Gels	3
Automotive Windshield Washer Fluids	23.5
Bathroom and Tile Cleaners	
Aerosols	7
All Other Forms	5
Carburetor-Choke Cleaners	75
Charcoal Lighter Material	See §115.612(f)
Cooking Spray Aerosols	18

Table III
(continued)

<u>Product Category</u>	<u>Percent-by-weight VOC</u>
Dusting Aids Aerosol	35
All Other Forms	7
Engine Degreasers	75
Fabric Protectants	75
Floor Polishes/Waxes Products for Flexible Flooring Materials	7
Products for Nonresilient Flooring	10
Wood Floor Wax	90
Furniture Maintenance Products Aerosols	25
General Purpose Cleaners	10
Glass Cleaners Aerosols	12
All other forms	6
Hairsprays	80
Hair Mousses	16

Table III
(continued)

<u>Product Category</u>	<u>Percent-by-weight VOC</u>
Hair Styling Gels	6
Household Adhesives	
Aerosol	75
Contact	80
Construction and Panel	40
General Purpose	10
Insecticides	
Crawling Bug	40
Flea and Tick	25
Flying Bug	35
Foggers	45
Lawn and Garden	20
Insect Repellents	
Aerosols	65
Laundry Prewash	
Aerosols/Solids	22
All Other Forms	5
Laundry Starch Products	5
Nail Polish Removers	75

Table III
(continued)

<u>Product Category</u>	<u>Percent-by-weight VOC</u>
Oven Cleaners Aerosols/Pump Sprays	8
Liquids	5
Shaving Creams	5

(2) Except as provided in §§115.613, 115.614, and 115.617 of this title, no person shall sell, supply, offer for sale, distribute, or manufacture for use in Texas any antiperspirant or deodorant which was manufactured after January 1, 1995 and contains high volatility organic compounds (HVOC) in excess of the limits specified in Table IV.

Table IV
Antiperspirant/Deodorant VOC Limitation

<u>Product Category</u>	<u>Percent-by-weight HVOC</u>
Aerosol product Antiperspirant	60
Deodorant	20
Non-aerosol product	0

(b) For consumer products for which the usage directions specifically state that the product should be diluted prior to use, the limits specified in subsection (a) of this section shall apply to the product only after the minimum recommended dilution has taken place. For purposes of this subsection, the usage directions shall not include recommendations for incidental use of a concentrated product to deal with limited special applications such as hard-to-remove soils or stains.

(c) The provisions of Tables III and IV shall not apply to a consumer product manufactured prior to the effective date stated in subsection (a) of this section.

(d) Notwithstanding the definition of product category in §115.600 of this title (relating to Definitions), if anywhere on the principal display panel of any consumer product, any representation is made that the product may be used as, or is suitable for use as a consumer product for which a lower VOC standard is specified in §115.612 of this title (relating to Control Requirements), then the lowest VOC standard shall apply. This requirement does not apply to general purpose cleaners or anti-spirants.

(e) For consumer products that are registered under the Federal Insecticide, Fungicide, and Rodenticide Act, (FIFRA; 7 United States Code, §136 et seq), the effective date of the VOC standards is one year after the date specified in subsection (a) of this section.

(f) The requirements for charcoal lighter material are as follows.

(1) No person shall sell for use in Texas any charcoal lighter material which was manufactured after January 1, 1996 that emits greater than an average of 0.020 pounds of VOC per start when used in accordance with the directions on the label of the product. Emissions are determined using the procedures specified in the South Coast Air Quality Management District (SCAQMD) Rule 1174 Ignition Method Compliance Certification Protocol, dated February 27, 1991, or other methods which are approved by the Executive Director and are shown to provide equivalent results. Charcoal lighter materials certified by Executive Order of the California Air Resources Board (CARB) are adequate, but not necessary, to demonstrate compliance with the requirements of this subsection, unless the CARB certification is revoked.

(2) Charcoal lighter materials' labels and accompanying literature shall clearly show usage directions for the product. For liquid charcoal lighter materials, the directions shall accurately reflect the required quantity of charcoal lighter material per pound of charcoal that was used in the SCAQMD Rule 1174 Testing Protocol for that product.

(3) Records of emission testing results, physical property data, formulation data, and other information for use in determining compliance with the requirements of this subsection for all charcoal lighter materials must be made available to the Execu-

tive Director within 30 days of receipt of such requests.

(g) The requirements of subsection (a)(1) of this section do not apply to automotive windshield washer fluids that are contained in motor vehicles at the time of initial sale, or at the time of subsequent sale of vehicles registered or licensed outside of Texas.

§115.613. Alternate Control Requirements.

(a) For all persons affected by this undesignated head, any alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this section may be approved by the Executive Director in accordance with §§115.910-115.916 of this title (relating to Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent or greater.

(b) The Executive Director may exempt a consumer product from the requirements of §115.612(a) of this title (relating to Control Requirements) if a manufacturer obtains a variance pursuant to appropriate California Air Resources Board (CARB) regulations, unless the CARB variance is revoked. The following procedures are applicable.

(1) A manufacturer shall apply in writing to the Executive Director for any alternate control requirements claimed under this subsection. The application shall include the supporting documentation that

demonstrates that the product has been granted a variance pursuant to CARB regulations, and shall include documentation showing the terms and conditions of the CARB variance.

(2) Within 30 days of receipt of an alternate control requirements application, the Executive Director shall determine whether an application is complete.

(3) Within 90 days after an application has been deemed complete, the Executive Director shall determine whether, under what conditions, and to what extent, a deviation from the requirements of §115.612(a) of this title will be permitted. The Executive Director shall notify the applicant of the decision in writing, and shall specify the terms and conditions of the approved alternate control requirements.

(4) For any product for which alternate control requirements have been granted pursuant to this subsection, the manufacturer shall notify the Executive Director in writing within 30 days of any changes in the product formulation or terms and conditions of the corresponding CARB variance. The Executive Director shall determine what, if any, changes to the alternate control requirements are needed, and shall notify the manufacturer of the decision in writing.

(5) If volatile organic compounds (VOC) standards are lowered for a product category through any subsequent rulemaking in Texas, all alternate control requirements granted for products in the product category shall have no force and effect as of the effective date of the modified VOC standard.

(c) Any person who cannot comply with the requirements set forth in §115.612(a) of this title because of extraordinary reasons beyond the person's reasonable control may apply in writing to the Executive Director for alternate control requirements.

(1) The application shall set forth the following:

(A) the specific grounds on which the alternate control requirements order is sought;

(B) the requested terms and conditions; and

(C) the specific method(s) by which compliance with the requested terms and conditions will be achieved.

(2) the alternate control requirements request shall be processed in accordance with §103.11 of this title (relating to Types of Hearings). Information submitted to the Executive Director by an applicant may be claimed as confidential, and if so claimed, shall be protected from public disclosure to the extent allowed under the Texas Open Records Act.

(3) In considering whether to grant a deviation from this rule, the Executive Director shall consider the facts and circumstances bearing on the reasonableness of a product's emissions, including:

(A) the character and degree of injury to or interference with the public's health and physical property associated with product emissions when used for its intended purpose,

(B) the product's social and economic value;

(C) the technical practicability and economic reasonableness of reducing the emissions resulting from the product; and

(D) the total emissions arising from use of the product

(4) Any alternate control requirements order shall specify terms and conditions, a date by which final compliance with its terms and conditions will occur, and may contain a condition that specifies increments of progress to assure timely compliance

(5) An alternate control requirements order shall cease to be effective upon failure of the party to whom the order was granted to comply with any substantive term or condition of the order.

(6) If VOC standards are lowered for a product category through any subsequent rulemaking, all alternate control requirements orders granted for products in the product category shall have no force and effect as of the effective date of the modified VOC standard.

(7) Upon the application of any person, the Executive Director may review, and for good cause, modify or revoke an alternate control requirements order after holding a public hearing in accordance with §103.31 of this title (relating to Calling the Hearing) and §103.33 of this title (relating to Action on Request for a Hearing).

§115.614. Innovative Products

(a) The Executive Director shall exempt a consumer product from the requirements of §115.612(a) of this title (relating to Control Requirements) if a manufacturer demonstrates that, due to some characteristic of the product formulation, design, delivery systems, or other factors, the use of the product will result in equal or less volatile organic compounds (VOC) emissions as compared to:

(1) the VOC emissions from a representative consumer product which complies with the VOC standards specified in §115.612(a) of this title; or

(2) the calculated VOC emissions from a noncomplying representative product, if the product had been reformulated to comply with the VOC standards specified in §115.612(a) of this title. If a manufacturer demonstrates that the following equation yields inaccurate results due to some characteristics of the product formulation or other factors, an alternative method which accurately calculates emissions may be used upon approval of the Executive Director. VOC emissions shall be calculated using the following equation:

$$E_R = E_{NC} \times \frac{VOC_{STD}}{VOC_{NC}}$$

Where:

E_R = The VOC emissions from the noncomplying representative product, had it been reformulated.

E_{NC} = The VOC emissions from the noncomplying representative product in its current formation.

VOC_{STD} = The VOC standard specified in §115.612(a).

VOC_{NC} = The VOC content of the noncomplying product in its current formulation.

(b) For the purposes of this section a representative consumer product is:

(1) one which is subject to the same VOC limit in §115.612(a) of this title as the innovative product;

(2) which is of the same product form, unless the innovative product uses a form which was nonexistent in the product category on the date of application in accordance with §115.614(c) of this title; and

(3) which has at least similar efficacy as other consumer products in the same category based on generally accepted tests for that category.

(c) A manufacturer shall apply in writing to the Executive Director for any exemption claimed under this section. The application shall include the supporting documentation that demonstrates the emissions from the innovative product, including the actual physical test methods used to generate the data and, if necessary, the consumer testing undertaken to document product usage. In addition, the applicant must provide any information necessary to enable the Executive Director to establish enforceable conditions for granting the exception including the VOC content for the innovative product, and test methods for determining the VOC content. Information submitted to the Commission by an exemption applicant may be claimed as confidential, and if so claimed, shall be protected from public disclosure to the extent allowed under the Texas Open Records Act.

(d) Within 30 days of receipt of the exemption application the Executive Director shall determine whether an application is complete.

(e) Within 90 days after an application has been deemed complete, the Executive Director shall determine whether, under what conditions, and to what extent, an exemption from the requirements of §115.612(a) of this title will be permitted. The applicant and the Executive Director may mutually agree to a longer time period for reaching a decision, and additional supporting documentation may be submitted by the applicant before a decision has been reached. The Executive Director shall notify the applicant of the decision in writing and specify such terms and conditions that are necessary to insure that emissions from the product will meet the emissions reductions specified in subsection (a) of this section, and that such emissions reductions can be enforced.

(f) If an applicant has been granted an exemption for an innovative product by another state or federal agency whose criteria for exemption meet or exceed those provided for in subsection (a) of this section, the applicant may submit such an ex-

emption as part of the application under this section. In such a case, the Executive Director shall make its determination under subsection (e) of this section within 45 days after the application has been deemed complete.

(g) In granting an exemption for a product, the Executive Director shall establish conditions that are enforceable. These conditions may include the VOC content of the innovative product, dispensing rates, application rates, and any other parameters determined by the Executive Director to be necessary. The Executive Director shall also specify the test methods for determining conformance to the conditions established. The test methods shall include criteria for reproducibility, accuracy, sampling, and laboratory procedures.

(h) For any product for which an exemption has been granted pursuant to this section, the manufacturer shall notify the Executive Director in writing no less than 30 days prior to any change in the product formulation or recommended product usage directions, and shall also notify the Executive Director within 30 days if the manufacturer knows or should have known of any information which would alter the emissions estimates submitted to the Executive Director in support of the exemption application. Innovative product exemptions granted for products under this section shall have no force and effect as of the date of any change which alters emissions estimates submitted to the Executive Director pursuant to subsection (c) of this section.

(i) If VOC standards are lowered for a product category through any subsequent rulemaking, all innovative product exemptions granted for products in the product category, except as provided in this subsection, shall have no force and effect as of the effective date of the modified VOC standard. This subsection shall not apply to innovative products which have VOC emissions less than representative products using the new VOC standard, for which a written notification of the product's emissions status versus the lowered VOC standard has been submitted to the Executive Director before the effective date of such standard, or to products manufactured prior to the effective date of the modified standard under a valid innovative product exemption.

(j) If the Executive Director believes that a consumer product for which an exemption has been granted no longer meets the criteria for an innovative product specified in subsection (a) of this section, the Executive Director may modify or revoke the exemption as necessary to assure that the product will meet these criteria. The Executive Director shall not modify or revoke an exemption without first affording the applicant an opportunity for a public

hearing in accordance with §103.31 of this title (relating to Calling the Hearing) to determine if the exemption should be modified or revoked.

(k) Any person affected by decisions of the Executive Director pursuant to this section may appeal to the Commission by filing written notice of appeal with the Executive Director within 30 days after the decision. Such appeal is to be taken by written notification to the Executive Director. Section 103.71 of this title (relating to Request for Action by the Commission) should be consulted for the method of requesting Commission action on the appeal.

§115.615. Testing Requirements.

(a) Testing to determine compliance with the requirements of this subchapter shall be performed using methods which are shown to accurately determine the concentration of volatile organic compounds (VOCs) in a subject product or its emissions.

(b) Testing to determine compliance with the requirements of this subchapter may alternatively be demonstrated through calculation of the VOC content from records of amounts of constituents used to manufacture the product. Compliance determination based on these records may not be used unless the manufacturer of a consumer product keeps accurate and updated records of production of the amount and chemical composition of the individual product constituents. These records must be kept for at least three years.

(c) Testing to determine whether a product is a liquid or solid shall be performed using American Society for Testing and Materials (ASTM) D4359-90 (May 25, 1990), which is incorporated by reference herein.

(d) Testing to determine distillation points of petroleum distillate-based charcoal lighter materials shall be performed using ASTM D86-90 (September 28, 1990), which is incorporated by reference herein.

(e) Testing to determine compliance with the requirements for charcoal lighter material shall be performed using the procedures specified in the South Coast Air Quality Management District Rule 1174 Ignition Method Compliance Certification Protocol (February 28, 1991), which is incorporated by reference herein, or other methods which are approved by the Executive Director and are shown to provide equivalent results.

§115.616. Recordkeeping and Reporting Requirements

(a) Each manufacturer of a consumer product subject to §115.612 of this

title (relating to Control Requirements) shall clearly display on each consumer product container or package, the day, month, and year on which the product was manufactured, or a code indicating such date. This date or code shall be displayed on each consumer product container or package which is manufactured after January 1, 1995.

(b) If a manufacturer uses a code indicating the date of manufacture for any consumer product subject to §115.612 of this title, an explanation of the code must be filed with the Executive Director no later than January 1, 1995.

(c) Records of product volatile organic compounds (VOC) content, based upon testing or chemical composition records as set forth in §115.615 of this title (relating to Testing Requirements), must be made available to the Executive Director within 30 days of receipt of such requests. Information submitted in response to such requests may be claimed as confidential, and if so claimed shall be protected from public disclosure to the extent allowed under the Texas Open Records Act.

(d) On or before January 1, 1995, each manufacturer subject to §115.612(a)(2) of this title shall submit to the Executive Director a written report. If a manufacturer introduces new products or makes formulation changes to existing products which alters information previously submitted pursuant to paragraphs (5), (6), or (7) of this subsection, the manufacturer shall also submit by January 1 every year thereafter another report, detailing such information. Information submitted pursuant to this subsection may be claimed as confidential, and if so claimed shall be protected from public disclosure to the extent allowed under the Texas Open Records Act. Each report shall include the following information:

(1) the brand name for each of the manufacturer's antiperspirant and deodorant products;

(2) the owner of the trademark or brand name,

(3) the product forms;

(4) the annual sales in Texas in pounds per year and the method used to calculate annual sales;

(5) the total VOC content in percent by weight which.

(A) has a vapor pressure of 2.0 millimeters mercury (mm Hg) or less at 20 degrees Centigrade; or

(B) consists of more than 10 carbon atoms, if the vapor pressure is unknown;

(6) the total high volatility organic compounds content in percent by weight.

(7) the total medium volatility organic compounds content in percent by weight.

§115.617. Exemptions.

(a) This rule shall not apply to any consumer product manufactured in Texas for shipment and use outside of Texas.

(b) The provisions of this undesignated head shall not apply to a manufacturer or distributor who sells, supplies, or offers for sale in Texas a consumer product that does not comply with the volatile organic compounds (VOC) standards specified in §115.612 of this title (relating to Control Requirements), as long as the manufacturer or distributor can demonstrate that the consumer product is intended for shipment and use outside of Texas, and that the manufacturer or distributor has taken reasonable prudent precautions to assure that the consumer product is not distributed in Texas. This subsection does not apply to consumer products that are sold, supplied, or offered for sale by any person to retail outlets in Texas.

(c) The requirements of §115.612(a) of this title shall not apply to fragrances and colorants up to a combined level of 2.0% VOC by weight contained in any consumer product.

(d) The requirements of §115.612(a)(1) of this title shall not apply to any VOC that:

(1) contains more than 12 carbon atoms per molecule, and for which the vapor pressure is unknown;

(2) has a vapor pressure of 0.1 millimeter mercury (mm Hg) or less at 20 degrees Centigrade; or

(3) has a melting point higher than 20 degrees Centigrade and does not sublime (i.e., does not change directly from a solid into a gas without melting), if the vapor pressure is unknown.

(e) The requirements of §115.612(a)(2) of this title shall not apply to any VOC that:

(1) contains more than 10 carbon atoms per molecule, and for which the vapor pressure is unknown; or

(2) has a vapor pressure of 2 millimeter Hg or less at 20 degrees Centigrade.

(f) The requirements of §115.616(b) of this title (relating to Recordkeeping Requirements) shall not apply to consumer products registered under the Federal Insecticide, Fungicide, and Ro-

denticide Act, (FIFRA; 7 United States Code, §136/136y).

(g) The requirements of §115.612(a) of this title shall not apply to air fresheners and insecticides containing at least 98% paradichlorobenzene.

(h) The requirements of §115.612(a) of this title shall not apply to adhesives sold in containers of one fluid ounce or less combined net weight.

(i) The requirements of §115.612(a) of this title shall not apply to bait station insecticides.

(j) The requirements of §115.612(a) of this title shall not apply to air fresheners that are comprised entirely of fragrance, less compounds not defined as VOC under §115.10 of this title (relating to Definitions) or exempted under subsection (d) of this section.

§115.619. Counties and Compliance Schedules. All affected persons within the State of Texas shall be in compliance with the requirements of this undesignated head as soon as practicable, but in any case no later than the dates specified in §115.612 of this title (relating to Control Requirements), §115.613 of this title (relating to Alternate Control Requirements), §115.614 of this title (relating to Innovative Products), and §115.617 of this title (relating to Exemptions).

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 May 4, 1994.

TRD-9440508

Mary Ruth Holder
Director, Legal Division
Texas Natural Resource
Conservation
Commission

Effective date: May 27, 1994

Proposal publication date: January 7, 1994

For further information, please call: (512) 239-0615

Subchapter G. Consumer-related Sources

Consumer Products

• 30 TAC §§115.612-115.615, 115.617, 115.619

The Texas Natural Resource Conservation Commission (TNRCC) adopts the repeal of §§115.612-115.615, 115.617, and 115.619, concerning Consumer Solvent Products, without changes as published in the January 7, 1994, issue of the *Texas Register* (19 TexReg 162). The repeal removes existing requirements in order to facilitate the concurrent adoption of new §§115.600, 115.610,

115.612-115.617, and §115.619, concerning Consumer Products. Public hearings were held January 24, 1994, in Houston, January 26, 1994 in El Paso; and January 27, 1994, in Irving.

The comment period closed on February 25, 1994. No written or oral testimony was received during the comment period concerning the proposed repeal of §§115.612-115.615, 115.617, and 115.619.

The repeals are adopted under the Texas Health and Safety Code (Vernon 1992), the Texas Clean Air Act (TCAA), §382.017, which provides the TNRCC with the authority to adopt rules consistent with the policy and purposes of the TCAA.

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

Issued in Austin, Texas, on May 4, 1994.

TRD-9440492 Mary Ruth Holder
Director, Legal Division
Texas Natural Resource
Conservation
Commission

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TITLE 34. PUBLIC FINANCE

Part IV. Employees Retirement System of Texas

Chapter 63. Board of Trustees

• 34 TAC §63.17

The Employees Retirement System of Texas (ERS) adopts new §63.17, concerning advisory committees, without changes to the proposed text as published in the March 15, 1994, issue of the *Texas Register* (19 TexReg 1775).

This new section is justified to implement legislation passed by the 73rd Legislature.

This new section will function by allowing the Board of Trustees and the staff of the ERS to receive advice to aid in decisions regarding investments and benefits issues.

The agency received no comments regarding the adoption of the new section.

The new section is adopted under the Government Code, §815.102, which gives the Board of Trustees of the ERS the authority to adopt rules for the administration of the funds of the retirement system and any other business of the Board.

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 May 5, 1994.

TRD-9440431 Charles D Travis
Executive Director
Employees Retirement
System of Texas

Effective date: May 27, 1994

Proposal publication date: March 15, 1994
For further information, please call: (512) 867-3336

Chapter 85. Flexible Benefits

• 34 TAC §85.5

The Employees Retirement System of Texas (ERS) adopts an amendment to §85.5, concerning benefits, without changes to the proposed text as published in the March 15, 1994, issue of the *Texas Register* (19 TexReg 1775).

This amendment is justified by the experience of the ERS to permit an increase in the amount of flexible benefit dollars a participant may receive under the health care reimbursement account from \$2,400 to \$3,000, effective September 1, 1994.

This amendment will function by allowing participants to receive more flexible benefit dollars in any plan year for health care expenses under the health care reimbursement plan. In addition, the monthly maximum salary reduction amount, exclusive of administrative fees, shall be increased in an amount not to exceed \$250.

The agency received no comments regarding the adoption of the amendment.

The amendment is adopted under the Insurance Code, Article 3.50-2, §4(k), which provides the ERS with the authority to promulgate all rules necessary to implement and to administer a Flexible Benefits (Cafeteria Plan) program for state employees.

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 May 5, 1994.

TRD-9440430 Charles D Travis
Executive Director
Employees Retirement
System of Texas

Effective date: September 1, 1994

Proposal publication date: March 15, 1994
For further information, please call: (512) 867-3336

TITLE 37. PUBLIC SAFETY AND CORRECTIONS

Part III. Texas Youth Commission

Chapter 91. Discipline and Control

Control

• 37 TAC §91.55

The Texas Youth Commission (TYC) adopts amendments to §91.55, concerning escape and apprehension, without changes to the proposed text as published in the March 25, 1994, issue of the *Texas Register* (19 TexReg 2122).

The justification for amending the section is to provide a more efficient system of apprehending TYC youth who are on escape.

The amendments will allow TYC to enter directives to apprehend TYC youth who have escaped from a TYC facility into the Texas/National Crime Information Center system to which all levels of law enforcement have access.

No comments were received regarding adoption of the amendment.

The amendment is adopted under the Human Resources Code, §51.093, which provides the Texas Youth Commission with the authority to allow law enforcement to take into custody of the commission a child who has been committed to the commission and placed by it in any institution or facility and escaped.

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 May 5, 1994.

TRD-9440376 Steve Robinson
Executive Administrator
Texas Youth Commission

Effective date: May 26, 1994

Proposal publication date: March 25, 1994
For further information, please call: (512) 483-5244

TITLE 37. PUBLIC SAFETY AND CORRECTIONS

Part VII. Texas Commission on Law Enforcement Officer Standards and Education

Chapter 211. Administration Division

• 37 TAC §211.65

The Texas Commission on Law Enforcement Officer Standards and Education ("commission") adopts an amendment to §211.65, concerning the establishing of required training and the maintaining thereof to be conducted by the commission or by and through other agencies and institutions. Because of the volume of required training, the commission has determined that the most effective method of accomplishing the training mandate is through the use of licensed academies.

The amendments to this section were