to LAK File: Vinyl Chlor

Subpart V—Massachusetts

§ 52.1147 [Amended]

5. In § 52.1147(a)(5), subparagraph (i) is amended by revising the words "an average annual throughput of 5,000,-000" to read "a daily throughput of 20,-000".

Subpart FF—New Jersey

§ 52.1598 [Amended]

6. In § 52.1598(c)(3), subparagraph (iv) is amended by revising the words "an average annual throughput of 5,000,000" to read "a daily throughput of 20,000".

Subpart NN—Pennsylvania

§ 52.2042 [Amended]

7. In § 52.2042(3), subparagraph (iv) is amended by revising the words "an average annual throughput of 5,000,000" to read "a daily throughput of 20,000".

Subpart SS—Texas

§ 52.2[illegible] [Amended]

8. In § 5[illegible](c)(3), subparagraph (i) is amended by revising the words "an average annual throughput of 5,000,-000" to read "a daily throughput of 20,000".

Subpart VV—Virginia

9. In § 52.2453(c), subparagraph (3) is amended by adding (iv), as follows:

§ 52.2453 Gasoline transfer vapor control.

* * * * *

(c) * * *

(3) * * *

(iv) Facilities which have a daily throughput of 20,000 [illegible] [illegible] were required [illegible] to have a vapor recovery system in operation no later than May 31, 1977 [illegible] average annual throughput of 5,000,000 [illegible] which were required to have a vapor recovery system in operation no later than May 31, 1977, also are required to meet the provisions of this section no later than May 31, 1977.

A[illegible] Gasoline Vapor Recovery Small Bulk Plants; Notice of Availability of Studies

This notice announces the availability of and summarizes studies conducted by EPA regarding the availability and applicability of control technology for small bulk plants in connection with Stage I Vapor Recovery regulations promulgated by [illegible] below.

EPA initiated several studies in 1975 to determine if the requirement to install gasoline vapor recovery equipment would place severe economic burdens on the industry and whether the 90 percent control level was achievable by a vapor balance system, and to further determine the availability of control equipment which would satisfy the requirements of the existing regulations. Pacific Environmental Services, Inc., of Santa Monica, California, was chosen by EPA to perform these studies.

BACKGROUND

In 1973 and 1974, the Administrator promulgated Stage I Vapor Recovery regulations for 13 Air Quality Control Regions (AQCRs). The AQCRs, Federal Register references, and promulgation dates are listed below.

Metropolitan Los Angeles AQCR, 38 FR 31251, November 12, 1973.

Sacramento Valley AQCR, 38 FR 31251, November 12, 1973.

San Joaquin Valley Intrastate AQCR, 38 FR 31251, November 12, 1973.

Metropolitan Denver Intrastate AQCR, 38 FR 30632, November 7, 1973.

Marion County, Indiana, 38 FR 12349, April 5, 1974.

Maryland portion of National Capital Interstate AQCR, 38 FR 33719, December 6, 1973.

Metropolitan Baltimore Intrastate AQCR, 38 FR 34252, December 12, 1973.

Boston Intrastate AQCR, 38 FR 30959, November 8, 1973.

New Jersey portion of New Jersey-New York-Connecticut Interstate AQCR, 38 FR 31389, November 13, 1973.

New Jersey portion of Metropolitan Philadelphia Interstate AQCR, 38 FR 31389, November 13, 1973.

Allegheny County portion of Southwest Pennsylvania Intrastate AQCR, 38 FR [illegible], November [illegible], 1973.

H[illegible]-Galveston Intrastate AQCR, 38 FR [illegible], November [illegible], 1973.

S[illegible] Intrastate AQCR, 38 FR [illegible], November [illegible], 1973.

Virginia portion of National Capital Interstate AQCR, 38 FR 3[illegible], December [illegible], 1973.

[illegible]

The first study (EPA contract 68-01-3156, Task No. 5) evaluated the applicability and cost impact of bottom-loading vapor balance systems on small bulk plants. The second study (EPA contract 68-01-3156, Task No. 17) surveyed small bulk plants in and around Denver, San Diego, and the San Joaquin Valley, and included the source testing of [illegible] small bulk plants to determine if 90 percent control could be achieved for incoming and outgoing loads through the use of a vapor balance system and a refrigeration [illegible] [illegible]. A third study (EPA contract 68-01-3[illegible], Task No. 25) surveyed small bulk plants in the [illegible], Dallas, [illegible], Texas [illegible] in the [illegible] [illegible] of the country [illegible] bulk plant operators in these areas to comply with vapor recovery regulations. A fourth study (EPA contract 68-01-4140, Task No. 9) provided for the evaluation of the applicability, availability and the financial impact of installing and operating top-loading vapor balance systems at small bulk plants. In addition, Radian Corporation performed a study for EPA (EPA contract No. 68-02-1319, Task No. 2) in 1975 which [illegible] control methods for gasoline marketing operations, including small bulk plants.

R[illegible]

A[illegible] the studies [illegible] that [illegible] vapor balance systems are capable of achieving the 90 percent control level established by the regulations. They further concluded that the equipment and technology for achieving these levels does exist in sufficient supply, and has been satisfactorily applied on gasoline transfer operations for a number of years.

These studies also concluded that certain types of vapor control systems (e.g., a bottom-loading vapor balance system) are more desirable from the viewpoint of the owner and operator because of the more efficient marketing capability that the systems provide. It must be emphasized that there is no requirement in the federal regulations that bottom-loading systems be installed. These bottom-loading systems, because of the additional modifications and equipment required for installation on bulk plants, are consistently much more expensive to install than the alternative top-loading vapor balance system.

The recent EPA studies on small bulk plants reaffirm the earlier conclusion that controls are available at a reasonable cost. Specifically, EPA has determined that the top-loading vapor balance system, which is readily available and the least expensive alternative, will meet the 90 percent control level established in the existing regulations at a reasonable cost. However, due to the Administrator's concern regarding the possible economic impacts of these regulations on the very small bulk plants (less than 4,000 gal/day of gasoline throughput), EPA will continue to study such impacts. EPA will report on its findings at the end of four to six weeks.

For further information or copies of the studies contact: Jared Floyd, Policy [illegible] Programs Section (EN-341), Division of Stationary Source Enforcement, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

Dated: May 31, 1977.

Douglas M. Costle,
Administrator.

[FR Doc.77-16197 Filed 6-6-77;8:45 am]

[FRL 740-7]

PART 61—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Standard for Vinyl Chloride; Corrections and Amendments

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: These amendments are being made to the vinyl chloride standard which was promulgated under the authority of the Clean Air Act on October 21, 1976. The standard contains some typographical errors and needs clarification in some parts. These amendments are intended to correct the typographical errors and clarify the standard.

EFFECTIVE DATE: June 7, 1977.

FOR FURTHER INFORMATION CONTACT:

Don R. Goodwin, Emission Standards and Engineering Division, Environmental Protection Agency, Research Triangle Park, North Carolina [illegible], telephone 919-[illegible].

SUPPLEMENTARY INFORMATION: On October 21, 1976, under section 112 of the Clean Air Act, as amended (42 U.S.C. 1857), the Environmental Protection Agency (EPA) promulgated a national emission standard for vinyl chloride (41 FR 46560). The standard covers plants which manufacture ethylene dichloride, vinyl chloride, and/or polyvinyl chloride. Since that time, it has become apparent that a few sections of the standard and Test Methods 106 and 107 are unclear. The purpose of the amendments being made at this time is to clarify these sections and to correct typographical errors. These corrections are in addition to those published on December 3, 1976 (41 FR 53017). The Administrator finds that

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good cause exists for omitting prior notice and public comment on these amendments as unnecessary and for making them immediately effective because they simply clarify and correct the existing regulations and impose no additional substantive requirements.

The most significant amendment involves clarification of the requirements for certification of the analysis of gas cylinders which may be used to calibrate testing and monitoring equipment. The standard, as promulgated on October 21, 1976, requires that an analysis of the gas used for calibration purposes, "• • • be traceable to the National Bureau of Standards or to a [illegible] calibrated [illegible] tube." Comments were received indicating that the term "traceable" was unclear.

[illegible] amendments require that the [illegible] of gas cylinders which may be used for calibration of testing and [illegible] equipment be certified by the [illegible] manufacturer. The certified concentration of the gas contained in each cylinder is of the gas contained in each [illegible] cylinder using an analytical procedure the manufacturer had called [illegible] on the day the analysis was performed. Calibration of the analytical procedure was to have been done using gases for which the concentrations have been specified: (1) By comparison with a certified vinyl chloride permeation tube, (2) by comparison with a gas mixture prepared in accordance with the procedure described in § 7.1 of Test Method 106 and using 99.9 percent vinyl chloride, or (3) by direct analysis by the National Bureau of Standards. These amendments are being made to §§ 61.65(b)(8)(iii)(A), 61.65(b)(8)(iii)(B), which contain the provisions, and to §§ 5.2 and 6.2 of Test Methods 106 and 107, respectively.

There are several other changes in wording for clarification purposes. For example, § 61.60 is being amended [illegible] to § 61.61(b)(1) to clarify that [illegible] which do not contain vinyl chloride do not have to be continuously tested to demonstrate that fact. Section 61.67(d) is being redesignated as § 61.67(g)(1)(ii) to clarify that conducting a series of three runs is not necessary when Test Method 107 is being used to determine emissions. A change is being made in § 61.67(g)(1)(iii) [which was originally promulgated as § 61.67(g)(1)(ii)] to establish that the concentration emission limits for gas streams are to be determined on a dry basis. Similarly, wording is being added to § 61.70(c)(2)(v) to establish that vinyl chloride concentrations in vinyl chloride resin are to be determined on a dry weight basis. An additional change to this same section is being made to clarify that a sample from each batch of resin is to be measured for its vinyl chloride content. Section 61.71(a) is being changed to correct typographical errors and to clarify that daily operating records for polyvinyl chloride reactors are required to be kept whether a relief valve discharges or not.

Section 4.3.2 of Test Method 106 is being revised to allow the option of using Poropak T as the column packing instead of GE SF-96 in a secondary gas chromatographic column if acetaldehyde is present. This packing has also been shown to produce adequate separation of vinyl chloride and acetaldehyde. Section 61.67(e) of the regulation and § 6.2 of Test Method 106 are being amended to include a limit on the amount of time a test sample can be kept before it is analyzed for vinyl chloride. Section 1.2 of Test Method 107 is being amended to clarify that chromatograph parameters can be altered if the precision and repeatability of analysis of vinyl chloride [illegible] is not impaired. Section 5.2.2 of Test Method 107 is being amended to allow the use of a pair of Poropak Q columns if methanol or acetaldehyde is present in the sample. Also in Test Method 107 a clarification for the term K_w has been added to § 9.2.

The remaining changes are corrections of typographical errors or are self-explanatory.

These amendments are issued under the authority of section 112 of the Clean Air Act, sec. 4(a) of Pub. L. 91-604, 84 Stat. 1685 (42 U.S.C. 1857c-7) and section 301(a) of the Clean Air Act, sec. 2 of Pub. L. No. 90-148, 81 Stat. 504, as amended by sec. (15)(c)(2) of Pub. L. 91-604, 84 Stat. 1713 (42 U.S.C. 1857g (c)). The amendments to §§ 61.67 and 61.63 are also issued under the authority of section 114 of the Clean Air Act, as added by sec. 4(a) of Pub. L. 91-604, 84 Stat. 1687 and amended by Pub. L. 93-319, sec. 8(a)(4), 88 Stat. 259 (42 U.S.C. 1857c-9).

[illegible] The [illegible] has determined that this document is not a major proposal requiring preparation of an Economic Impact Analysis under Executive Order 11821 and OMB Circular A-107.

Dated: May 16, 1977.

Norman F. Thorp,
Acting Assistant Administrator for Air and Waste Management.

Part 61 of Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

1. In § 61.60, paragraph (c) is amended as follows:

§ 61.60 Applicability.

• • • • •

(c) Sections of this subpart other than §§ 61.61; 61.64 (a)(1), (b), (c), and (d); 61.67; 61.68; 61.69; 61.70; and 61.71 • • •.

2. In § 61.61 paragraphs (t) and (u) are added as follows:

§ 61.61 Definitions.

• • • • •

(t) "Standard temperature" means a temperature of 20° C (69° F).

(u) "Standard pressure" means a pressure of 760 mm of Hg (29.92 in. of Hg).

3. Section 61.62 is corrected as follows:

§ 61.62 Emission standard for ethylene dichloride plants.

(a) Ethylene dichloride purification: The concentration of vinyl chloride in all exhaust gases discharged to the atmosphere from any equipment used in ethylene dichloride purification is not to exceed 10 ppm, except as provided in § 61.65(a). This requirement does not apply to equipment that has been opened, is out of operation, and met the requirement in § 61.65(b)(6)(i) before being opened.

(b) Oxychlorination reactor: Except as provided in § 61.65(a), emissions of vinyl chloride to the atmosphere from each oxychlorination reactor are not to exceed 0.2 g/kg (0.0002 lb/lb) of the 100 percent ethylene dichloride product from the oxychlorination process.

4. In § 61.65, paragraphs (b)(1), (b)(8)(iii)(A), and (b)(8)(iii)(B) are amended as follows:

§ 61.65 Emission standard for ethylene dichloride, vinyl chloride and polyvinyl chloride plants.

• • • • •

(b) • • •

(1) Loading and unloading lines: Vinyl chloride emissions from loading and unloading lines in vinyl chloride service which are opened to the atmosphere after each loading or unloading operation are to be minimized as follows:

• • • • •

(8) • • •

(iii) • • •

(A) A calibration gas mixture prepared from the gases specified in sections 5.2.1 and 5.2.2 of Test Method 106 and in accordance with section 7.1 of Test Method 106, or

(B) A calibration gas cylinder standard containing vinyl chloride concentration of vinyl chloride. The gas composition of the calibration gas cylinder standard is to have been certified by the manufacturer. The manufacturer must have recommended a maximum shelf life for each cylinder so that the concentration does not change greater than ±5 percent from the certified value. If a date of gas cylinder preparation, certified vinyl chloride concentration and recommended maximum shelf life must have been affixed to the cylinder before shipment from the manufacturer to the buyer. If a gas chromatograph is used as the vinyl chloride monitoring system, these gas mixtures may be directly used to prepare a chromatograph calibration curve as described in section 7.3 of Test Method 106. The requirements in section 5.2.3.1 and 5.2.3.2 of Test Method 106 for certification of cylinder standards and for establishment and verification of calibration standards are to be followed.

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(Secs. 112 and 301(a), Clean Air Act (42 U.S.C. 1857c-7 and 1857g(a)).)

5. Section 61.67 is amended by deleting and reserving paragraph (d), revising paragraphs (e), (g)(1)(ii) and (g)(1)(iii), and by adding paragraph (g)(1)(iv) as follows:

§ 61.67 **Emission tests.**

* * * * * * *

(d) **[Reserved]**

(e) **When at all possible, each sample is to be analyzed within 24 hours, but in no case in excess of 72 hours of sample collection. Vinyl chloride emissions are to be determined within 30 days after the emission test. The owner or operator shall report the determinations to the Administrator by a registered letter dispatched before the close of the next business day following the determination.**

* * * * *

(g) * * *

(1) * * *

(ii) Each sample is to be taken over a period of three hours. For the purpose of determining emissions, the arithmetic mean of all runs in a set is to be used.

(iii) For gas streams containing more than 10 percent oxygen, the concentration of vinyl chloride as determined by Test Method 106 is to be corrected to 10 percent oxygen (dry basis) for determination of emissions by using the following equation:

$$C_{corr} = C_b \frac{10.6}{20.9 - P_{O_2}}$$

where:

C_{corr} = The concentration of vinyl chloride corrected to 10% O_2.

C_b = The concentration of vinyl chloride as measured by Test Method 106.

20.9 = Percent oxygen in the air at standard conditions.

10.6 = Percent oxygen in the air at standard conditions, minus 10.0 percent oxygen to which the concentration is being corrected.

P_{O_2} = Percent O_2 = Percent oxygen in the exhaust gas as measured by Reference Method 3 in Appendix A of Part 60 of this chapter.

(iv) For those emission sources where the emission limit is prescribed in terms of mass rather than concentration, mass emissions in kg/100 kg product are to be calculated by using the following equation:

$$C_{BY} = \frac{(C_b)(2.60)(Q)(10^{-6})(10^2)}{Z}$$

where:

C_{BY} = kg vinyl chloride/100 kg product.

C_b = The concentration of vinyl chloride as measured by Test Method 106.

2.60 = Density of vinyl chloride at one atmosphere and 20° C in kg/m³.

Q = Volumetric flow rate in m³/hr as determined by Reference Method 2 of Appendix A to Part 60 of this chapter.

10^{-6} = Conversion factor for ppm.

Z = Production rate (kg/hr).

* * * * *

6. Section 61.68 is amended by revising paragraphs (c)(1) and (c)(2) as follows:

§ 61.68 **Emission monitoring.**

* * * * *

(c) * * *

(1) A calibration gas mixture prepared from the gases specified in sections 5.2.1 and 5.2.2 of Test Method 106 and in accordance with section 7.1 of Test Method 106, or

(2) A calibration gas cylinder standard containing the appropriate concentration of vinyl chloride. The gas composition of the calibration gas cylinder standard is to have been certified by the manufacturer. The manufacturer must have recommended a maximum shelf life for each cylinder so that the concentration does not change greater than ±5 percent from the certified value. The date of gas cylinder preparation, certified vinyl chloride concentration and recommended maximum shelf life must have been affixed to the cylinder before shipment from the manufacturer to the buyer. If a gas cylinder standard is used for the vinyl chloride monitoring system, the cylinder standard may be directly used to prepare a chromatograph calibration curve as described in section 7.3 of Test Method 106. The requirements in section 5.2.3.1 and 5.2.3.2 of Test Method 106 for certification of cylinder standards and for establishment and verification of calibration standards are to be followed.

(Secs. 112, 114, and 301(a), Clean Air Act (42 U.S.C. 1857c-7, 1857c-9, and 1857g(a)).)

7. In § 61.70 paragraphs (c)(2)(i) and (c)(2)(v) are amended as follows:

§ 61.70 **Semiannual report.**

* * * * *

(c) * * *

(2) * * *

(i) **If batch stripping is used, one representative sample of polyvinyl chloride resin is to be taken from each batch of each grade of resin immediately following the completion of the stripping operation, and identified by resin type and grade and the date and time the batch is completed. The corresponding quantity of material processed in each stripper batch is to be recorded and identified by resin type and grade and the date and time the batch is completed.**

* * * * *

(v) **The report to the Administrator by the owner or operator is to include the vinyl chloride content found in each sample required by paragraphs (c)(2)(i) and (c)(2)(ii) of this section, averaged separately for each type of resin, over each calendar day and weighted according to the quantity of each grade of resin processed by the stripper(s) that calendar day, according to the following equation:**

$$A_{T_i} = \frac{\sum_{i=1}^{n} P_{G_i} M_{G_i}}{Q_{T_i}} = \frac{P_{G_1} M_{G_1} + P_{G_2} M_{G_2} + \cdots + P_{G_n} M_{G_n}}{Q_{T_i}}$$

where:

A = [illegible] of type T_i resin in ppm (dry weight basis).

Q = The production of type T_i resin over the 24-hour period in kg.

T_i = Type of resin $i = 1, 2 \ldots m$ where m is total number of resin types produced during the 24-hour period.

M = Concentration of vinyl chloride in one sample of grade G_i resin, in ppm.

P = Production of grade G_i resin represented by the sample, in kg.

G_i = Grade of resin, e.g., G_1, G_2, and G_n.

n = Total number of grades of resin produced during the 24-hour period.

* * * * *

8. Section 61.71 is amended by correcting the parentheses in (a)(2) and (a)(3), and by adding paragraph (a)(4) as follows:

§ 61.71 **Recordkeeping.**

(a) * * *

(2) A record of the leaks detected during routine monitoring with the portable hydrocarbon detector and the action taken to repair the leaks, as required by § 61.65(b)(3), including a brief statement explaining the location and cause of each leak detected with the portable hydrocarbon detector, the date and time of the leak, and any action taken to eliminate that leak.

(3) A record of emissions measured in accordance with § 61.68.

(4) A daily operating record for each polyvinyl chloride reactor, including pressures and temperatures.

9. Section 1.1 of Test Method 106 is corrected as follows:

1.1 An integrated bag sample of stack gas containing vinyl chloride (chloroethene) is subjected to chromatographic analysis, using a flame ionization detector.

10. Section 3 of Test Method 106 is corrected as follows:

3. *Interferences.* Acetaldehyde, which can occur in some vinyl chloride sources, will interfere with the vinyl chloride peak from the Chromosorb 102® column. See sections 4.3.2 and 6.4. If resolution of the vinyl chloride peak is still not satisfactory for a particular sample, then chromatographic parameters can be further altered with prior approval of the Administrator. If alteration of the chromatograph parameters fails to resolve the vinyl chloride peak, then supplemental confirmation of the vinyl chloride peak through an absolute analytical technique, such as mass spectroscopy, must be performed.

11. Section 4.1 of Test Method 106 is corrected as follows:

4.1 *Sampling* (Figure 106-1).

12. Section 4.1.3 of Test Method 106 is corrected as follows:

4.1.3 Male (2) and female (2) stainless steel quick-connects, with ball checks (one pair without) located as shown in Figure 106-1.

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13. Section 4.1.10 of Test Method 106 is corrected as follows:

4.1.10 *Connecting tubing.* Teflon, 6.4 mm outside diameter, to assemble sample train (Figure 106-1).

14. Section 4.3.2 of Test Method 106 is amended as follows:

4.3.2 ***Chromatographic column.*** **Stainless steel, 2 m×3.2 mm, containing 80/100 mesh Chromasorb 102. A secondary column of GE SF-96, 20 percent on 60/80 mesh AW Chromasorb P, stainless steel, 2 m×3.2 mm or Porapak T, 80/100 mesh, stainless steel, 1 m×3.2 mm is required if acetaldehyde is present. If used, a secondary column is placed after the Chromasorb 102 column. The combined columns should then be operated at 100° C.**

15. Section 5.2 of Test Method 106 is amended as follows:

5.2 *Calibration.* Use one of the following calibration procedures 5.2.1 and 5.2.2, or 5.2.3.

5.2.1 *Vinyl chloride, 99.9+ percent.* Pure vinyl chloride gas certified by the manufacturer to be a minimum of 99.9 percent for use in preparation of calibration gas mixtures specified in 7.1. If the source does not maintain a bulk cylinder supply of 99.9+ percent vinyl chloride, the calibration analysis may have been performed on this supply rather than on each cylinder prepared from this bulk supply. The date of gas cylinder preparation and the certified analysis must have been received from the gas supplier prior to the buyer.

5.2.2 *Nitrogen gas (N2), for preparation of calibration gas mixtures.*

5.2.3 *Cylinder standards (3).* Gas mixture standards (50, 10, and 5 ppm vinyl chloride in nitrogen cylinders) for which the gas composition has been certified by the manufacturer. The manufacturer must have recommended a maximum shelf life for each cylinder so that the concentration does not change greater than ±5 percent from the certified value. The date of gas cylinder preparation, certified vinyl chloride concentration and recommended maximum shelf life must have been affixed to the cylinder before shipment from the gas supplier to the buyer. These gas mixture standards may be used to prepare a calibration curve as specified in section 7.3. [illegible] gas mixtures may be prepared by the procedure described in section 7.1. [illegible] the concentrations of vinyl chloride in the gas mixtures prepared from the bulk supply of 99.9+ percent vinyl chloride, the concentration of vinyl chloride in the cylinder standards must be verified on the day of cylinder use. The calibration of the analytical procedure shall, as a minimum, have utilized a three-point calibration curve. It is recommended that the manufacturer maintain two calibration standards and use these standards in the following way: (1) a high concentration standard (between 40 and 100 ppm) for preparation of a calibration curve by an appropriate dilution technique; (2) a low concentration standard (between 5 and 10 ppm) for verification of the dilution technique used.

5.2.3.2 ***Establishment and verification of calibration standards.*** **The concentration of each calibration standard must have been established by the manufacturer using reliable procedures. Additionally, each calibration standard must have been verified by the manufacturer by one of the following procedures, and the agreement between the initially determined concentration value and the verification concentration value must be within ± 5 percent: (1) verification value determined by comparison with a calibrated vinyl chloride permeation tube, (2) verification value determined by comparison with a gas mixture prepared in accordance with the procedure described in section 7.1 and using 99.9+ percent vinyle chloride, or (3) verification value obtained by having the calibration standard analyzed by the National Bureau of Standards. All calibration standards must be renewed on a time interval consistent with the shelf life of the cylinder standards sold.**

16. Section 6.2 of Test Method 106 is amended as follows:

6.2 *Sample storage.* Sample bags must be kept out of direct sunlight. When at all possible analysis is to be performed within 24 hours, but in no case in excess of 72 hours of sample collection.

17. Section 7.1 of Test Method 106 is amended as follows:

7.1 *Preparation of vinyl chloride standard gas mixtures.* Evacuate a sixteen-inch square Tedlar bag that has passed a leak check (described in Section 7.4) and meter in 5 liters of nitrogen. While the bag is filling, use the 0.5 ml syringe to inject 0.5ml of 99.9+ percent vinyl chloride through the wall of the bag. Upon withdrawing the syringe needle, immediately cover the resulting hole with a piece of adhesive tape. The bag now contains a vinyl chloride concentration of 50 ppm. In a like manner use the other syringe to prepare gas mixtures having 10 and 5 ppm vinyl chloride concentrations. Place each bag on a smooth surface and alternately depress opposite sides of the bag 50 times to further mix the gases. These gas mixture standards may be used for 10 days from the date of preparation, after which time preparation of new gas mixtures is required. (CAUTION.—Contamination may be a problem when a bag is reused if the new gas mixture standard contains a lower concentration than the previous gas mixture standard did.)

18. Section 7.3 of Test Method 106 is amended as follows:

7.3 *Preparation of chromatograph calibration curve.* Make a gas chromatographic measurement of each gas mixture standard described in section 5.2.2 or 7.1) using conditions identical with those listed in sections 8.3 and 9.4. Flush the sampling loop for 30 seconds at the rate of 100 ml/min with each standard gas mixture and analyze the sample twice. Record C_s, the concentration of vinyl chloride injected, the attenuator setting, chart speed, peak area, sample loop temperature, column temperature, carrier gas flowrate, and retention time. Record the laboratory pressure. Calculate A_s, the peak area multiplied by the attenuator setting. Repeat until two injection areas are within 5 percent, then plot the points vs. C_s. When the other concentrations have been plotted, draw a smooth curve through the points. Perform calibration daily, or before and after each set of bag samples, whichever is more frequent.

19. Section 1.2 of Test Method 107 is amended as follows:

1.2 This procedure is suitable for determining the vinyl chloride monomer (VCM) content of process wastewater samples and the residual vinyl chloride monomer (RVCM) content of polyvinyl chloride (PVC) resins, wet cake, slurry, and latex samples. It cannot be used for polymer in fused forms, such as sheet or cubes. If a resolution of the vinyl chloride peak is not satisfactory for a particular sample, then chromatograph parameters may be altered provided that the precision and reproducibility of the analysis of vinyl chloride cylinder standards are not impaired. If there is reason to believe that some other hydrocarbon with an identical retention time is present in the sample, then supplemental confirmation of the vinyl chloride peak through an absolute analytical technique, such as mass spectroscopy, should be performed.

20. Section 3.3.2 is amended as follows:

5.3.2 ***Chromatographic column.*** Stainless steel, 2 m × 3.2 mm, containing 0.4 percent Carbowax 1500 on Carbopak A, Perkin-Elmer Corporation No. 105-0133, or equivalent. Carbopak C can be used in place of Carbopak A. If both vinyl chloride and/or acetaldehyde is present in the sample, a pair of Porapak Q columns in series (1 m × 3.2 mm followed by 2 m × 3.2 mm) with provision for bypass of the first column has been shown to provide adequate separation of vinyl chloride.

21. Section 6.2 of Test Method 107 is revised as follows:

6.2 *Calibration.*

6.2.1 *Cylinder standards (4).* Gas mixture standards (50, 500, 2,000, and 4,000 ppm vinyl chloride in nitrogen cylinders) for which the gas composition has been certified by the manufacturer. Lower concentration standards should be obtained if lower concentrations of vinyl chloride samples are expected, as the intent is to bracket the sample concentrations with standards. The manufacturer must have recommended a maximum shelf life for each cylinder so that the concentration does not change greater than ±5 percent from the certified value. The date of gas cylinder preparation, certified vinyl chloride concentration and recommended maximum shelf life must have been affixed to the cylinder before shipment from the manufacturer to the buyer.

6.2.1.1 *Cylinder standards certification.* The concentration of vinyl chloride in nitrogen in each cylinder must have been certified by the manufacturer by a direct analysis of each cylinder using an analytical procedure that the manufacturer had calibrated on the day of cylinder analysis. The calibration of the analytical procedure shall, as a minimum, have utilized a three-point calibration curve. It is recommended that the manufacturer maintain two calibration standards and use these standards in the following way: (1) a high concentration standard (between 4,000 and 8,000 ppm) for preparation of a calibration curve by an appropriate dilution technique; (2) a low concentration standard (between 50 and 500 ppm) for verification of the dilution technique used.

6.2.1.2 *Establishment and verification of calibration standards.* The concentration of each calibration standard must have been established by the manufacturer using reliable procedures. Additionally, each calibration standard must have been verified by the manufacturer by one of the following procedures, and the agreement between the initially determined concentration value and the verification concentration value must be within ±5 percent: (1) verification value determined by comparison with a gas mixture standard generated in a similar manner to the procedure described in section 7.1 of Method 106 for preparing gas mixture standards using 99.9+ percent vinyl chloride, or (2) verification value obtained by having the calibration standard analyzed by the National Bureau of Standards. All calibration standards must be renewed on a time interval consistent with the shelf life of the cylinder standards sold.

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[illegible] Section 7.3.2 d. of Test Method 107 [illegible] as follows:

[illegible] time. The normal set- [illegible] 2 minutes.

2. Section 9.2 of Test Method 107 is [illegible] as follows:

9.2 Residual vinyl chloride monomer concentration, or vinyl chloride [illegible]

Calculate C_{rvc} as f[illegible]

$$C_{rvc} = \frac{A_s P_2}{R_f T_1}\left(\frac{M_v V_g}{m_s R} + K T_2\right)$$

Equation 107-2

[illegible]

V_g—Volume of vapor phase (vial volume less sample volume).

m_s — Weight of sample, grams.

R = Gas constant [62,360 (cc-mm-Hg)/(g-mole)(°Kelvin)]

K = Henry's Law constant. For VCM in PVC at 90° C, $K = 6.52 \times 10^{-6} = K_p$. For VCM in latex (approximate) [illegible] at 90° C, $K = [illegible] \times 10^{-6} = K_p$.

T_2 = Equilibration temperature, °K.

If the following conditions are met, Equation 107-2 can be simplified as follows:

1. T_1 = 22° C (295° K)
2. T_2 = 90° C (363° K)
3. P_2 = 760 mm Hg.
4. V_g [illegible] $= 23.5 - \frac{m_s}{1.4}$

[illegible]

$$C_{rvc} = \frac{A_s}{R_f}\left([illegible] \right)$$

Equation 107-3

[illegible] VCM,

$$C_{rvc} = \frac{A_s P_2}{R_f T_1}\times\left[\frac{M_v V_g}{R m_s} + K_p (T_s, T_2 [illegible] T_s, T_2)\right]$$

Equation 107-4

[illegible] Equation 107-4 [illegible] results based on dry PVC [illegible] by T_s.

[illegible]

$$C_{rvc} = \frac{A_s}{R_f}\left[[illegible] \right]$$

Equation 107-5

[illegible]

[illegible]

[illegible]

PART 177—FEDERAL, STATE, AND PRIVATE PROGRAMS OF LOW-INTEREST LOANS TO VOCATIONAL STUDENTS AND STUDENTS IN INSTITUTIONS OF HIGHER EDUCATION

Commissioner's "Equitable Share" of Payments on Certain Reinsured Loans

AGENCY: Office of Education, HEW.

ACTION: Interim Final Rule.

SUMMARY: This Guaranteed Student Loan Program (GSLP) rule prescribes the Commissioner's "equitable share" of a [illegible] made by a borrower in discharge of his GSLP loan obligation to an approved State or private nonprofit loan insurance program (guarantee agency) after the Commissioner has made a reinsurance payment on that loan to the agency. This regulation [illegible] the [illegible] of a new

[illegible] of 1976 (Public Law [illegible]). This regulation is needed [illegible] to prescribe the distribution of [illegible] received from borrowers [illegible]

[illegible] the Commissioner [illegible] concurrently with the publication in the Federal Register.

That section provides that regulations subject thereto shall become effective on the 45th day following the date of such transmittal, subject to the provisions therein concerning Congressional action and adjournment.

ADDRESSES: Written comments concerning this rule should be sent to the Associate Commissioner, Office of Guaranteed Student Loans, Office of Education, Room 4[illegible], Regional Office Building No. 3, Seventh and D Streets, S.W., Washington, D.C.

FOR FURTHER INFORMATION CONTACT:

Robert F. Cannedy, Jr., 202-472-[illegible].

SUPPLEMENTARY INFORMATION: This rule prescribes what the Commissioner's "equitable share" of payments is with respect to payments made by a borrower to a State or private nonprofit student loan insurance program ("guarantee agency") in full or partial discharge of the borrower's loan obligation, after the Commissioner has made a reinsurance payment to the guarantee agency with respect to that loan pursuant to a Supplemental Guaranty Agreement. Section 428A of the Higher Education Act of 1965 (Act), as added by section 127 of the Education Amendments of 1976 (Pub. L. 94-[illegible]), [illegible] the Commissioner to enter with guarantee agencies into Supplemental Guaranty Agreements which provide for 100 percent Federal reinsurance on eligible loans. The statute also directs the Commissioner to prescribe by regulation his "equitable share" of payments collected by the guarantee agency from the borrower once the guarantee agency is subrogated to the rights of the lender after paying an insurance claim. The Commissioner of Education has already begun to enter into Supplemental Guaranty Agreements with guarantee agencies. These agreements provide that the Commissioner's "equitable share" will be determined by regulations to be prescribed by the Commissioner. This regulation is [illegible] to [illegible] the distribution of payments received from borrowers after the [illegible] of the [illegible].

[illegible] section [illegible] of the Act [illegible] "equitable share" of payments [illegible] by guarantee agencies [illegible] 80 percent [illegible] agreement. It provides that the Commissioner's share of payments [illegible] both the portion [illegible] guarantee agency has [illegible]:

1. A percentage amount equal to the percentage, if any, of insurance [illegible] previously paid on the loan [illegible] the [illegible] of the loan [illegible] Federal reinsurance;

2. A[illegible] costs of collection [illegible] as defined at sections 428(c)(6)(B)(i) and 428(f)(3)(B) of the Act, and

3. An amount attributable to the allowable "administrative costs of preclaims assistance for default prevention," as defined at sections 428(c)(6)(B)(ii) and 428(f)(3)(C) of the Act.

The technical change clarifies that a guarantee agency may not deduct costs for loan collection and preclaims assistance which are reimbursed pursuant to section 428(f) of the Higher Education Act of 1965, as amended by Public Law 94-482.

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