the publicly owned treatment works receiving such regulated wastes:

Subpart G.—*Electroless Plating Facilities Discharging 38,000 Liters or More Per Day PSES Limitations (mg/sq m-operation)*

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 4 consecutive monitoring days shall not exceed
CN,T	74	39
Cu	176	105
Ni	160	100
Cr	273	156
Zn	164	102
Pb	23	16
Cd	47	29
Total metals	410	267

(e) For wastewater sources regulated under paragraph (c) of this section, the following optional control program may be elected by the source introducing treated process wastewater into a publicly owned treatment works with the concurrence of the control authority. These optional pollutant parameters are not eligible for allowance for removal achieved by the publicly owned treatment works under 40 CFR 403.7. In the absence of strong chelating agents, after reduction of hexavalent chromium wastes, and after neutralization using calcium oxide (or hydroxide) the following limitations shall apply:

Subpart G.—*Electroless Plating Facilities Discharging 38,000 Liters or More Per Day PSES Limitations (mg/l)*

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 4 consecutive monitoring days shall not exceed
CN,T	1.9	1.0
Pb	0.6	0.4
Cd	1.2	0.7
TSS	20.0	13.4
pH	(1)	(1)

(1) Within the range 7.5 to 10.00

Subpart H—Printed Circuit Board Subcategory

§ 413.80 Applicability: Description of the printed circuit board subcategory.

The provisions of this subpart apply to the manufacture of printed circuit boards, including all manufacturing operations required or used to convert an insulating substrate to a finished printed circuit board. The provisions set forth in other subparts of this category are not applicable to the manufacture of printed circuit boards.

§ 413.81 Specialized definitions.

For the purpose of this subpart:

(a) The term "sq ft" ("sq m") shall mean the area of the printed circuit board immersed in an aqueous process bath.

(b) The term "operation" shall mean any step in the printed circuit board manufacturing process in which the board is immersed in an aqueous process bath which is followed by a rinse.

§ 413.84 Pretreatment standards for existing sources.

Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR Part 403 and achieve the following pretreatment standards for existing sources (PSES):

(a) No user introducing wastewater pollutants into a publicly owned treatment works under the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this standard.

(b) For a source discharging less than 38,000 liters (10,000 gal) per calendar day of electroplating process wastewater the following limitations shall apply:

Subpart H.—*Printed Circuit Board Facilities Discharging Less Than 38,000 Liters Per Day PSES Limitations (mg/l)*

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 4 consecutive monitoring days shall not exceed
CN, A	5.0	2.7
Pb	0.6	0.4
Cd	1.2	0.7

(c) For plants discharging 38,000 liters (10,000 gal) or more per calendar day of electroplating process wastewater the following limitations shall apply:

Subpart H.—*Printed Circuit Board Facilities Discharging 38,000 Liters or More Per Day PSES Limitations (mg/l)*

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 4 consecutive monitoring days shall not exceed
CN, T	1.9	1.0
Cu	4.5	2.7
Ni	4.1	2.6
Cr	7.0	4.0
Zn	4.2	2.6
Pb	0.6	0.4
Cd	1.2	0.7
Total metals	10.5	6.8

(d) Alternatively, the following mass-based standards are equivalent to and may apply in place of those limitations specified under paragraph (c) of this section upon prior agreement between a source subject to these standards and the publicly owned treatment works receiving such regulated wastes:

Subpart H.—*Printed Circuit Board Facilities Discharging 38,000 Liters or More Per Day PSES Limitations (mg/sq m-operation)*

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 4 consecutive monitoring days shall not exceed
CN, T	169	89
Cu	401	241
Ni	365	229
Cr	623	357
Zn	374	232
Pb	53	36
Cd	107	65
Total metals	935	609

(e) For wastewater sources regulated under paragraph (c) of this section, the following optional control program may be elected by the source introducing treated process wastewater into a publicly owned treatment works with the concurrence of the control authority. These optional pollutant parameters are not eligible for allowance for removal achieved by the publicly owned treatment works under 40 CFR 403.7. In the absence of strong chelating agents, after reduction of hexavalent chromium wastes, and after neutralization using calcium oxide (or hydroxide) the following limitations shall apply:

Subpart H.—*Printed Circuit Board Facilities Discharging 38,000 Liters or More Per Day PSES Limitations (mg/l)*

Pollutant or pollutant property	Maximum for any 1 day	Average of daily values for 4 consecutive monitoring days shall not exceed
CN, T	1.9	1.0
Pb	0.6	0.4
Cd	1.2	0.7
TSS	20.0	13.4
pH	(1)	(1)

(1) Within the range 7.5 to 10.0

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Wednesday
January 28, 1981

Part IV

Environmental Protection Agency

Electroplating Pretreatment Standards; Denial of Petition for Reconsideration

ENVIRONMENTAL PROTECTION AGENCY

[EN FRL 1671-4]

Electroplating Pretreatment Standards; Denial of Petition for Reconsideration

AGENCY: Environmental Protection Agency.

ACTION: Denial of petition for reconsideration.

SUMMARY: On May 15, 1980, Ford Motor Company (Ford) filed a petition under the Administrative Procedure Act, 5 U.S.C. 553(e). Ford requested that EPA reconsider the applicability of the Electroplating Pretreatment Standards for Existing Sources (40 CFR Part 413) to intergrated facilities with combined wastestreams. Ford specifically requested that EPA either a separate industrial category for automotive manufacturing or reopen the rulemaking for comment on the proper applicability of the electroplating standards in light of the Agency's combined wastestream formula contained in the General Pretreatment Regulations, 40 CFR 403.6(e). The Administrator has denied this Petition. The Administrator's Decision appears below.

FOR FURTHER INFORMATION CONTACT: Ellen Maldonado, Attorney, Water & Solid Waste Divison (A-131), Office of General Counsel, 401 M St. SW., Washington, D.C. 20460, (202) 472-7818.

SUPPLEMENTARY INFORMATION: EPA has established a public record for this decision which is available for inspection in the Public Information Reference Unit, EPA Library, Room M2404, 401 M St. SW., Washington, D.C. 20460.

This record includes the petition and comments submitted by Ford and EPA's analysis of the cost of wastestream segregation.

The Decision of the Administrator appearing below was sent to Ford. The Attachments referred to in the Decision have not been reproduced below. They are available for inspection in the Public Information Reference Unit.

Dated: January 13, 1981.

Douglas M. Costle,
Administrator.

Response to the Petition of Ford Motor Company for Reconsideration of the Electroplating Pretreatment Standards

Decision of the Administrator

I have been petitioned to reconsider the applicability of the Electroplating Pretreatment Standards for Existing Sources (40 CFR Part 413) to integrated facilities with combined wastestreams by either establishing a separate industrial category for automotive manufacturing or reopening the electroplating rulemaking for comment on the proper applicability of the electroplating standards in light of the Agency's combined wastestream formula (40 CFR 403.6(e)). The petition is denied.

I. Introduction

On May 15, 1980, Ford Motor Company (Ford) filed a Petition for Reconsideration of the Electroplating Pretreatment Standards on the grounds that EPA had not given sufficient consideration to how the electroplating standards would apply to facilities that combine electroplating wastestreams with other wastestreams. Ford argued that in order to give adequate consideration to this issue EPA should either create a separate pretreatment standard for the automotive industry, or reopen the electroplating rulemaking for comment on the proper applicability of the electroplating standards in light of the Agency's combined wastestream formula.

The Administrator has concluded that it is unnecessary to reconsider the electroplating regulation because the problem of how to apply categorical pretreatment standards, including the electroplating standards, to facilities with combined wastestreams has been fully considered and resolved by the revised combined wastestream formula in the General Pretreatment Regulations published elsewhere in today's **Federal Register.**

II. Background

The issue presented by Ford's petition arose from the proposal of a combined wastestream formula in proposed amendments to the General Pretreatment Regulation, 40 CFR Part 403, on October 29, 1979. (44 FR 62260.) The purpose of the formula was to provide a method for calculating pollutant limitations at industrial facilities where regulated process effluent is mixed with other wastestreams (either regulated or unregulated) prior to treatment. The formula proposed in October was originally included as part of the National Pretreatment Strategy which appeared as Appendix A to the June 26, 1978, General Pretreatment Regulation. The formula was moved from the Appendix to proposed § 403.6(e) of the regulation to formalize the resolution of this problem, and thereby, to eliminate uncertainty among POTWs, States, and affected industries, and to ensure consistent application nationwide.

A combined wastestream formula is primarily of importance to diversified multi-process industrial users of POTWs. These users, like Ford, frequently have a number of individual processes producing different wastestreams that are not regulated by a single categorical pretreatment standard or are not regulated at all. Many of these integrated facilities have combined process wastestreams and a number have already constructed combined waste treatment plants. These users often install a pretreatment system on the combined stream rather than install separate parallel systems on each individual stream. A combined wastestream formula permits a facility to mix wastestreams prior to treatment by providing it with alternative effluent limits for this combined discharge.

Ford, like some other industrial users, submitted extensive comments criticizing the combined wastestream formula proposed in October, 1979. In the General Pretreatment Regulation published today EPA has agreed with commenters that the proposed formula assumed that there was only one regulated process contributing to the mixed discharge. It also established a *de facto* zero discharge limit for the unregulated wastestreams being combined by not taking into account the presence of pollutants in those streams. As a result, Ford argued that the formula proposed by EPA would not permit combined treatment where process effluent was mixed with other wastewaters, because the combined stream limits were technologically unattainable in many instances.

Ford presented these criticisms in its comments on the proposed formula and in the comments attached to its petition for reconsideration.

EPA acknowledged the defects in its proposed formula and has published a final version which, as discussed more fully below, will permit combined treatment in most cases, although some restrictions are imposed on the combination of certain streams to protect against the dilution of wastewaters and combination of incompatible wastestreams. The Agency believes that this revised formula, which had not been finally determined at the time Ford's petition was filed, resolves the issues presented in Ford's petition for reconsideration of the electroplating pretreatment standards. For a response to Ford's technical argument see the preamble to the General Pretreatment Regulations published elsewhere in today's **Federal Register.**

III. The Final Combined Wastestream Formula

Ford's principal concern presented in its petition was that the combined wastestream formula, as proposed, would set limitations on combined streams that would be lower than the capability of treatment technology. By setting a new, stringent limit below treatability levels, Ford argued, EPA would in effect ban combined treatment. Integrated facilities already operating centralized treatment systems or using combined process sewers, might be obligated to segregate wastestreams in order to achieve pretreatment standards. If segregation of wastestreams were required, Ford argued, then EPA would have to include the cost of such stream segregation in its economic impact analysis for the electroplating standards. Accordingly , if EPA decided not to create a separate category for the automotive industry, then, Ford contended, EPA should at least reopen the electroplating rulemaking record for comment on the economic impact of the combined waste stream formula.

EPA believes that reopening the record is unnecessary because the final combined wastestream formula will make segregation of wastestreams unnecessary in most cases. The adopted formula sets the alternative concentration limit for each pollutant by mutiplying the categorical limit for a regulated stream by the flow of that stream and then adding the resultant products for all regulated wastestreams that are combined. This amount is then divided by the sum of the flow for each regulated streams. In statistical terms, a flow-weighted average of the categorical standards is taken over the regulated streams. If only regulated streams are being combined, this is all one would have to do to compute the alternate limit. However, if the user combines regulated with unregulated streams, to prevent inappropriate dilution, the resulting number is multiplied by a fraction the numerator of which is the total flow through the treatment system minus dilution streams such as noncontact cooling water. The denominator of this fraction is the total flow through the treatment facility. If the unregulated streams are not dilution streams as defined in the formula, the fraction become 1 and no further adjustment is made on the alternative limit. If an unregulated stream is a dilution stream, this fraction will adjust the alternative limit to account for the dilution that is taking place. Alternative mass-based limits may be calculated instead of concentration-based limits.

The effect of the formula can be summarized as follows: If two regulated streams are combined, the use of the formula will result in a new standard for the regulated pollutant somewhere in between the two categorical standards. If a regulated and an unregulated stream are combined, and the unregulated stream is not a "dilution stream," the pollutant standard for the combined stream will be the categorical standard for the pollutant in the regulated stream. If dilution streams such as non-contact cooling water are combined with regulated streams, the limitation for the combined stream becomes more stringent in order to avoid giving credit for dilution of the pollutants. Under this approach, segregation of waste streams will not be necessary unless dilution stream are combined with process streams prior to treatment, and the alternative pretreatment standard for the combined stream is below treatability levels. EPA expects that the number of plants required to segregate these streams will be relatively small because pretreatment facilities are unlikely to be sized to include treatment of dilution streams and because industrial users tend to take appropriate measures to reduce their discharges to the POTW in order to reduce user charges. According, it is unlikely that the problems presented by Ford in its petition will exist after using the new combined wastestream formula.

Nevertheless, in order to provide a complete response to Ford's petition, the Agency has considered Ford's request for either a separate category for the automotive industry or for a reopening of the record to consider the economic impact of the combined wastestream formula.

IV. Ford's Request for a Separate Category for the Automotive Industry

Ford's principal concern with respect to a separate automotive assembly category is that EPA regulate all operations at automotive plants under one pretreatment standard. The Agency believes that the combined wastestream formula has resolved the problem of providing uniform standards for automotive plants. If the plant combines wastestreams, it now has a method of computing an alternative limit so that, in most cases, the plant will not need to segregate treatment of each process stream. Moreover, the upcoming Metal Finishing regulations, which will establish BAT-level pretreatment standards, should be compatible with a combined treatment approach because they are likely to establish standards based on combined treatment of most wastestreams.

V. Ford's Request That the Agency Reopen the Electroplating Record for Comment in Light of the Combined Wastestream Formula

Ford's second request, in the alternative, is that the Agency reopen the electroplating record for comment in light of the combined wastestream formula. The principal reason for this request, as discussed in Ford's Comments, is to examine the economic impact that would result if integrated facilities were required to segregate regulated and unregulated process streams in order to comply with the pretreatment standards. As discussed previously, Ford argues that such segregation would be necessary under the October, 1979 proposed combined wastestream formula.

As discussed above, the final combined wastestream formula will, in most instances, obviate the need for segregation of process wastestreams. Thus, a reconsideration of economic impact is unnecessary. Nevertheless, EPA examined the data submitted by Ford in an effort to make a rough estimate of the economic impact that would result if all integrated facilities were required to segregate their wastestreams. Since the Agency believes that very few facilities will be forced to segregate, this estimate gives an exaggerated economic impact.

A detailed description of the approach taken in analyzing these costs is attached. (Attachment 1.) Our rough estimate indicates that 56 out of 4,700 plants might choose to divest their inhouse electroplating rather than segregate wastesteams. The analysis also indicates that only the very largest plants, i.e., those with flows greater than 500,000 gallons per day, would consider divestiture. As mentioned above, this estimate exaggerates the economic impact of wastestream segregation by assuming that all integrated facilities would segregate their wastestreams. Moreover, the cost per plant of wastestream segregation presented by Ford and used in EPA's analysis may also be too high. EPA's independent estimate of the cost per plant is less than one-fifth of the amount estimated by Ford. (See Attachment 2.)

This analysis leads EPA to conclude that the economic impact of stream segregation, even assuming that every integrated facility would be required to segregate, and the Ford's high costs per plant are correct, is not sufficently high to require a revised economic analysis or additional comment on this issue. This conclusion is strengthened by the existence of a combined wastestream formula that will make it unnecessary

for most plants to segregate their wastestreams.

In addition, a plant which must segregate its wastestreams, may be eligible for a fundamentally different factors (FDF) variance. The amended General Pretreatment Regulation published today provides that a variance may be given if data specific to an industrial user "indicate it presents factors fundamentally different from those considered by EPA in developing the limit at issue." 40 CFR § 403.13(b). The comment following § 403.13(d) notes that "[w]here an adjusted Pretreatment Standard has been calculated in accordance with § 403.6(e), the Industrial User may apply for a fundamentally different factors variance from this adjusted standard in accordance witht his section." Factors which may be considered fundamentally different include the nature or quality of pollutants contained in the raw waste load of the User's process wastewater; age, aize, land availability, and configuration as they relate to the User's equipment or facilities; processes employed; process changes; and engineering aspects of the application of control technology; and cost of complaince with required control technology. Such plant-specific issues are appropriately resolved by a variance request.

VI. Conclusion

For the reasons stated above, the Petition of Ford Motor Co. is denied.

Dated: January 13, 1981.

Douglas M. Costle,

Administrator.

[FR Doc. 81-2116 Filed 1-27-81; 8:45 am]

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January 28,1981

Part V

Pension Benefit Guaranty Corporation

ALLOCATION OF ASSETS IN NON-MULTIEMPLOYER PLANS

PENSION BENEFIT GUARANTY CORPORATION

29 CFR Part 2608

Allocation of Assets in Non-Multiemployer Plans

AGENCY: Pension Benefit Guaranty Corporation.

ACTION: Final rule.

SUMMARY: This regulation prescribes rules for allocating assets of a terminating pension plan among the six priority categories set forth in section 4044 of the Employee Retirement Income Security Act of 1974. The rules apply to all terminating non-multiemployer pension plans covered by Title IV of the Act. Heretofore, the allocation rules of the Pension Benefit Guaranty Corporation (the "PBGC"), which were set forth in its Interim Regulation on Allocation of Assets, applied only to terminating plans that did not receive a Notice of Sufficiency and that were, therefore, placed into trusteeship pursuant to Title IV of the Act. This regulation is needed to establish rules for allocating assets in terminating plans that close out under a Notice of Sufficiency pursuant to Subpart C of Part 2615 of this chapter. The regulation is further necessary to clarify when benefit amounts are determined and when those benefits are valued. The regulation is also needed to clarify general rules previously published as proposed and interim regulations. The effect of this regulation is to provide guidance to plan administrators in allocating the assets of terminating pension plans for purposes of demonstrating sufficiency under Part 2615 of this chapter, determining benefits payable under Title IV, and determining plan asset insufficiency under Part 2613 of this chapter. This regulation applies only to non-multiemployer plans because, under the Multiemployer Pension Plan Amendments Act of 1980, the allocation rules in section 4044 no longer apply to multiemployer plans.

EFFECTIVE DATE: March 1, 1981.

FOR FURTHER INFORMATION CONTACT: Renae R. Hubbard, Staff Attorney, Office of the General Counsel, Pension Benefit Guaranty Corporation, 2020 K Street, N.W., Washington, D.C. 20006, 202-254-4895.

SUPPLEMENTARY INFORMATION:

Background

On November 4, 1975, the PBGC published in the **Federal Register**, 40 FR 51368, a proposed regulation governing allocation of assets in terminating plans subject to Title IV of the Employee Retirement Income Security Act of 1974. The proposed regulation did not differentiate between plans to which PBGC issues a Notice of Sufficiency and other terminating plans.

On November 3, 1976, the PBGC published in the **Federal Register**, 41 FR 48480, an interim regulation covering the allocation of assets in plans that do not receive a Notice of Sufficiency. Simultaneously, at 41 FR 48492, the PBGC published a supplemental notice of proposed rulemaking that superseded, in its entirety, the proposed regulation published on November 4, 1975. The supplemental notice was issued in order to differentiate between "sufficient plans" [1] and plans that do not receive a Notice of Sufficiency from the PBGC. The supplemental notice also established rules concerning ancillary benefits purchased by employee contributions and rules governing the establishment of subclasses.

The supplemental notice and the interim regulation, as published in 1976, are essentially the same except for (1) differences required because the supplemental notice covers all terminating plans, whereas the interim regulation covers only plans that have not received a Notice of Sufficiency, and (2) the inclusion in the supplemental notice of a section dealing with the establishment of subclasses.

The interim regulation was amended on January 13, 1977, 42 FR 2677, in order (1) to provide rules for the establishment of subclasses, (2) to identify more clearly priority category 5 benefits, and (3) to make technical changes in the priority category 2 provisions. The interim regulation was further amended on April 4, 1978, 43 FR 14010, along with corresponding changes in the Guaranteed Benefits regulation, 29 CFR, Part 2605, to provide allocation rules for the newly guaranteeable pre-retirement death benefit based on mandatory employee contributions and to clarify further the treatment of mandatory employee contributions. On August 2, 1977, the PBGC published a proposed amendment to the interim regulation, 42 FR 39120, to allow plans that merge to provide a special schedule for allocating assets if the merged plan later terminates.

Unless clearly stated otherwise, the rest of this preamble relates solely to the 1976 proposal, which will be referred to hereafter as the "supplemental notice."

General

Unlike the supplemental notice, which applied to all plans covered by Title IV, this final regulation applies only to non-multiemployer plans. This is because, under the Multiemployer Pension Plan Amendments Act of 1980, Pub. L. No. 96-364, 94 Stat. 1208 (1980), section 4044 is no longer applicable to multiemployer plans.

This final regulation for non-multiemployer plans basically tracks the supplemental notice but also includes rules similar to those in the interim regulation for priority category 2. This final regulation applies both to plans that close out under a Notice of Sufficiency pursuant to Subpart C of Part 2615 of this chapter and to plans that are placed into trusteeship pursuant to Title IV. Thus, this regulation supersedes the interim regulation, as amended. This regulation does not address the following:

(1) The allocation of assets when a merged plan terminates;

(2) The allocation of assets to benefits covered by insurance commitments, other than benefits payable by an insurer under irrevocable commitments; and

(3) The allocation of residual assets.

The allocation of residual assets is the subject of a proposed amendment to this part published on October 2, 1980, 45 FR 65259. A final amendment dealing with this matter will be completed shortly. The other two issues will be considered separately for inclusion in the regulation at a later date.

This final regulation on allocation of assets has been coordinated with the final regulations on the determination of plan sufficiency and the valuation of plan benefits, both of which are being published today. Basic to each is the concept that plans that close out under a Notice of Sufficiency must be treated in a different manner than plans that are placed into trusteeship. In the supplemental notice, the PBGC recognized that nontrusteed plans face a special problem in allocating plan assets because of the time delay between the date of plan termination and the date plan assets are finally liquidated and distributed. Therefore, the PBGC proposed that, while the amount of the benefit to which a participant is entitled would be determined as of the date of plan termination, the valuation of that benefit and the allocation of plan assets

[1] The use of the term "sufficient plans" is somewhat misleading since there are circumstances under which "sufficient plans" are not issued a Notice of Sufficiency but, instead, are placed into trusteeship. This could occur, for example, if a "sufficient plan" were abandoned by its sponsor-employer. It would be more precise to say that the supplemental notice differentiated between plans that close out pursuant to a Notice of Sufficiency and plans that are placed into trusteeship pursuant to Title IV.

in such plans would be made as of the date of distribution.[2] In trusteed plans, the determination of the benefit amount and both the valuation and allocation would continue to be done as of the date of plan termination. The PBGC received no comments on this aspect of the proposal. Therefore, the final regulation provides that assets shall be allocated as of the date of distribution in plans that close out under a Notice of Sufficiency and as of the date of plan termination in other plans.

This final regulation has been renumbered and restructured for clarification and to accommodate the future inclusion of other provisions. Subpart A contains general rules. Subpart B contains specific rules for allocating assets in priority categories 1 through 6. Subpart C, to be added later, will contain rules for allocating residual assets.

Definitions

The following definitions have been added to § 2608.2:

(1) "Expected retirement age" has been defined since that is a necessary factor in computing benefits when a plan permits early retirement.

(2) "Irrevocable commitment" has been defined because benefits covered by an irrevocable commitment are excluded from the allocation process. This is discussed more fully under the heading "General Rule and Violations" in this preamble.

In addition, the terms "Notice of Sufficiency", "plan administrator", "PBGC", and "Code" have been defined for the reader's convenience. The definitions of "normal retirement age", "plan assets", and "value of plan benefits" have been eliminated because, in the context used, they are self-explanatory.

The definition of "nonforfeitable benefit" has been revised to track the language in the definition added to section 4001 of the Act by the Multiemployer Pension Plan Amendments Act of 1980. The definition is essentially the same as the definition in the Guaranteed Benefits regulation, 29 CFR, Part 2605, except for the addition of language under which a benefit may be nonforfeitable if a participant is entitled to it under "requirements of the Act."

General Rule and Violations

The general rule, § 2608.3, has been revised in two ways. First, the revised language makes clear that the assets to be allocated are only those "available to pay for benefits under the plan" that become due after the date of plan termination. Assets that, under plan provisions, are to be used to satisfy benefits that are due and unpaid as of the date of plan termination and liabilities other than plan benefits are not assets "available to pay for benefits under the plan."

Second, the final regulation excludes from the allocation process benefits payable by an insurer under an irrevocable commitment. The value of an insurance company's irrevocable commitment to pay benefits to a named participant should not be included in plan assets because the commitment cannot be used to satisfy other plan obligations. Conversely, assets need not be allocated to cover those benefits already provided under an irrevocable commitment.

Objections to the "irrevocable commitment" rule have been raised on the grounds that it could result in an abuse of the termination insurance program. For example, the rule could permit payment of benefits in excess of the guaranteed benefit limits. It also could result in a misallocation to certain priority categories. In addition, highly paid participants could use the rule to circumvent the nondiscrimination provisions of section 401 of the Code. Because of this, the PBGC has given preliminary consideration to a requirement that all insurance or annuity contracts issued by insurance companies (existing as well as future) include provisions for cancellation of any annuity benefits purchased or otherwise provided, to the extent required to conform to section 4044. However, development of such a rule has not begun.

Therefore, to minimize the possibility of abuse, §2608.4 has been revised to make clear that distribution of plan assets contrary to section 4044 of the Act, in anticipation of plan termination, whether directly to a participant or through the purchase of an insurance contract, constitutes a violation of section 4044. In determining if a distribution has been made in anticipation of plan termination, the PBGC will consider all of the facts and circumstances including, but not limited to, (1) any change in funding or operating procedures, (2) past practice with regard to employee requests for forms of distribution, (3) whether the distribution is consistent with plan provisions, and (4) whether an annuity contract that provides for a cutback to Title IV guarantee levels could have been purchased from an insurance company.

Manner of Allocation

One comment objected to the provision in § 2608.4 of the supplemental notice (§ 2608.10 of the final regulation) that assets be allocated to all benefits, including nonbasic-type benefits, if any, in each priority category before any assets are allocated to the next lower priority category. It was suggested that the proposed treatment is unjustifiable since it allocates to nonguaranteed benefits assets that otherwise would be available to pay guaranteed benefits in a lower priority category. This could result, in turn, in greater employer liability and an indirect guarantee by the PBGC of benefits in excess of the guarantee limitations. The comment suggested that nonguaranteed benefits presently being assigned to priority category 3 be shifted to priority category 5.

The PBGC believes that this suggestion is contrary to the language of section 4044(a). The statutory language does not permit benefits to be shifted from one priority category to another by allocating assets first to all guaranteed benefits in all priority categories. Rather, PBGC believes the statute requires satisfaction of *all* benefits within a priority category before assets are allocated to the next lower priority category. Any other reading would controvert the statutory requirement that a specified "order" be followed in allocating the assets. For example, priority category 3 benefits could include nonbasic-type early retirement supplements that have been in pay status for more than three years when a plan terminates and basic-type benefits in excess of the guarantee limits. Under the statutory language, assets must be allocated to both types of benefits before allocation to the next lower priority category. Therefore, no change was made in the final rule in this respect.

A new provision, § 2608.10(c) *Valuing benefits*, was added to clarify the concept that benefits initially assigned to each priority category are computed by first determining all of a participant's benefit of the type assigned to that priority category, *e.g.*, basic-type or nonbasic-type. A participant's benefits of each type are then valued and reduced by the value of the same type of benefit properly assigned to a higher priority category. For example, in order to determine the priority category 4 benefit, a participant's total basic-type benefit that does not exceed the guarantee limits, other than the limits in sections 4022(b)(5) and 4022B(a),

[2] Similarly, plan obligations under section 4007 of Title IV and under Title I continue after the date of plan termination.

formerly sections 4022(b)(6) and 4022(b)(5), of the Act, is determined and then the amount of the participant's basic-type benefit previously assigned to priority categories 2 and 3, if any, is deducted. The same procedure is followed for nonbasic-type benefits.

In addition, a provision was added to make clear that a nonbasic-type benefit in priority category 2 does not reduce nonbasic-type benefits in lower priority categories. As explained hereafter under the heading "Priority Category 2", a participant's annuity and pre-retirement death benefit derived from mandatory employee contributions are basic-type benefits. The nonbasic portion in priority category 2 is a valuation surplus equal to the amount by which the value of the lump sum benefit elected in lieu of the basic-type benefits exceeds the value of the basic-type benefits. Thus, since this nonbasic-type benefit does not duplicate benefits in lower priority categories, it does not serve to reduce the value of benefits in lower priority categories.

A change has been made in the provision for allocation of assests to benefits within priority categories, § 2608.10(e). Specifically, the change deals with the provisions governing the allocation of assets to priority category 5 subcategories based on successive plan amendments when plan assets are not sufficient to pay all benefits assigned to that priority category. Under these circumstances, benefits are determined first according to plan provisions in effect five years before the date of plan termination, and then according to each successive amendment. The provisions of the supplemental notice (§ 2608.4(e)) assumed that each succeeding amendment would increase benefits. The final rule recognizes that this will not always be the case. Situations may arise where the amounts allocated on account of a benefit increase under an earlier amendment will have to be reduced because of a later amendment that decreases benefits. For example, if a plan were amended to reduce future benefit accruals or the Secretary of the Treasury approves other benefit reductions because of substantial business hardship, it is possible that amounts allocated to a benefit increase under an earlier amendment could, together with the assets allocated to the benefit assigned to priority categories 2 through 4, provide for a benefit that was larger than a participant's total benefit under the plan on the date of plan termination (or the date employment ceased, if applicable). Therefore, § 2608.10(e) states that, if an amendment reduces benefits, amounts previously allocated to priority category 5 in excess of the reduced benefit shall be reduced accordingly.

The only other changes that have been made in § 2608.10 are editorial in nature.

Priority Category 1

Changes in priority category 1 (§ 2608.11) have been made primarily for clarification. Rules for assigning benefits in plans that do not maintain separate accounts have been eliminated since experience has shown that separate accounts are normally kept for the portion of each participant's accrued benefit derived from voluntary employee contributions, as required by section 204(b)(2) of the Act and section 411(b)(2) of the Code. Terminating plans that have not maintained separate accounts, if any, will be handled on a case by case basis.

Priority Category 2

In addition to language simplification and format changes made for clarification, two basic changes have been made in priority category 2, § 2608.12. First, the manner in which the accrued benefit derived from mandatory employee contributions is computed has been changed. For plans that are subject to the minimum vesting standards of the Act when the plan terminates, the proposed rules based the computation on the participant's total mandatory contributions remaining in the plan, accumulated with interest and converted to an annuity form of benefit using factors established by the Internal Revenue Service (the "IRS"). In contrast, the interim regulation, as amended on April 4, 1978, provided that the accrued benefit derived from mandatory employee contributions would be computed using plan provisions and would be based on mandatory employee contributions without interest. The accrued benefit, however, could not be less than the minimum nonforfeitable benefit required under section 411(c) of the Code and section 204(c) of the Act. Upon review of the interim regulation, the PBGC decided that the accrued benefit derived from mandatory employee contributions should be determined by converting a participant's mandatory employee contributions, accumulated with interest, into an annuity benefit using the plan's interest rates and conversion factors. The limitation of the minimum nonforfeitable benefit requirement under section 411(c) of the Code and section 204(c) of the Act still applies.

In the absence of plan interest rates and factors, the IRS rates and factors in effect on the date of plan termination will be used. The IRS factors for converting mandatory employee contributions to an annuity form of benefit are set forth in Treasury Regulation § 1.411(c)-1 (26 U.S.C. § 411(c) (1976)) and Revenue Ruling 76-47, C.B. 1976-1, 109. The IRS-established interest rate is contained in Treasury Regulation § 1.411(c)-1.

The supplemental notice contained a different rule for plans that were not subject to the minimum vesting provisions in section 203 of the Act or section 411 of the Code on the date of plan termination. Since this final regulation applies only to plans that file a Notice of Intent to Terminate on or after February 27, 1981, and since all such plans are subject to the minimum vesting provisions, the alternative rule is not included in this final regulation.

The second change in the priority category 2 rules is the addition of rules governing the allocation of assets to a pre-retirement death benefit that returns mandatory employee contributions in the event of death before retirement, which was treated as a nonbasic-type benefit in the supplemental notice. The pre-retirement death benefit was recognized as a basic-type benefit in the April 4, 1978 amendment to the Guaranteed Benefits regulation. In addition, that amendment provided that a participant could elect to receive his or her mandatory employee contributions in a lump sum, in lieu of the annuity and death benefits derived from those contributions, if lump sum payments were consistent with the plan provisions. A simultaneous amendment to the interim regulation on allocation of assets provided rules reflecting the changed status of the pre-retirement death benefit and rules for election of the lump sum. These rules have been incorporated in the final regulation with one change.

The change relates to the determination of the total value of the benefits assigned to priority category 2. The effect of § 2608.7(b) of the interim regulation, was, in most cases, to provide that the assets allocated to priority category 2 for each participant would be equal to the total value of the participant's mandatory employee contributions with interest at the plan rate or the statutory rate, whichever was applicable, reduced by distributions made before the date of plan termination. The purpose of the rule in § 2608.7(b) was to assure that, if a participant elected to receive his or her contributions with interest in a lump sum, there would be enough assets allocated to priority category 2 to pay

that lump sum benefit. If, on the other hand, the participant elected to receive the annuity benefit and the death benefit derived from those contributions, there could be a surplus of funds in priority category 2 with respect to that participant. This is because, under § 2608.7(c), a participant's priority category 2 annuity benefit was based on mandatory employee contributions remaining in the plan, exclusive of interest. The combined values of the annuity benefit and the death benefit might be less than the contributions plus interest. In other words, the annuity and death benefits might cost less to provide than the total mandatory employee contributions plus interest.

The interim regulation stated that the annuity benefit and the pre-retirement death benefit in priority category 2 were basic-type benefits. It also provided that the excess, if any, of employee contributions plus interest over the value of the basic-type benefit was a nonbasic-type benefit. If a participant had a nonbasic-type benefit in priority category 2, that benefit was to be distribuuted to the participant on the date plan assets were distributed, and would be paid in addition to the annuity and death benefits.

The existence of this nonbasic-type benefit, which is, in fact, a "valuation surplus", could result in a duplication of benefit payments if a participant elects to receive the priority category 2 benefit as an annuity benefit plus the pre-retirement death benefit, rather than as a lump sum benefit. If a participant who has so elected dies after plan termination but before retirement, his or her beneficiary would receive the full amount of the mandatory employee contributions under the plan's death benefit provision, even though a portion of those mandatory employee contributions were previously paid out (when plan assets were distributed) as a nonbasic-type benefit. This is illustrated by the following example:

Assume that on the date of plan termination a participant's accumulated mandatory contributions in the plan are $4,000, the value of the annuity benefit derived from those contributions is $3,000, and the value of the pre-retirement death benefit that would return those $4,000 of contributions is $400. The accumulated contributions ($4,000) exceed the sum of the values of the annuity benefit ($3,000) and death benefit ($400) by $600. The $600 is a nonbasic-type priority category 2 benefit. If the participant elects a lump sum return of contributions, the participant would receive the $4,000. However, if the participant did not elect a lump sum benefit and died before reaching retirement age, but after the date of plan termination, his or her beneficiary would receive the $4,000 return of contributions in addition to the $600 nonbasic-type benefit already paid to the participant.

In order to avoid this potential duplication of benefits, under the final regulation each participant's benefit assigned to priority category 2 is determined by the form of distribution each participant elects. If a participant elects to receive an annuity benefit and the pre-retirement death benefit derived from his or her mandatory employee contributions, those benefits are assigned to priority category 2 for that participant. The annuity and pre-retirement death benefit are then valued by determining the cost of providing those benefits, at PBGC rates or those of an insurance company, whichever will be providing the benefit. The combined value of the annuity benefit and the pre-retirement death benefit is the participant's basic-type benefit in priority category 2. There is no nonbasic-type benefit in priority category 2 for a participant who elects to receive the annuity benefit and the pre-retirement death benefit. This is because the participant is receiving the full benefits derived from his or her total accumulated mandatory contributions even though those benefits can be purchased at a lower cost. Thus, under these rules, the potential duplication of benefit payments possible under the interim regulation is avoided.

If a participant elects, pursuant to plan provisions, to receive a lump sum benefit that returns his or her mandatory employee contributions in lieu of the annuity benefit and the death benefit derived from those contributions, the benefit assigned to priority category 2 is the lump sum benefit. The basic-type benefit of the participant is the sum of the values of the annuity benefit and the pre-retirement death benefit that would have been paid had the participant not elected the lump sum. The value of the nonbasic-type benefit is the excess, if any, of the accumulated mandatory employee contributions over the combined value of the annuity and death benefits. If the total amount of a participant's accumulated mandatory contributions is less than the combined value of the annuity and death benefits, the final regulation limits the lump sum benefit to the total amount of the accumulated mandatory employee contributions.

The computation and valuation of an annuity benefit and a pre-retirement death benefit is a necessary step in the allocation process, although a participant has elected a lump sum benefit, since the value of the participant's annuity benefit in priority category 2 must be known in order to determine the employer-derived portion of that participant's *total* annuity benefit, which portion is to be assigned to a lower priority category.

In addition to these two basic changes, the final regulation makes clear that the pre-retirement death benefit and the lump sum benefit may not be less than the minimum lump sum determined under rules established by the Internal Revenue Service under section 204(c) of the Act and section 411(c) of the Code and using the IRS rates and factors in effect on the date of plan termination. Those rules, which are set forth in Treasury Regulation § 1.411(c)–1, provide that the lump sum may be no less than the actuarial equivalent of the participant's minimum accrued benefit derived from mandatory employee contributions. Examples of methods for determining the actuarial equivalent, including an example of a reasonable approximation method, are found in Revenue Ruling 78–202, C.B. 1978–1, 124.

Priority Category 3

The changes in § 2608.13, priority category 3, are (1) format and language simplification and (2) clarification of the general rules contained in the supplemental notice. The new format more clearly shows that the determination of priority category 3 benefits is a two-step process. The first step is to determine if a participant or beneficiary is eligible for a priority category 3 benefit. The second step is the calculation of the benefit amount.

Other clarifying changes in the general rules are as follows:

(1) Sections 2608.13(b) (1) and (2) specify which plan provisions govern eligibility and benefit amounts. Two time periods must be considered. One is the 5-year period ending on the date of plan termination (hereafter referred to as the "5-year period"). The other is the 3-year period ending on the date of plan termination (hereafter referred to as the "3-year period"). Plan provisions in effect on the date benefits commenced are used for those participants who were in pay status before the beginning of the 3-year period, without regard to the 5-year period, but benefit increased before the beginning of the 5-year period will be given effect. For other participants, eligibility and benefit amounts are governed by the plan provisions in effect on the day before the beginning of the 3-year period.

(2) As discussed in the preamble to the interim regulation, benefits that

become payable solely because of a participant's death or disability within the three years immediately preceding the date of plan termination are not included in priority category 3. this is because the prerequisite condition that would make the participant or beneficiary eligible for the benefit, *i.e.* death or disablility of the participant, did not occur before the beginning of the 3-year period. A provision has, however, been included in the eligibility rules in § 2608.13(b)(1) to make clear that the beneficiary of a participant who was eligible for a priority category 3 benefit and who died within the 3-year period is included in priority category 3. Section 2608.13(b)(4) makes clear that the beneficary's annuity will be determined as if the participant had died on the day before the 3-year period began.

(3) The priority category 3 benefit limitation has been clarified. Specifically, for a participant whose priority category 3 benefit was in pay status before the beginning of the 3-year period, there is a two-step rule that limits the amount of the priority category 3 benefit. The first step is the basic rule that a priority category 3 benefit must be determined using the plan provisions in effect during the 5-year period that would provide the lowest benefit. The second step, for those in pay status, is to compare the lowest benefit so determined with the lowest annuity benefit the participant was entitled to receive at any time *during* the 3-year period. The lesser of the two benefits is the priority category 3 benefit for those in pay status. This rule, for example, would exclude, from priority category 3, a temporary benefit supplement that was in effect for a retiree during the 3rd, 4th, and 5th years preceding termination. Only the basic rule that a priority category 3 benefit is limited to the lowest benefit under plan provisions in effect during the 5-year period applies to participants who could have been, but were not, in pay status before the 3-year period.

(4) In determining the lowest amount payable under the plan provisions during the 5-year period, consideration was given to the proper treatment of amendments adopted before the 5-year period that provided for automatic benefit increases during the 5-year period. Since the amendment provisions were in place at the beginning of the 5-year period, the PBGC has decided that automatic benefit increases scheduled during the fourth and fifth years preceding plan termination should be included in determining the lowest benefit under the plan provisions. However, automatic increases in the benefit formula during the 3-year period preceding termination are not taken into consideration since priority category 3 benefit rights are fixed no later than the beginning of the 3-year period. Automatic benefit increases are to be disregarded to the extent that the increase is greater for active participants than for those in pay status or if the benefit increase is only for active participants. This is because, by definition, the lowest benefit provided by the plan during the 5-year period can be no greater than one based on the benefit formula applicable to participants in pay status. These rules are set forth in § 2608.13(b)(5) of the final regulation.

(5) In determining the amount of the priority category 3 benefit of a participant who is eligible for a priority category 3 benefit because he or she could have received a benefit before the beginning of the 3-year period, it is necessary to make an adjustment for any differences between the normal form of annuity in effect at the beginning of the 3-year period and the normal form at that point in the 5-year period when the lowest benefit was in effect. Therefore, if the annuity benefit forms are different, § 2608.13(b)(3) requires that the benefits be compared after the differing form is converted to the normal annuity form at the beginning of the 3-year period, using plan factors. In the absence of plan factors, PBGC's factors set forth in Part 2609 of this chapter shall be used.

(6) In determining the lowest amount payable under the plan provisions during the 5-year period, it was unclear under the supplemental notice whether a plan that is less than five years old on the date of plan termination could have a priority category 3 benefit. If a long established plan were amended during the 5-year period to increase benefits, that increase would not increase the priority category 3 benefit. PBGC believes that participants in a plan that is established within five years of the date of plan termination should not be treated in a different manner than participants in a plan amended to increase benefits during that 5-year period. Therefore, the final regulation provides in § 2608.13(b)(3) that, if a plan is less than five years old on the date of plan termination, the lowest benefit in effect during the 5-year period is zero and the plan, therefore, has no priority category 3 benefits.

(7) A new § 2608.13(b)(6) has been added to clarify that a plan or an amendment is considered to be "in effect", for purposes of determining priority category 3 benefits, on the later of the effective date or the adoption date of the plan or amendment.

The rules discussed in items (1) and (3) through (5) are illustrated by the following examples:

Example 1. A plan provides for an early retirement benefit for participants who are 55 years of age and have 20 years of service, which benefit is payable for 10 years certain and thereafter for life ("a 10 C&C annuity"). The amount of the benefit is $10 per month for each year of service. Benefits are reduced ½ of 1% for each month that the benefit commencement date precedes the normal retirement date, which is age 65. On the date of plan termination, participant A is 63 years old and has 25 years of service. Therefore, A could have retired before the beginning of the 3-year period ending on the date of plan termination. Participant A's priority category 3 benefit would be a 10 C&C annuity of $154 per month: ($10×22)×70%. Years of service are determined as of three years before the date of plan termination, and the early retirement reduction of 30% is based on commencement of the benefit as of that date.

If, however, four years before the date of plan termination, the benefit formula was $8 per month for each year of service and the plan was then amended to increase the benefit formula to $10 per month for each year of service, A's priority category 3 benefit would be limited by the dollar amount in the lowest benefit formula in effect during the 5-year period to $123.20 per month: ($8×22)×70%.

Example 2. Plan provisions that were in effect five years before the date of plan termination provide for a 10 C&C annuity benefit payable to a participant who has reached the normal retirement age of 65 with 10 years of service. The monthly normal retirement annuity was $300 at the beginning of the 5-year period ending on the date of plan termination. Under the plan, however, the benefit formula for both active and retired participants would increase midway through each succeeding plan year by $10.

On the date of plan termination, Participant R is age 68, had earned 15 years of service, and had been retired for three years. Participant E is age 56, has 34 years of service, and is still employed. Only Participant R is eligible for a priority category 3 benefit. Participant E has sufficient service but has not met the age requirement for retirement. Since E could not have retired three years before plan termination, E does not have a priority category 3 benefit.

Under the plan provisions, the lowest benefit formula in effect during the 5-year period contained an automatic increase. Participant R's priority category 3 benefit would be a monthly annuity of $320. Although the benefit level would have increased to $350 by the date of plan termination, only increases during the fourth and fifth years before plan termination are included in the computation of the lowest benefit.

Example 3. Continuing with the plan and participants in Example 2, four years before termination the plan was amended to provide that a participant with 30 years of service could retire and receive an immediate unreduced monthly annuity. The normal retirement benefit was increased to $400 a month for participants retiring at age 65 and for previously retired participants. The 30-and-out pensioners would receive $500 a month until age 65 and $400 a month thereafter. Both R and E are eligible for priority category 3 benefits. Although the amendment cannot be used to increase the amount of the priority category 3 benefit because it was not in effect before the 5-year period, it is used to determine eligibility for a priority category 3 benefit.

Participant R's priority category 3 benefit would be $320 per month, as determined in the preceding example.

While E's eligibility for a priority category 3 benefit is determined under the plan as amended four years before termination, the amount of E's priority category 3 benefit is not determined on the basis of the amended $500/$400 benefit level. Rather, it is determined on the basis of the lowest annuity benefit in effect during the 5-year period, or $320 a month commencing at age 65. Therefore, E's priority category 3 benefit is the actuarial equivalent at age 53 of a monthly annuity of $320 payable at age 65.

Assume that an annuity payable at age 53 would be 40% of the benefit payable at age 65 on the basis of plan factors. E's priority category 3 benefit, therefore, is $128 a month ($320 × 40% = $128).

Priority Categories 4 through 6

Changes in the rules for priority categories 4 through 6 (§§ 2608.14 through 2608.16) have been made for clarification only. There are no substantive changes from the supplemental notice.

Subclasses

One comment received concerning subclasses, § 2608.17, was that the establishment of subclasses within a category is complex, could lead to capricious results, and should not be permitted. The PBGC does not agree that subclasses should not be allowed. There are many plans, most notably plans that were collectively bargained, that, prior to the Act, provided for allocation to classes based on length of service or other factors. The fact that Congress recognized and approved of these provisions is shown by section 4044(b)(6) of the Act, which provides for voluntary establishment of subclasses, subject to whatever rules the PBGC prescribes by regulation. The supplemental notice provided that subclasses would be allowed based specifically on "greater length of service, older age or on disability (or any combination thereof)." This final regulation makes no change in this respect.

Another comment requested the specific inclusion of a subclass based on seniority of service, provided the allocation did not increase or decrease total assets allocated to guaranteed benefits in any priority category or violate the anti-discrimination provisions of section 401 of the Code. The comment pointed out that such provisions are often found in collectively bargained plans and suggested that these provisions correspond to a subclass based on length of service. Seniority rules, however, are not necessarily based on length of service. For example, there may be job line seniority, departmental seniority, or plant seniority, none of which necessarily reflects length of service. Therefore, the PBGC has not changed the regulation in this respect.

The supplemental notice included a provision, § 2608.12(a), that required a reallocation of assets whenever allocation on the basis of the established subclasses shifted assets from nonguaranteed benefits to guaranteed benefits, thereby decreasing potential employer liability. Reallocation was also required when the subclasses shifted assets from guaranteed benefits to nonguaranteed benefits. Either could occur in priority categories 3 and 4, both of which can include basic-type benefits that exceed the guarantee limits. The reallocation requirement, however, did not apply to a plan that, on September 2, 1974, provided for subclasses based on longer service, older age, or disability, or a combination thereof, and continued to so provide.

The final regulation includes similar provisions, in §§ 2608.17 (b) and (c). It also includes a new provision, in § 2608.17(c), under which plans that provided for subclasses on September 2, 1974, but subsequently were amended to eliminate or revise those subclasses, will have 180 days from the date this regulation is published in the **Federal Register** during which to adopt amendments re-establishing the same subclasses. Plans that do so will not be subject to the reallocation requirement.

This final regulation is effective on March 1, 1981, and applies to any non-multiemployer plan for which a Notice of Intent to Terminate is filed on or after that date.

In consideration of the foregoing, Part 2608 of Chapter XXVI, Title 29, Code of Federal Regulations, is hereby revised as follows:

1. Part 2608 is recodified to reflect the creation of subparts and the renumbering of sections as follows:

PART 2608—ALLOCATION OF ASSETS IN NON-MULTIEMPLOYER PLANS

Subpart A—General

Sec.
2608.1 Purpose and scope.
2608.2 Definitions.
2608.3 General rule.
2608.4 Violations.

Subpart B—Allocation of Assets to Benefit Categories

2608.10 Manner of allocation.
2608.11 Priority category 1 benefits.
2608.12 Priority category 2 benefits.
2608.13 Priority category 3 benefits.
2608.14 Priority category 4 benefits.
2608.15 Priority category 5 benefits.
2608.16 Priority category 6 benefits.
2608.17 Subclasses.

Authority: Sections 4002(b)(3), 4044, Pub. L. 93-406, 88 Stat. 1004, 1025 (29 U.S.C. 1302(b)(3), 1344 (1976)), as amended by sections 403(1), 402(a)(7), Pub. L. 96-364, 94 Stat. 1208 (1980).

Subpart A—General

§ 2608.1 Purpose and scope.

Section 4044, of the Employee Retirement Income Security Act of 1974, as amended, contains rules for allocating a plan's assets when the plan terminates. These rules have been in effect since September 2, 1974, the date of enactment of the Act. This part interprets those rules and applies to any non-multiemployer plan for which a Notice of Intent to Terminate is filed on or after the effective date of this part.

§ 2608.2 Definitions.

For purposes of this part:

"Act" means the Employee Retirement Income Security Act of 1974 (29 U.S.C. § 1001 *et seq.* (1976)), *as amended by* the Multiemployer Pension Plan Amendments Act of 1980, Pub. L. No. 96-364, 94 Stat. 1208.

"Annuity" means a series of periodic payments to a participant or a surviving

beneficiary for a fixed or contingent period.

"Basic-type benefit" means a benefit that is guaranteed under the provisions of Part 2605 of this chapter, or would be if the guarantee limits in Part 2609 of this chapter did not apply.

"Code" means the Internal Revenue Code of 1954, as amended (26 U.S.C. §1 *et seq.* (1976)).

"Date of plan termination" means the date established under section 4048 of the Act.

"Expected retirement age" means the age determined in accordance with Subpart D of Part 2610 of this chapter when the participant has not elected, before the allocation date, an annuity starting date.

"Guaranteed benefit" means a benefit that is guaranteed under Part 2605 of this chapter.

"Irrevocable commitment" means an obligation by an insurer to pay benefits to a named plan participant or surviving beneficiary, if the obligation cannot be cancelled under the terms of the insurance contract (except for fraud or mistake) without the consent of the participant or beneficiary and is legally enforceable by the participant or beneficiary. An irrevocable commitment is considered to be made on its effective date.

"Mandatory employee contributions" means amounts contributed to the plan by a participant that are required as a condition of employment, as a condition of participation in the plan, or as a condition of obtaining benefits under the plan attributable to employer contributions.

"Nonbasic-type benefit" means any benefit provided by a plan other than a basic-type benefit.

"Nonforfeitable benefit" means, with respect to a plan, a benefit for which a participant has satisfied the conditions for entitlement under the plan or the requirements of the Act (other than submission of a formal application, retirement, completion of a required waiting period, or death in the case of a benefit that returns all or a portion of a participant's accumulated mandatory employee contributions upon the participant's death), whether or not the benefit may subsequently be reduced or suspended by a plan amendment, an occurrence of any condition, or operation of the Act or the Code. Benefits that become nonforfeitable solely as a result of the termination of a plan will be considered forfeitable.

"Non-multiemployer plan" means a pension plan described in section 4021(a) of the Act that is maintained by one trade or business (whether or not incorporated), or by more than one trade or business (whether or not incorporated), all of which are under common control within the meaning of Part 2612 of this chapter, or a plan maintained by more than one trade or business not under common control that is not a multiemployer plan as defined in section 4001(a)(3) of the Act.

"Notice of Sufficiency" means a notice issued by the PBGC that it has determined that plan assets are sufficient to discharge when due all obligations of the plan with respect to benefits in priority categories 1 through 4 after plan assets have been allocated to benefits in accordance with section 4044 of the Act and this part.

"PBGC"means the Pension Benefit Guaranty Corporation.

"Plan" means a defined benefit plan described in section 4021(a) of the Act.

"Plan administrator" means the plan administrator as defined in sections 4001 (a)(1) and 3(16) of the Act. For this purpose, the term "employer", as used in section 3(16)(B), is defined in section 3(5) of the Act.

"Priority categories" or "priority category" means the categories contained in sections 4044(a) (1) through (6) of the Act that establish the order in which plan assets are to be allocated.

"Voluntary employee contributions" means amounts contributed by an employee to a plan, pursuant to the provisions of the plan, that are not mandatory employee contributions.

§ 2608.3 General rule.

(a) *Asset allocation.* Upon the termination of a non-multiemployer plan, the plan administrator shall allocate the plan assets available to pay for benefits under the plan in the manner prescribed by this part. Plan assets available to pay for benefits include all plan assets (valued according to Part 2611 of this chapter) remaining after the subtraction of all liabilities, other liabilities for future benefit payments, paid or payable from plan assets under the provisions of the plan. Liabilities include expenses, fees and other administrative costs, and benefit payments due before the allocation date. Except as provided in § 2608.4(b), an irrevocable commitment by an insurer to pay a benefit, which commitment is in effect on the date of the asset allocation, is not considered a plan asset, and a benefit payable under such a commitment is excluded from the allocation process.

(b) *Allocation date.* For plans that close out pursuant to a Notice of Sufficiency under the provisions of Subpart C of Part 2615 of this chapter, assets shall be allocated as of the date plan assets are to be distributed. For other plans, assets shall be allocated as of the date of plan termination.

§ 2608.4 Violations.

(a) *General.* A plan administrator violates the Act if plan assets are allocated upon termination in a manner other than that prescribed in section 4044 of the Act and this part, except as may be required to prevent disqualification of the plan under the Code and regulations thereunder.

(b) *Distributions in anticipation of termination.* A distribution, transfer, or allocation of assets to a participant or to an insurance company for the benefit of a participant, made in anticipation of plan termination, is considered to be an allocation of plan assets upon termination, and is covered by paragraph (a) of this section. In determining whether a distribution, transfer, or allocation of assets has been made in anticipation of plan termination PBGC will consider all of the facts and circumstances including—

(1) Any change in funding or operation procedures;

(2) Past practice with regard to employee requests for forms of distribution;

(3) Whether the distribution is consistent with plan provisions; and

(4) Whether an annuity contract that provides for a cutback based on the guarantee limits in Part 2609 of this chapter could have been purchased from an insurance company.

Subpart B—Allocation of Assets to Benefit Categories

§ 2608.10 Manner of allocation.

(a) *General.* The plan administrator shall allocate plan assets available to pay for benefits under the plan using the rules and procedures set forth in paragraphs (b) through (f) of this section, or any other procedure that results in each participant (or beneficiary) receiving the same benefits he or she would receive if the procedures in paragraphs (b) through (f) were followed.

(b) *Assigning benefits.* The basic-type and nonbasic-type benefits payable with respect to each participant in a terminated plan shall be assigned to one or more priority categories in accordance with §§ 2608.11 through 2608.16. Benefits derived from voluntary employee contributions, which are assigned only to priority category 1, are treated, under section 204(c)(4) of the Act and section 411(d)(5) of the Code, as benefits under a separate plan. The amount of a benefit payable with respect to each participant shall be

determined as of the date of plan termination.

(c) *Valuing benefits.* The value of a participant's benefit or benefits assigned to each priority category shall be determined, as of the allocation date, in accordance with the provisions of Part 2610 of this chapter. The value of each participant's basic-type benefit or benefits in a priority category shall be reduced by the value of the participant's benefit of the same type that is assigned to a higher priority category. Except as provided in the next two sentences, the same procedure shall be followed for nonbasic-type benefits. The value of a participant's nonbasic-type benefits in priority categories 3, 5, and 6 shall not be reduced by the value of the participant's nonbasic-type benefit assigned to priority category 2. Benefits in priority category 1 shall neither be included in nor subtracted from lower priority categories. In no event shall a benefit assigned to a priority category be valued at less than zero.

(d) *Allocating assets to priority categories.* Plan assets available to pay for benefits under the plan shall be allocated to each priority category in succession, beginning with priority category 1. If the plan has sufficient assets to pay for all benefits in a priority category, the remaining assets shall then be allocated to the next lower priority category. This process shall be repeated until all benefits in priority categories 1 through 6 have been provided or until all available plan assets have been allocated. If the plan has assets remaining after satisfaction of all benefits in priority categories 1 through 6, those residual assets shall be allocated in accordance with section 4044(d) of the Act.

(e) *Allocating assets within priority categories.* Except for priority category 5, if the plan assets available for allocation to any priorty category are insufficient to pay for all benefits in that priority category, those assets shall be distributed among the participants according to the ratio that the value of each participant's benefit or benefits in that priority category bears to the total value of all benefits in that priority category. If the plan assets available for allocation to priority category 5 are insufficient to pay for all benefits in that category, the assets shall be allocated, first, to the value of each participant's nonforfeitable benefits that would be assigned to priority category 5 under § 2608.15 after reduction for the value benefits assigned to higher priority categories, based only on the provisions of the plan in effect at the beginning of the 5-year period immediately preceding the date of plan termination. If assets available for allocation to priority category 5 are sufficient to fully satisfy the value of those benefits, assets shall then be allocated to the value of the benefit increase under the oldest amendment during the 5-year period immediately preceding the date of plan termination, reduced by the value of benefits assigned to higher priority categories (including higher subcategories in priority category 5). This allocation procedure shall be repeated for each succeeding plan amendment within the 5-year period until all plan assets available for allocation have been exhausted. If an amendment decreased benefits, amounts previously allocated with respect to each participant in excess of the value of the reduced benefit shall be reduced accordingly. In the subcategory in which assets are exhausted, the assets shall be distributed among the participants according to the ratio that the value of each participant's benefit or benefits in that subcategory bears to the total value of all benefits in that subcategory.

(f) *Applying assets to basic-type or nonbasic-type benefits within priority categories.* The assets allocated to participant's benefit or benefits within each priority category shall first be applied to pay for the participant's basic-type benefit or benefits assigned to that priority category. Any assets allocated on behalf of that participant remaining after satisfying the participant's basic-type benefit or benefits in that priority category shall then be applied to pay for the participant's nonbasic-type benefit or benefits assigned to that priority category. If the assets allocable to a participant's basic-type benefit or benefits in all priority categories are insufficient to pay for all of the participant's guaranteed benefits, the assets allocated to that participant's benefit in priority category 4 shall be applied, first, to the guaranteed portion of the participant's benefit in priority category 4. The remaining assets allocated to that participant's benefit in priority category 4, if any, shall be applied to the nonguaranteed portion of the participant's benefit.

(g) *Allocation to established subclasses.* Notwithstanding paragraphs (e) and (f) of this section, the assets of a plan that has established subclasses within any priority category may be allocated to the plan's subclasses in accordance with the rules set forth in § 2608.17.

§ 2608.11 Priority category 1 benefits.

(a) *Definition.* the benefits in priority category 1 are participants' accrued benefits derived from voluntary employee contributions.

(b) *Assigning benefits.* Absent an election described in the next sentence, the benefit assigned to priority category 1 with respect to each participant is the balance of the separate account maintained for the participant's voluntary contributions. If a participant has elected to receive an annuity in lieu of his or her account balance, the benefit assigned to priority category 1 with respect to that participant is the present value of that annuity.

§ 2608.12 Priority category 2 benefits.

(a) *Definition.* the benefits in priority category 2 are participants' accrued benefits derived from mandatory employee contributions, whether to be paid as an annuity benefit with a pre-retirement death benefit that returns mandatory employee contributions or, if a participant so elects under the terms of the plan and Part 2605 of this chapter, as a lump sum benefit. Benefits are primarily basic-type benefits although nonbasic-type benefits may also be included as follows:

(1) *Basic-type benefits.* The basic-type benefit in priority category 2 with respect to each participant is the sum of the values of the annuity benefit and the pre-retirement death benefit determined under the provisions of Paragraph (c)(1) of this section.

(2) *Non-basic-type benefits.* If a participant elects to receive a lump sum benefit and if the value of the lump sum benefit exceeds the value of the basic-type benefit determined with respect to the participant, the excess is a nonbasic-type benefit. There is no nonbasic-type benefit in priority category 2 for a participant who does not elect to receive a lump sum benefit.

(b) *Conversion of mandatory employee contributions to an annuity benefit.* Subject to the limitation set forth in Paragraph (b)(3) of this section, a participant's accumulated mandatory employee contributions shall be converted to an annuity form of benefit payable at the normal retirement age or, if the plan provides for early retirement, at the expected retirement age. The conversion shall be made using the interest rates and factors specified in Paragraph (b)(2) of this section. The form of the annuity benefit (*e.g.*, straight life annuity, joint and survivor annuity, cash refund annuity, etc.) is the form that the participant or beneficiary is entitled to on the date of plan termination. If the participant does not have a nonforfeitable right to a benefit,

other than the return of his or her mandatory contributions in a lump sum, the annuity form of benefit is the form the participant would be entitled to if the participant had a nonforfeitable right to an annuity benefit under the plan on the date of plan termination.

(1) *Accumulated mandatory employee contributions.* Subject to any addition for the cost of ancillary benefits plus interest, as provided in the following sentence, the amount of the accumulated mandatory employee contributions for each participant is the participant's total nonforfeitable mandatory employee contributions remaining in the plan on the date of plan termination plus interest, if any, under the plan provisions. Mandatory employee contributions, if any, used after the effective date of the minimum vesting standards in section 203 of the Act and section 411 of the Code for costs or to provide ancillary benefits such as life insurance or health insurance, plus interest under the plan provisions, shall be added to the contributions that remain in the plan to determine the accumulated mandatory employee contributions.

(2) *Interest rates and conversion factors.* The interest rates and conversion factors used in the administration of the plan shall be used to convert a participant's accumulated mandatory contributions to the annuity form of benefit. In the absence of plan rules and factors, the interest rates and conversion factors established by the Internal Revenue Service for allocation of accrued benefits between employer and employee contributions under the provisions of section 204(c) of the Act and section 411(c) of the Code shall be used.

(3) *Minimum accured benefit.* The annuity benefit derived from mandatory employee contributions may not be less than the minimum accured benefit under the provisions of section 204(c) of the Act and section 411(c) of the Code.

(c) *Assigning benefits.* If a participant or beneficiary elects to receive a lump sum benefit, his or her benefit shall be determined under paragraph (c)(2) of this section. Otherwise, the benefits with respect to a participant shall be determined under paragraph (c)(1) of this section.

(1) *Annuity benefit and pre-retirement death benefit.* The annuity benefit and the pre-retirement death benefit assigned to priority category 2 with respect to a participant are determined as follows:

(i) The annuity benefit is the benefit computed under Paragraph (b) of this section.

(ii) Except for adjustments necessary to meet the minimum lump sum requirements as hereafter provided, the pre-retirement death benefit is the benefit under the plan that returns all or a portion of the participant's mandatory employee contributions upon the death of the participant before retirement. A benefit that became payable in a single installment (or substantially so) because the participant died before the date of plan termination is a liability of the plan within the meaning of § 2608.3(a) and should not be assigned to priority category 2. A benefit payable upon a participant's death that is included in the annuity form of the benefit derived from mandatory employee contributions (*e.g.*, the survivor's portion of a joint and survivor annuity or the cash refund portion of a cash refund annuity) is assigned to priority category 2 as part of the annuity benefit under Paragraph (c)(1)(i) of this section and is not assigned as a death benefit. The pre-retirement death benefit may not be less than the minimum lump sum required upon withdrawal of mandatory employee contributions by the Internal Revenue Service under section 204(c) of the Act and section 411(c) of the Code.

(2) *Lump sum benefit.* Except for adjustments necessary to meet the minimum lump sum requirements as hereafter provided, if a participant elects to receive a lump sum benefit under the provisions of the plan, the amount of the benefit that is assigned to priority category 2 with respect to the participant, is—

(i) The combined value of the annuity benefit and the pre-retirement death benefit determined according to Paragraph (c)(1) (which constitutes the basic-type benefit) plus

(ii) The amount, if any, of the participant's accumulated mandatory employee contributions that exceeds the combined value of the annuity benefit and the pre-retirement death benefit (which constitutes the non-basic-type benefit), but not more than

(iii) The amount of the participant's accumulated mandatory contributions.

For purposes of this Paragraph (c)(2), accumulated mandatory contributions means the contributions with interest, if any, payable under plan provisions to the participant or beneficiary on termination of the plan or, in the absence of such provisions, the amount that is payable if the participant withdrew his or her contributions on the date of plan termination. The lump sum benefit may not be less than the minimum lump required upon withdrawal of mandatory employee contributions by the Internal Revenue Service under section 204(c) of the Act and section 411(c) of the Code.

§ 2608.13 Priority category 3 benefits.

(a) *Definition.* The benefits in priority category 3 are those annuity benefits that were in pay status before the beginning of the 3-year period ending on the date of plan termination, and those annuity benefits that would have been in pay status for participants who were eligible to receive annuity benefits before the beginning of the 3-year period ending on the date of plan termination. Benefits are primarily basic-type benefits, although non-basic-type benefits will be included if any portion of a participant's priority category 3 benefit is not guaranteeable under the provisions of Part 2605 of this chapter.

(b) *Assigning benefits.* The annuity benefit that is assigned to priority category 3 with respect to a participant is the lowest annuity that was paid or payable under the rules in Paragraphs (b)(2) through (b)(6) of this section.

(1) *Eligibility of participants and beneficiaries.* A participant or beneficiary is eligible for a priority category 3 benefit if either of the following applies:

(i) The participant's (or beneficiary's) benefit was in pay status before the beginning of the 3-year period ending on the date of plan termination.

(ii) The participant was eligible for an annuity and his or her benefit could have been in pay status before the beginning of the 3-year period ending on the date of plan termination. Whether a participant was eligible to receive an annuity before the beginning of the 3-year period shall be determined using the plan provisions in effect on the day before the beginning of the 3-year period.

(iii) If a participant described in either of the preceding two paragraphs died during the 3-year period ending on the date of the plan termination and his or her beneficiary is entitled to an annuity, the beneficiary is eligible for a priority category 3 benefit.

(2) *Plan provisions governing determination of benefit.* In determining the amount of the priority category 3 annuity with respect to a participant, the plan administrator shall use the participant's age, service, actual or expected retirement age, and other relevant facts as of the following dates:

(i) Except as provided in the next sentence, for a participant or beneficiary whose benefit was in pay status before the beginning of the 3-year period ending on the date of plan termination, the priority category 3 benefit shall be determined according to plan provisions in effect on the date the benefit

commenced. Benefit increases that became effective before the beginning of the 5-year period ending on the date of plan termination, including automatic benefit increases after that date to the extent provided in Paragraph (b)(5) of this section, shall be included in determining the priority category 3 benefit. The form of annuity elected by a retiree is considered the normal form of annuity for that participant.

(ii) For a participant who was eligible to receive an annuity before the beginning of the 3-year period ending on the date of plan termination but whose benefit was not in pay status, the priority category 3 benefit and the normal form of annuity shall be determined according to plan provisions in effect on the day before the beginning of the 3-year period ending on the date of plan termination as if the benefit had commenced at that time.

(3) *General benefit limitations.* The general benefit limitation is determined as follows:

(i) If a participant's benefit was in pay status before the beginning of the 3-year period, the benefit assigned to priority category 3 with respect to that participant is limited to the lesser of the lowest annuity benefit in pay status during the 3-year period ending on the date of plan terminations and the lowest annuity benefit payable under the plan provisions at any time during the 5-year period ending on the date of plan termination.

(ii) Unless a benefit was in pay status before the beginning of the 3-year period ending on the date of plan termination, the benefit assigned to priority category 3 with respect to a participant is limited to the lowest annuity benefit payable under the plan provisions, including any reduction for early retirement, at any time during the 5-year period ending on the date of plan termination. If the annuity form of benefit under a formula that appears to produce the lowest benefit differs from the normal annuity form for the participant under Paragraph (b)(2)(ii) of this section, the benefits shall be compared after the differing form is converted to the normal annuity form, using plan factors. In the absence of plan factors, the factors in Part 2609 of this chapter shall be used.

(iii) For purposes of this paragraph, if a terminating plan has been in effect less than five years on the date of plan termination, computed in accordance with Paragraph (b)(6) of this section, the lowest annuity benefit under the plan during the 5-year period ending on the date of plan termination is zero. If the plan is a successor to a previously established defined benefit plan within the meaning of section 4021(a) of the Act, the time it has been in effect will include the time the predecessor plan was in effect.

(4) *Determination of beneficiary's benefit.* If a beneficiary is eligible for a priority category 3 benefit because of the death of a participant during the 3-year period ending on the date of plan termination, the benefit assigned to priority category 3 for the beneficiary shall be determined as if the participant had died the day before the 3-year period began.

(5) *Automatic benefit increases.* If plan provisions adopted and effective before the beginning of the 5-year period ending on the date of plan termination provided for automatic increases in the benefit formula for both active participants and those in pay status or for participants in pay status only, the lowest annuity benefit payable during the 5-year period ending on the date of plan termination determined under Paragraph (b)(3) of this section includes the automatic increases scheduled during the fourth and fifth years preceding termination, subject to the following restrictions. Benefit increases for active participants in excess of the increases for retirees shall not be taken into account.

(6) *Computation of time periods.* For purposes of this section, a plan or amendment is "in effect" on the later of the date on which it is adopted or the date it becomes effective.

§ 2608.14 Priority category 4 benefits.

The benefits assigned to priority category 4 are participants' basic-type benefits that do not exceed the guarantee limits set forth in Part 2609 of this chapter, except as provided in the next sentence. The benefit assigned to priority category 4 with respect to a participant is not limited by the aggregate benefits limitations set forth in § 2609.3(b) for individuals who are participants in more than one plan or by the phase-in limitation applicable to substantial owners set forth in § 2609.7.

§ 2608.15 Priority category 5 benefits.

The benefits assigned to priority category 5 with respect to each participant are all of the participant's nonforfeitable benefits under the plan.

§ 2608.16 Priority category 6 benefits.

The benefits assigned to priority category 6 with respect to each participant are all of the participant's benefits under the plan, whether forfeitable or nonforfeitable.

§ 2608.17 Subclasses.

(a) *General rule.* A plan may establish one or more subclasses within any priority category, other than priority categories 1 and 2, which subclasses will govern the allocation of assets within that priority category. The subclasses may be based only on a participant's longer service, older age, or disability, or any combination thereof.

(b) *Limitation.* Except as provided in Paragraph (c) of this section, whenever the allocation within a priority category on the basis of the subclasses established by the plan increases or decreases the cumulative amount of assets that otherwise would be allocated to guaranteed benefits, the assets so shifted shall be reallocated to other participant's benefits within the priority category in accordance with the subclasses.

(c) *Exception for subclasses in effect on September 2, 1974.* A plan administrator may allocate assets to subclasses within any priority category, other than priority categories 1 and 2, without regard to the limitation in Paragraph (b) of this section if, on September 2, 1974, the plan provided for allocation of plan assets upon termination of the plan based on a participant's longer service, older age, or disability, or any combination thereof, and—

(1) Such provisions are still in effect; or

(2) The plan, if subsequently amended to modify or remove those subclasses, is re-amended to re-establish the same subclasses on or before July 28, 1981.

(d) *Discrimination under Internal Revenue Code.* Notwithstanding the provisions of Paragraphs (a) through (c) of this section, allocation of assets to subclasses established under this section is permitted only to the extent that the allocation does not result in discrimination prohibited under the Code and regulations thereunder.

Effective date. This regulation is effective on March 1, 1981.

Issued at Washington, D.C., this 19th day of January, 1981.

Ray Marshall,

Chairman, Board of Directors Pension Benefit Guaranty Corporation.

Issued on the date set forth above pursuant to a resolution of the Board of Directors approving this regulation and authorizing its Chairman to issue same.

Henry Rose,

Secretary, Pension Benefit Guaranty Corporation.

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Part VI

Pension Benefit Guaranty Corporation

Valuation of Plan Benefits in Non-Multi-Employee Plans; Interim Rule With Requests for Comments

PENSION BENEFIT GUARANTY CORPORATION

29 CFR Part 2610

Valuation of Plan Benefits in Non-Multi-Employer Plans

AGENCY: Pension Benefit Guaranty Corporation.

ACTION: Final Rule; Interim Rule with Request for Comments.

SUMMARY: This regulation sets forth the final and interim rules for valuing benefits in terminating non-multiemployer pension plans covered by Title IV of the Employee Retirement Income Security Act of 1974, *as amended by* the Multiemployer Pension Plan Amendments Act of 1980. This regulation is needed to enable plan administrators to value plan benefits upon the termination of a plan. This valuation is required so that the plan administrator can comply with the rules and procedures set forth in the Pension Benefit Guaranty Corporation's regulations on the Determination of Plan Sufficiency and Termination of Sufficient Plans and the Allocation of Assets (both of which are published in today's **Federal Register.**)

Heretofore, the Pension Benefit Guaranty Corporation's interim regulation on valuing plan benefits applied only to plans that did not receive a Notice of Sufficiency. That interim regulation is superseded by this regulation, and this regulation provides valuation rules both for plans that close out under a Notice of Sufficiency and for plans that do not.

This regulation is published as a final rule except for Subpart D, which is published in interim form with a request for public comments. Subpart D sets forth the method for calculating an expected retirement age in order to value early retirement benefits.

DATES: Final rule effective on March 1, 1981. Interim rule (Subpart D) effective March 1, 1981. Comments on the interim rule must be received on or before March 30, 1981.

ADDRESSES: Comments should be sent to: Office of the General Counsel, Pension Benefit Guaranty Corporation, Room 7200, 2020 K Street, N.W., Washington, D.C. 20006. Copies of written comments will be available for examination in: Pension Benefit Guaranty Corporation, Public Reference Room, Suite 7000, 2020 K Street, N.W., Washington, D.C., on weekdays between the hours of 9 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT:

Ms. Nina R. Hawes, Staff Attorney, Office of the General Counsel, Pension Benefit Guaranty Corporation, 2020 K Street, N.W., Washington, D.C. 20006; 202-254-3010.

SUPPLEMENTARY INFORMATION:

Overview

On December 12, 1975, the Pension Benefit Guaranty Corporation (PBGC) published a notice of proposed rulemaking (40 FR 57982), which contained proposed rules for valuing plan benefits in insufficient terminating pension plans, *i.e.*, plans whose assets are insufficient to pay all guaranteed benefits.

On November 3, 1976, the PBGC issued an interim regulation and a supplemental notice of proposed rulemaking dealing with the valuation of plan benefits (41 FR 48484 and 41 FR 48498). The interim regulation set forth the methods to be used to value plan benefits in insufficient plans that terminated before the proposed regulation was made final. The supplemental proposal contained the same valuation rules for insufficient plans, as well as rules for computing the value of benefits in sufficient terminating plans.

The PBGC is now issuing a final regulation which contains the rules for valuing benefits in both types of terminating pension plans that are not multiemployer plans. Because the Multiemployer Pension Plan Amendments Act of 1980 established a new insurance program for multiemployer plans, the scope of this regulation is restricted to non-multiemployer plans. Non-multiemployer plans are plans to which only one employer (as defined in section 4001(b) of ERISA) contributes and plans to which more than one employer contributes that are not multiemployer plans as defined in section 4001(a)(3) of ERISA. This regulation supersedes the interim regulation and applies to all non-multiemployer plans that submit a Notice of Intent to Terminate, or with respect to which a termination proceeding under section 4042 of ERISA is commenced, on or after the effective date of this regulation. Hereinafter, "plans" will refer only to non-multiemployer plans.

One comment the PBGC received on the proposed regulation expressed a concern about vagueness in the regulation which would prevent a plan administrator from being able to determine precisely the value of the plan benefits. One example cited in the comment was the requirement that, if PBGC was going to provide an early retirement benefit for a sufficient plan, the value for this benefit would have to be computed by PBGC. This would prevent the plan administrator from knowing the total value of benefits at the time the Notice of Intent to Terminate is submitted. This regulation provides an interim rule which is to be used to determine expected retirement ages which are used to calculate the value of early retirement benefits, so that the plan administrator can calculate this value without the assistance of PBGC. In addition, the entire regulation has been rewritten and restructured to provide clearer rules and methods of computation wherever possible.

The final rule is divided into four subparts. Subpart A describes the coverage of the regulation and contains the general definitions which are applicable to all covered terminating plans. Subpart B deals with plans which are closing out in the private sector, *e.g.*, by the purchase of annuities from an insurance company, after receiving a Notice of Sufficiency from BPGC pursuant to the new plan sufficiency regulation. (These plans are designated as "non-trusteed plans.") Subpart C contains rules for valuing benefits in plans which are closing out after being placed into trusteeship by PBGC. (These plans are designated as "Trusteed plans".) Finally, Subpart D, an interim rule, sets forth the method for determining the expected retirement age used to value early retirement benefits for trusteed plans and, in certain cases, for non-trusteed plans.

This regulation contains some new terminology. Under the interim regulation and the proposed regulation, plans were categorized as either "sufficient" or "insufficient". Under this regulation, they are described as either "non-trusteed" or "trusteed". The reason for this change is the new procedure for identifying and closing out "sufficient" plans set forth in PBGC's regulation on the Determination of Plan Sufficiency and Termination of Sufficient Plans, being published today (the "Sufficiency regulation"). This terminology has no relation to whether the plan was funded through a trust fund (commonly called a "trusteed" plan), or through an insurance contract (an "insured" plan).

Under the Sufficiency regulation, at the early stages of the case-processing procedure, the PBGC will be able to classify some plans as either sufficient or clearly insufficient. However, most plans will not fall into either category.

Plans which are initially determined to be sufficient will be issued a Notice of Sufficiency and will then close out by distributing their assets in accordance with Subpart C of the Sufficiency

regulation. They will not be placed into trusteeship. Plans which are initially determined to be clearly insufficient will be issued a Notice of Inability to Determine Sufficiency and placed into trusteeship by PBGC.

Plan administrators of all other plans will be required to demonstrate sufficiency by obtaining a qualifying bid from a private insurer which provides for all plan benefits through priority category 4 to be paid as annuities, except for certain early retirement benefits, if any, which are to be provided by PBGC. Those early retirement benefits are to be valued under § 2610.46. If benefits are to be provided by a method other than by purchasing an annuity for an insurer, *e.g.*, a lump sum, distribution or payments from a wasting trust, the value of those benefits will be determined as though they were distributed in a lump sum on the proposed date of distribution. The valuation rules in Subpart C of this regulation may be used as guidance in estimating the value of any lump sum benefits to be submitted with a Notice of Intent to Terminate.

Those plans that demonstrate they have adequate assets to provide all benefits in priority categories 1 through at least 4 as of the proposed date of distribution, will be issued a Notice of Sufficiency and will then close out by purchasing annuities pursuant to the bid or distributing the assets. If PBGC determines that plan assets are not adequate to provide all the benefits in priority categories 1 through 4 as of the proposed date of distribution, the plan will be issued a Notice of Inability to Determine Sufficiency and placed into trusteeship by PBGC.

Situations may arise, however, where a plan that has received a Notice of Sufficiency is unable to provide all the benefits in priority categories 1 through 4 on the distribution date because, for example, of a decrease in the value of plan assets. In this event, PBGC will withdraw the Notice of Sufficiency and place the plan into trusteeship. The plan will then be a trusteed plan and the benefits valued under Subpart C.

Given this procedure and the situations that can arise in the termination process, it is not possible to cast rules in terms of "sufficient" or "insufficient" plans. For this reason, this regulation refers to terminating plans as either "non-trusteed" or "trusteed" plans. Non-trusteed plans are those that close out in the private sector, and trusteed plans are those that do not. As can be seen from the foregoing description of that rule, the valuation date for plans that are closing out in the private sector, *i.e.*, non-trusteed plans, is the date of distribution. For trusteed plans the valuation date continues to be the date of plan termination.

Subpart A—General

Section 2610.2 sets forth the general definitions which are used in the other three subparts. These definitions have not been substantially changed from those which were contained in the proposed and interim regulations. One new term, non-multiemployer plan, is defined, as described above.

Subpart B—Non-Trusteed Plans

General

Subpart B contains the valuation rules for plan administrators to use to value benefits in non-trusteed plans. In general, these are the rules that were set forth in the supplemental proposal, although some of the rule have been expanded and clarified to provide better guidance. This subpart provides valuation rules for benefits payable as annuities, lump sums payable in lieu of annuities, the withdrawal of employee contributions and other lump sum benefits. In addition, this subpart prescribes the form of annuity to be valued.

Annuities

Under the Sufficiency regulation, the plan administrator of a non-trusteed plan must obtain a qualifying bid from an insurer for providing all benefits to be paid as annuities. Section 2610.23 of the final regulation provides that the value of a benefit to be paid as an annuity, including a disability benefit, is the cost of that annuity under the qualifying bid obtained from an insurer. Since an insurer is going to assume the responsibility for making benefit payments, the PBGC believes it is appropriate to use the price charged by the insurer as the value of the benefit.

Section 2610.24 prescribes the form of annuity that is to be valued when there are optional annuity forms under the plan or when a participant or beneficiary dies between the date of termination and the date of distribution. In general, the form to be valued is (1) the normal form payable under the plan, (2) an optional form for which the participant has made a valid election under the terms of the plan pursuant to § 2615.4(c), or (3) the form being paid to a participant in pay status.

The regulation also contains special rules for valuing early retirement annuities. When the annuity starting date is known before the distribution date (either because the participant has already started receiving benefit payments or has already selected a retirement date), there should be no special problem in obtaining a bid from an insurer to provide the benefits, and thus the normal rule in § 2610.23 applies (§ 2610.25(a)). However, when the annuity starting date is not known, there may be problems that make it impossible or inappropriate to value the benefits by this method.

Subpart D of Part 2615 provides that, if the plan administrator cannot obtain a qualifying bid which includes all the early retirement benefits under the plan for which the annuity starting date is unknown and which reasonably reflects the probability of retirement at different dates between the earliest date the participant is eligible to start receiving benefits and his or her normal retirement date, then the plan administrator may arrange for PBGC to provide these benefits. In this event, the plan administrator shall value all the early retirement benefits for which the starting date is unknown under §2610.23(b), using the early retirement valuation rule in § 2610.46 of Subpart C and the rules for determining the expected retirement age in Subpart D. All early retirement benefits for which the annuity starting date is known shall be valued under the qualifying bid (§ 2610.25(a)). If the plan administrator does not have PBGC provide the early retirement benefits for which the annuity starting date is unknown, then these benefits will be valued under the qualifying bid (§ 2610.25(b)(2)). Although this rule permits the plan administrator to value certain benefits under a bid that does not reasonably reflect probable retirement dates, the PBGC does not wish to preclude a plan administrator from taking such a bid if doing so would result in a lower overall cost to the plan than if PBGC provided the early retirement benefits.

Lump Sum Benefits Payable in Lieu of Annuities

Under certain circumstances set out in the Sufficiency regulation (§2615.4(b)) and in this regulation (§ 2610.26), an annuity benefit may be paid as a single lump sum or in another form, such as payment from a wasting trust, rather than as an annuity. This may occur, for example, when the present value of a participant's benefit is $1,750 or less, when the plan allows an annuity to be paid as a lump sum and the participant has chosen the lump sum option, or when the participant chooses to have his or her benefit paid from a wasting trust. Section 2610.26 of this regulation provides that the value of a lump sum or other benefit paid in lieu of an annuity is equal to the present value of the normal annuity form payable under the plan at

normal retirement age. The normal annuity form is the form payable absent an election by the participant. The present value is determined using reasonable actuarial assumptions. If the PBGC determines that the assumptions used are not reasonable, the PBGC may re-value the benefit (§ 2610.26(b)). Section 2610.26(b) also contains a list of interest assumptions that the PBGC would normally consider reasonable. There is no listing of acceptable mortality assumptions, however, because of the current uncertainty as to the legality under Title VII of the Civil Rights Act of 1964 of a plan sponsor using sex-based mortality tables.

Under the proposed regulation, the value of a lump sum payable in lieu of an annuity was determined as of the date of plan termination and interest was not credited from the date of termination to the date of distribution. One comment stated that this was unfair since interest was taken into account in valuing an annuity benefit to be purchased at the date of distribution. The final regulation corrects this disparity by providing that benefits payable as lump sums are valued as of the date of distribution, the same as annuities.

Under the proposed rule, the amount of a lump sum payable in lieu of an annuity could not be less than the present value of the annuity calculated using PBGC's interest and mortality assumptions. Further, the interest rate was also limited and could not be less than the interest rate prescribed under § 204(c) of ERISA. The PBGC feels that these minimums are no longer necessary because, as previously mentioned, the final regulation provides that PBGC reserves the right to review the reasonableness of the actuarial assumptions used and to re-value any benefits that it determines were valued using unreasonable assumptions.

Withdrawal of Employee Contributions

Some plans allow the withdrawal of mandatory employee contributions as a single installment in lieu of the benefits derived from those contributions. These lump sum amounts are valued in accordance with § 2610.27. Their value is the amount of the employee contributions at the date of plan termination, including interest to that date payable at the greater of the rate provided under the plan, if any, or the rate required under § 204(c) of ERISA or § 411(c) of the Internal Revenue Code. In addition, interest (at a reasonable rate) is to be credited from the date of plan termination to the date of distribution. If payments, which were derived, at least in part, from mandatory employee contributions, have been made to the participant between the date of plan termination and the date of distribution, the amount of the lump sum as of the date of distribution is adjusted by subtracting the amount of those payments that is attributable to mandatory employee contributions, and interest thereon.

Other Lump Sum Benefits

If a participant or beneficiary is entitled under the plan to a lump sum benefit (§ 2610.28) that is not a benefit payable in lieu of an annuity or a benefit that returns employee contributions, but is a benefit such as a one-payment severance benefit or funeral payment, the value of the benefit is either (1) the value under the qualifying bid, or (2) if the value of the benefit is to be paid at the date of distribution, the present value of the benefit determined using reasonable actuarial assumptions. The actuarial assumptions are subject to review and adjustment by PBGC.

Subpart C—Trusteed Plans

General

Subpart C sets out the rules for valuing guaranteed benefits in plans which have been or will be placed into trusteeship by PBGC. As explained above, this may include plans that originally received a Notice of Sufficiency but were subsequently unable to provide all benefits payable under the Notice of Sufficiency on the proposed date of distribution. Because PBGC must calculate employer liability with respect to such plans and because ERISA requires that "the current value of the plan's benfits guaranteed under this title [Title IV] as of the date of termination" be used to calculate employer liability (section 4062(b)(1)(A) of ERISA), guaranteed benefits under trusteed plans are valued as of the date of plan termination. Benefits are valued by using PBGC interest rates and factors and mortality tables in effect on the date of plan termination. These rates and tables are contained in Appendices A and B to this part.

Subpart C sets forth specific actuarial formulas the plan administrator may use to determine the current (present) value of different benefits. The different benefits are divided into five categories—immediate annuities, deferred annuities, early retirement benefits, death benefits, and withdrawal of employee contributions—and are addressed in §§ 2610.44–2610.48 respectively. Section 2610.42 describes and defines the actuarial symbols and commutation symbols used in the actuarial formulas. Finally, § 2610.43 provided that benefits are valued using the PBGC interest and mortality rates in effect on the date of plan termination. This section also provides that the plan administrator may value benefits by using any other formula or approximation that is at least as accurate as the corresponding formula or approximation set forth in this regulation.

Immediate Annuities

Section 2610.44 contains the equations for valuing various forms of annuities that are payable immediately as of the date of plan termination. These equations are substantially the same as those in the interim regulation, however two equations have been eliminated and several have been added. The equations for a life annuity payable annually and an annuity certain payable annually are eliminated because they are the same as the equations for such annuities payable periodically with a period of 1 (§ 2610.44(c) and (d)).

Three new forms of annuities are added as follows:

(1) Annuity certain and joint thereafter, § 2610.44(j), is an annuity payable with respect to more than one person, and payments cease at the later of (a) the death of the participant or the beneficiary, or (b) the passage of a specified period of time.

(2) Annuity certain and joint and survivor (joint basis) thereafter, § 2610.44(k), is similar to the annuity described in (1) above, except that the payments continue to either survivor in an equal or reduced amount.

(3) Annuity certain and joint and survivor (contingent basis) thereafter, § 2610.44(1), is similar to the annuity described in (1) above, except that it is payable in the original amount until the later of (a) the death of the participant, or (b) the passage of a specified period of time, and, if the beneficiary survives the participant, payments continue to the beneficiary at an equal or reduced amount until his or her death.

The cash refund annuity and installment refund annuity have been moved from the death benefit section to the immediate annuity section, § 2610.44, because they are immediate annuities although they also have a death benefit feature. The cash refund annuity is re-named a single life cash refund annuity and is set forth in § 2610.44(m). The installment refund annuity is set forth in § 2610.44(n).

In general, all immediate annuities which are not being received as disability benefits will be valued using the mortality rates for healthy lives given in Tables I and II of Appendix A. Disability benefits which are not being

received in connection with Social Security disability benefits will be valued using the mortality rates for disabled lives given in Tables III and IV of Appendix A. Disability benefits which do depend on the receipt of Social Security disability benefits will be valued using the mortality rates for disabled lives given in Tables V and VI of Appendix A. The specific mortality tables and interest rates used are those in effect on the valuation date.

Deferred Annuities

Section 2610.45 sets forth the rules for valuing the various forms of annuities described in § 2610.44 when the benefit is not in pay status or immediately payable as of the date of plan termination, but rather payment is deferred to a future date. This future date can be either (1) the normal retirement date, (2) a known early retirement date (if the participant is entitled to receive an early retirement benefit and has selected an early retirement date) or (3) an expected retirement date determined under Subpart D (if the early retirement date has not been selected).

As in the proposed and interim regulations, the formula given in § 2610.45(b) for valuing deferred annuities involving life contingencies of more than one person makes several simplifying assumptions in order to reduce the administrative burden of collecting additional data at termination. First, the formula considers the mortality of only the participant between the date of plan termination and date of retirement. Second, the formula assumes that the participant is married to the same spouse on the date payments commence as on the date of plan termination. Thus, the simplified formula does not take into account the possibility that in a given case there will be no spouse or a different spouse at the date payments commence because of divorce, death, and/or re-marriage. PBGC expects that, in general, the use of this simplified formula will not have a significant impact on the total value of plan benefits; in any event, the administrative savings justify any resultant inaccuracy in the overall value of plan benefits.

Early Retirement Benefits

The procedure for valuing early retirement benefits (§ 2610.46) has been substantially recast and simplified from that contained in the interim regulation. Specifically, the equation for calculating the age at which a participant could be expected to retire has been dropped. Instead, the PBGC itself has developed tables of expected retirement ages. The procedure for using these tables, which are set forth in Appendix C to this part, is contained in Subpart D.

After the expected retirement age is determined under Subpart D, the benefit is valued according to § 2610.46. Under this section, if a participant's expected retirement age or known early retirement age is the same as the participant's age at the valuation date, then the early retirement benefit is valued as an immediate annuity. If the expected retirement age or known early retirement age is greater than the participant's age at the valuation date, then the early retirement benefit is valued as a deferred annuity.

Section 2610.46 is also used to value early retirement benefits under non-trusteed plans if the early retirement benefits are being provided by PBGC pursuant to the rules set forth in the Sufficiency regulation. The valuation rules in this case are the same as for trusteed plans, except that the participant's expected retirement age is compared to his or her age at the date of distribution of plan assets (rather than at the date of plan termination) to determine whether the benefit is to be valued as an immediate or deferred annuity. The value is determined using the interest rates and tables in effect on the date of distribution. If the interest rates for the proposed date of distribution are not known when the plan administrator submits this information to PBGC, the plan administrator may estimate these values using the PBGC interest rates then in effect.

Death Benefits

The rules for valuing death benefits (§ 2610.47) are similar to those in the interim regulation, except for a change in one formula and the addition of new formula.

A change has been made in the formula for valuing a post-retirement death benefit payable as term insurance decreasing periodically, § 2610.47(e). The change is needed because the previous formula did not reduce the death benefit by the first month's benefit payment. This has been taken into account in the changed formula.

The new formula, § 2610.47(f), is used to value a pre-retirement death benefit payable as term insurance which increases at a specific rate of interest per year, *e.g.*, a pre-retirement death benefit that returns employee contributions plus a specified rate of interest up to the date of death.

Withdrawal of Employee Contributions

Section 2610.48 sets forth the rules for valuing mandatory employee contributions which are withdrawn in a lump sum. The value as of the date of plan termination is the amount of contributions made, plus interest to that date at the greater of the interest rate provided by the plan, or the interest rate required by § 204(c) of the Act or § 411(c) of the Internal Revenue Code.

Subpart D—Expected Retirement Age

Background

When a participant has the right to retire early under the terms of a pension plan, but has not yet selected a retirement date or begun receiving benefits, it is more difficult to value his or her benefit. This is because the early retirement benefit may be subsidized, *i.e.*, the benefit payable to a participant retiring prior to his or her normal retirement date may not be sufficiently reduced to compensate for the anticipated longer payment period. Because of this, it is necessary to know the age at which the participant will actually retire in order to value the benefit accurately.

The PBGC has, therefore, developed a method for valuing deferred early retirement benefits based on an "expected retirement age" (XRA), which is an intermediate age between the normal retirement age and the earliest possible retirement age for a particular plan participant. The XRA reflects the probability of retirement at various ages based on plan benefit levels, conditions under which benefits can commence and the circumstances surrounding the plan termination. The expected retirement age is determined under Subpart D of this regulation.

This subpart is issued in interim form because rules for determining the XRA are needed immediately so that plan administrators may complete processing terminating plans. However, because these rules are substantially different from the early retirement rules in the proposed regulation, the PBGC invites the public to comment on the procedures set forth in Subpart D. After the comments are reviewed, PBGC will promulgate final rules for determining expected retirement ages.

Overview of Procedure for Determining XRA

In developing this procedure for determining an expected retirement age, the PBGC found that the data available on the subject of the election of early retirement benefits by participants in terminating plans is inadequate to develop a statistically accurate procedure for determining an expected retirement age. Therefore, the PBGC has developed a procedure based on

estimated probabilities that is intended to produce early retirement costs for an entire plan that are intermediate between the extremes that would be obtained if it were assumed either that all participants retire at their normal retirement age or that all participants retire at the earliest retirement age possible. The procedure has been designed to simplify the calculation of the expected retirement age.

Subpart D contains three tables of XRA's that reflect low, medium, and high probabilities of retirement at various ages, based on the amount of the participant's benefits (Appendix D to this part, Tables II–A (Low), II–B (Medium) and II–C (High)). In creating the tables, PBGC assumed that a participant will not choose to retire unless he or she has sufficient income to meet his or her minimum needs. That is, the assumption is that, all other things being equal, the greater the anticipated pension, the greater the likelihood that the participant will choose to leave employment, and thus the lower the XRA.

A participant will be assumed to have a high probability of early retirement if the participant's benefit alone will provide adequate retirement income. The participant's probability of early retirement will be assumed to be in the medium category if the benefit is such that, only in combination with a hypothetical average Social Security benefit, will it provide an adequate retirement income. The probability of early retirement will be assumed to be in the low category if the guaranteed benefit falls below the dollar minimum for the medium category and thus the participant will not have income adequate to meet his or her needs.

The Selection of Retirement Rate Category Table in Appendix D is used to determine the retirement probability category. This table will be updated annually by PBGC to reflect changes in the cost of living, etc. (The use of this table is discussed in greater detail in the next section of this preamble.)

The age of a participant and the adequacy of retirement income may not be the only factors pertinent to the decision to retire and therefore to the determination of a reasonable XRA. The provisions of the plan itself and the circumstances surrounding the plan termination are also pertinent. Accordingly, this regulation contains three different rules for determining the XRA, the applicability of which depends on the plan provisions or the circumstances surrounding the plan termination. In general, whenever the plan termination is the result of a facility closing, the XRA is determined under § 2610.65. In all other cases, the determination of the XRA is dependent on plan provisions.

Section 2610.63 applies when the terms of the plan require a participant to cease employment to receive a benefit. Some examples of this are when the plan forbids drawing benefits while employed by a successor employer or by another employer in the same industry. This may also occur when the participant continues to work for the original employer. In this case, the PBGC assumes that the participant is currently employed and must leave employment in order to begin receiving pension benefits from the plan. PBGC further assumes that in these circumstances the decision to retire would be based primarily on the adequacy of retirement income. Section 2610.63 therefore provides that the participant's XRA will be determined under the applicable retirement rate table (low, medium, or high), as determined by the Selection of Retiremenet Rate Category Table. (Tables I–79, I–80, and I–81 for plans with a valuation date in 1979, 1980 and 1981, respectively, are included in Appendix D to this part. New Tables will be added annually).

Section § 2610.64 covers those plans which do not prohibit a participant from receiving retirement benefits while employed. In this situation, the PBGC assumes that participants are more likely to elect to receive their retirement benefits early, because the pension benefit does not need to be adquate by itself or even with Social Security to provide for the participant's needs. This is because the participant can receive his or her benefit while still employed; the pension need not be the primary source of income.

When the pension is not necessarily the primary source of income, the fact that electing to receive the benefit early will usually result in the benefit being reduced is not as likely to dissuade the participant from taking the benefit early. On the other hand, in situations covered under § 2610.63, when participants must stop working to receive their benefits, the reduction in pension benefits caused by receiving them prior to normal retirement age is much more likely (depending on the amount of the benefit) to discourage participants from electing early retirement.

Given these considerations, for plan terminations covered under § 2610.64, the XRAs of all participants are determined by using the "high" retirement rate category, regardless of the amount of their benefits. Therefore, the plan administrator simply uses Table II–C to determine the XRA; there is no need to use the Selection of Retirement Rate Category Table.

As noted above, § 2610.65 covers the situation where the employer has completely ceased operations at one or more facilities, or is in the process of completely ceasing operations at one or more facilities, and the participant was employed at the closed facility on the valuation date or his or her employment at the closed facility was terminated within one year prior to the evaluation date. (This section applies if an employer has only one facility, and it is closed or closing.) Under these circumstances, it is likely that early retirement benefits will be taken at the earliest age possible, since individuals have been put out of work by the cessation of operations and will be in need of income. Section 2610.65 provides that the XRA of a participant under these circumstances is the earliest retirement age permitted under the plan. Thus, in this case the plan administrator need not use any of the tables in Appendix D to determine the XRA.

For a participant who worked at a facility which did not close, or if he or she terminated employment more than one year before plan termination, § 2610.63 or § 2610.64, as applicable, will be used to determine his or her XRA.

Use of the Retirement Tables

As discussed above, for plan terminations covered under § 2610.63, *i.e.*, terminations where the participant may not draw pension benefits from the plan unless he or she leaves employment, it is necessary to determine which retirement rate table (low, medium or high) applies, based on the participant's benefit at normal retirement age. The Selection of Retirement Rate Category Table Appendix D to this part is used for this purpose.

To determine the applicable retirement rate table under the Selection of Retirement Rate Category Table, the plan administrator compares the participant's benefit in the normal form or a validily elected optional form payable at normal retirement age (NRA) to the dollar figures listed under each retirement category rate (low, medium, and high) for the calendar year in which the participant will reach NRA. The participant is categorized according to the position in the table of his or her benefit.

For trusteed plans, the guaranteed benefit which will actually be paid to the participant, rather than the vested accrued benefit, is used for this procedure because in trusteed plans, participants will recieve their guaranteed benefit, which may be less

than their vested accrued benefit. For those few non-trusteed plans that will be using these rules because PBGC will be providing the early retirement benefits, the vested accrued benefit rather than the guaranteed benefit is used to determine the retirement rate category.

The procedure for determining the retirement rate category uses the benefit at normal retirement age rather than at early retirement age (or any other pre-normal retirement age) for the sake of simplicity. Additionally, because the dollar cut-offs for the three categories are set far apart, and because the actuarial reductions used by most plans to adjust the benefit at normal retirement age to a benefit amount at an earlier age are comparable to the inflation projections used to determine the dollar figures for each year in the Selection of Retirement Rate Category Table, it is unlikely that using the benefit payable at early retirement age rather than at a normal retirement age would result in participants falling into different retirement probability categories.

Selection of Retirement Rate Category Table I–79 will apply to plans which have a valuation date in 1979, Table I–80 to those in 1980 and I–81 to those in 1981. A revised table will be issued for each year and will apply to plans with a valuation date in that year.

The following example shows how this procedure works: Assume that a plan terminates in 1981, that a participant who is eligible to receive an early retirement benefit has a guaranteed benefit payable at normal reitrement age of $350 per month, and that he or she will reach normal retirement age in 1990. Table I–81 shows the monthly income figures for the three retirement rate categories for 1990: (1) low—less than $428; (2) medium—between $428 and $1,288; and (3) high—more than $1,288. Therefore, adequate retirement income at NRA for this participant is assumed to be more than $1,288 per month. If the participant's guaranteed benefit were greater than this amount, he or she would fall within the "high" retirement rate category. The $428 per month figure of the $428 to $1,288 range in the "medium" category is the lowest plan benefit that is assumed to provide the participant with an adequate retirement income in combination with the hypothetical average Social Security benefit available at NRA. The participant's $350 per month guaranteed benefit is below this amount. Therefore, the participant falls into the "low" probability category, and his XRA is determined by using Table II–A.

Once the applicable retirement rate category is determined, the XRA of a participant is found from Table II–A, II–B or II–C, as appropriate. The plan administrator shall determine the XRA by using the participant's normal retirement age and the earliest age at which he or she could take early retirement at the valuation date. This latter age is the later of—

(1) the participant's age at the valuation date, or

(2) the earliest age at which the participant can retire under the terms of the plan.

The normal retirement age is defined for purposes of this subpart as the earliest age at which an unreduced benefit is available under the plan. The XRA determined under this subpart is then used to value the early retirement benefit in accordance with § 2610.46.

Appendixes

Appendix A to this part provides tables of a_x's for healthy and disabled lives. In addition, the PBGC has caluclated mortality tables of l_x's to four decimal places based on a radix of 10,000 lives, and these are included in Appendix C to this part. Further, instructions are given so that the plan administrator may construct mortality tables of l_x's. The plan administrator may use any other set of l_x's he or she chooses, as long as the set chosen is at least as accurate as the one set forth in the Appendix. The tables of l_x's for healthy lives and for disabled lives not receiving Socical Security disability benefits both start with 10,000 lives at age 15. Thus the l_x's for disabled lives are not set back three years from the healthy lives as are corresponding q_x's.

Appendix B to this part provides the interest rates which have been used for dates of termination since September 2, 1974. Tables issued while the interim rule was in effect correspond to the sections listed in the interim regulation on the Valuation of Plan Benefits, while the tables issued after this rule becomes final will correspond to the sections listed in this final regulation. If this rule becomes effective at a time other than when new interest rates and factors become effective, the interest rates, which refer to specific sections (benefits) in the interim regulation, will apply to the corresponding sections of this final rule for the same benefits.

Appendix D to this part provides the tables necessary to determine the expected retirement age. Included are Tables I–79, I–80 and I–81 for plans with a valuation date in 1979, 1980 and 1981, respectively and Tables II–A, II–B, and II–C which are used for all valuation dates. Examples of calculations of the expected retirement age are given in Appendix E to this part.

In consideration of the foregoing, Part 2610, Chapter XXVI of Title 29, Code of Federal Regulations, is revised to read as follows:

PART 2610—VALUATION OF BENEFITS

Subpart A—General

Sec.

Subpart B—Non-Trusteed Plans

Subpart C—Trusteed Plans

Subpart D—Expected Retirement Age

Authority: Secs. 4002(b)(3), 4041, 4044, and 4062(b)(1)(A), 29 U.S.C. §§ 1302, 1341, 1344, and 1362, Pub. L. 93–406, 88 Stat. 1004, 1020, 1025–27, 1029, (1974), as amended by Secs. 403(1), 403(d) and 402(a)(7), Pub. L. 96–364, 94 Stat. 1302, 1301, 1299 (1980).

Subpart A—General

§ 2610.1 Purpose and scope.

(a) *Purpose.* The purpose of this part is to establish the method of determining the value of plan benefits under terminating non-multiemployer pension plans covered by Title IV of the Employee Retirement Income Security

Act of 1974, as amended. This valuation is needed for both plans trusteed under Title IV and plans which are not trusteed. For the former, the value of plan benefits is needed to allocate plan assets in accordance with Part 2608 of this chapter and to determine the amount of any plan asset insufficiency. For the latter, the valuation is needed to allocate assets in accordance with Part 2608 and to distribute the assets in accordance with Part 2615.

(b) *Scope.* This part applies to all non-multiemployer pension plans covered by Title IV of the Act which submit a Notice of Intent to Terminate, or for which PBGC commences an action to terminate the plan under § 4042 of the Act, on or after March 1, 1981. Subpart A sets forth the general provisions of this regulation and applies to all such plans. Subpart B prescribes the valuation rules for plans that receive a Notice of Sufficiency from PBGC and are not placed into trusteeship by PBGC. Subpart C prescribes the valuation rules for plans that receive or that expect to receive a Notice of Inability to Determine Sufficiency from PBGC and are placed into trusteeship by PBGC. Subpart D sets forth as an interim rule the method for determining expected retirement ages in order to value early retirement benefits under Subpart C. In addition, Subpart D applies to non-trusteed plans when the PBGC is providing the early retirement benefits for such plans in accordance with Part 2615 of this chapter.

§ 2610.2 Definitions.

For the purposes of this part (unless otherwise required by the context):

"Act" means the Employee Retirement Income Security Act of 1974, *as amended by* the Multiemployer Pension Plan Amendments Act of 1980.

"Age" means the participant's age at his or her nearest birthday and is determined by rounding the individual's exact age to the nearest whole year. Half years are rounded to the next highest year. This is also known as the "insurance age."

"Annuity" means a series of periodic payments made at equal intervals of time, a specified number of times per year, to a plan participant or surviving beneficiary for a fixed or contingent period.

"Closed group" means a hypothetical number of people whose number is decreased only by their hypothetical death, and is never increased.

"Code" means the Internal Revenue Code of 1954, as amended.

"Date of distribution" means the date on which the plan administrator will distribute the plan assets to plan participants in a non-trusteed plan.

"Date of termination" means the date of plan termination established under § 4048 of the Act.

"Death benefit" means a benefit payable as a result of the death of a participant.

"Deferment period" means with respect to a particular participant, the number of years between the age of the participant as of the valuation date and the age of the participant as of the date benefit payments begin or are assumed to begin.

"Deferred annuity" means an annuity under which the specified date or age at which payments are to begin occurs after the valuation date.

"Early retirement benefit" means an annuity benefit payable under the terms of the plan, under which the participant is entitled to begin receiving payments before his or her normal retirement age and which is not payable on account of the disability of the participant. It may be reduced according to the terms of the plan.

"Immediate annuity" means an annuity for which payments start on or before the valuation date.

"Non-multiemployer plan" means a pension plan described in section 4021(a) of the Act that is maintained by one trade or business (whether or not incorporated), or by more than one trade or business (whether or not incorporated), all of which are under common control within the meaning of Part 2612 of this chapter, or a plan maintained by more than one trade or business not under common control that is not a multiemployer plan as defined in section 4001(a)(3) of the Act.

"Non-trusteed plan" means a non-multiemployer plan which receives a Notice of Sufficiency from PBGC and is able to close out by purchasing annuities in the private sector in accordance with Part 2615 of this chapter.

"Normal retirement age" means the age specified in the plan as the normal retirement age. This age shall not exceed the later of age 65 or the age attained after 10 years of participation in the plan. If no normal retirement age is specified in the plan, it is age 65.

"PBGC" means the Pension Benefit Guaranty Corporation.

"Trusteed plan" means a non-multiemployer plan which has been placed into trusteeship by PBGC.

"Valuation date" means (1) for non-trusteed plans, the date of distribution and (2) for trusteed plans, the date of termination.

§ 2610.3 General valuation rules.

(a) *Non-trusteed plans.* Plan administrators of non-trusteed plans shall value plan benefits in accordance with Subpart B of this part, except for any early retirement benefits to be provided by PBGC, which shall be valued in accordance with § 2610.46 of Subpart C. If a plan with respect to which PBGC has issued a Notice of Sufficiency is unable to satisfy all benefits assigned to priorities categories 1 through 4 on the date of distribution, the PBGC will place it into trusteeship and the plan administrator shall re-value the benefits in accordance with Subpart C of this part.

(b) *Trusteed plans.* Plan administrators of trusteed plans shall value plan benefits in accordance with Subpart C of this part.

Subpart B—Non-Trusteed Plans

§ 2610.21 Purpose and scope.

This subpart sets forth the rules for calculating the value of a benefit to be paid a participant or beneficiary under a terminating pension plan that is distributing assets after receiving to a Notice of Sufficiency issued pursuant to Part 2615 of this chapter.

§ 2610.22 Definitions.

For the purposes of this subpart:

"Insurer" means a company authorized to do business as an insurance carrier under the laws of a state or the District of Columbia.

"Lump sum payable in lieu of an annuity" means a benefit that is payable in a single installment and is derived from an annuity payable under the plan.

"Other lump sum benefit" means a benefit in priority category 5 or 6, determined under Part 2608 of this chapter ("Allocation of Assets"), that is payable in a single installment (or substantially so) under the terms of the plan, and that is not derived from an annuity payable under the plan. The benefit may be a severence pay benefit, a death benefit or other single installment benefit.

"Qualifying bid" means a bid obtained from an insurer in accordance with § 2615.14(b) of Part 2615 of this chapter.

§ 2610.23 Valuation of annuity benefits.

The value of a benefit which is to be paid as an annuity, except for any early retirement benefit to be provided by PBGC, is the cost of purchasing the annuity on the date of distribution from an insurer under the qualifying bid.

§ 2610.24 Form of annuity to be valued.

(a) When both the participant and beneficiary are alive on the date of

distribution, the form of annuity to be valued is—

(1) for a participant or beneficiary already receiving a monthly benefit, that form which is being received, or

(2) for a participant or beneficiary not receiving a monthly benefit, the normal annuity form payable under the plan or the optional form for which the participant has made a valid election pursuant to § 2615.4(c) of Part 2615 of this chapter.

(b) When the participant dies after the date of plan termination but before the date of distribution, the form of annuity to be valued is determined under paragraph (1) or (2) below:

(1) For a participant who was entitled to a deferred annuity—

(i) if the form was a single or joint life annuity, no benefit shall be valued; or

(ii) if the participant had made a valid election of a lump sum benefit before he or she died, the form to be valued is the lump sum.

(2) For a participant who was eligible for immediate retirement, and for a participant who was in pay status at the date of termination—

(i) the form was a single life annuity, no benefit shall be valued;

(ii) if the form was an n year certain and life thereafter annuity, the form to be valued is an n year certain annuity;

(iii) if the form was a joint and survivor annuity, the form to be valued is a single life annuity payable to the beneficiary, unless the beneficiary has also died, in which case no benefit shall be valued;

(iv) if the form was a n year certain and joint and survivor thereafter annuity, the form to be valued is an n year certain and continuous annuity payable to the beneficiary, unless the beneficiary has also died, in which case the form to be valued is an n year certain annuity;

(v) if the form was a cash refund annuity, the form to be valued is the remaining lump sum death benefit; or

(vi) if the participant had elected a lump sum benefit before he or she died, the form to be valued is the lump sum.

(c) When the participant is still living and the named beneficiary or spouse dies after the date of termination but before the date of distribution, the form of annuity to be valued is determined under paragraph (1) or (2) below:

(1) For a participant entitled to a deferred annuity—

(i) if the form was a joint and survivor annuity, the form to be valued is a single life annuity payable to the participant; or

(ii) if the form was an n year certain and joint and survivor thereafter annuity, the form to be valued is an n year certain and continuous annuity payable to the participant.

(2) For a participant eligible for immediate retirement and for a participant in pay status at the date of termination—

(i) if the form was a joint and survivor annuity, the form to be valued is a single life annuity payable to the participant; or

(ii) if the form was an n year certain and joint survivor thereafter annuity, the form to be valued is an n year certain and continuous annuity payable to the participant.

§ 2610.25 Early retirement benefits.

(a) *Participants with a known retirement date.* The value of an early retirement benefit for a participant whose retirement date is known (*i.e.*, who has retired or has selected a retirement date) before the date of distribution is the cost of the benefit under the qualifying bid.

(b) *Participants with an unknown retirement date.* The value of an early retirement benefit for a participant whose retirement date is not known before the date of distribution is determined under either paragraph (b)(1) or (2) of this section, as appropriate.

(1) If, with respect to *all* such early retirement benefits payable under the plan, the qualifying bid for the plan reasonably takes into account the probability that participants may retire at a date between the earliest date early retirements benefits may be received and the normal retirement date, when the value of each early retirement benefit is its cost under the qualifying bid.

(2) If the plan administrator is unable to obtain a qualifying bid described in paragraph (b)(1), then the plan administrator may arrange PBGC to become responsible for the payment of such benefits in accordance with Subpart D of Part 2615 of this chapter. If the plan administrator so arranges, he or she will calculate the value of all such early retirement benefits in accordance with § 2610.46(c). (In this event, the PBGC will provide these benefits as set forth in Part 2615 of this chapter.) If the plan administrator does not so arrange, then the value of each early retirement benefit is its cost under the qualifying bid.

§ 2610.26 Lump sums and other alternative forms of distribution in lieu of annuities.

(a) *Applicability.* A benefit that is payable as an annuity under the provisions of a plan need not be provided in annuity form if—

(1) The monthly amount of the benefit is less than the smallest monthly benefit amount normally provided by an insurer;

(2) The present value of the benefit determined under this paragraph, is $1,750 or less; or

(3) The plan provides for an alternative form of distribution, and the plan administrator submits a statement to the PBGC in which he or she certifies that—

(i) the participant elected, in writing, the alternative form of distribution;

(ii) The participant was informed, in writing, before he or she made the election, of the estimated amounts of the annuity and of the alternative form to which he or she is entitled with reference to any risks attendant to the alternative form; and

(iii) The participant was notified, in writing, before he or she made the election, that his or her election would not be given effect unless the plan should close out under a Notice of Sufficiency and that PBGC does not guarantee the benefit payable in the alternative form.

(b) *Valuation.*

(1) The value of the lump sum or other alternative form of distribution payable under this section is the present value of the normal form of benefit provided by the plan payable at normal retirement age, determined as of the date of distribution using reasonable actuarial assumptions as to interest and mortality.

(2) If the participant dies before the date of distribution, but had elected a lump sum benefit, the present value shall be determined as if the participant were alive on the date of distribution.

(c) *Actuarial assumptions.*

(1) The plan administrator shall specify the actuarial assumptions used to determine the value calculated under paragraph (b) of this section when the plan administrator submits the benefit valuation data to the PBGC pursuant to § 2615.12 of Part 2615 of this chapter. The same actuarial assumptions shall be used for all such calculations. The PBGC reserves the right to review the actuarial assumptions used and to re-value the benefits determined by the plan administrator if the actuarial assumptions are found to be unreasonable.

(2) The following interest assumptions are among those that will normally be considered reasonable.

(i) The rate by the plan for determining lump sum amounts prior to the date of termination. This rate may appear in the plan documents or may be inferred from recent plan practice.

(ii) The rate used by the insurer in the qualifying bid under which the plan

administrator will purchase annuities not being paid as a lump sum. (In the event the insurer does not provide the specific rate used, the rate may be estimated.)

(iii) The interest rate used for the minimum funding standard account pursuant to § 302 of the Act and § 412(b) of the Internal Revenue Code.

(iv) The PBGC interest rate for immediate annuities in effect on the valuation date set forth in Appendix B to this part.

§ 2610.27 Withdrawal of employee contributions.

(a) If a participant has not started to receive monthly benefit payments on the date of distribution, the value of the lump sum which returns mandatory employee contributions is equal to the total amount of contributions made by the participant, plus interest that is payable to the participant under the terms of the plan, plus interest on that total amount from the date of termination to the date of distribution. The rate of interest credited on employee contributions up to the date of termination shall be the greater of the interest rate provided under the terms of the plan or the interest rate required under § 204(c) of the Act or § 411(c) of the Code.

(b) If a participant has started to receive monthly benefit payments on the date of distribution, part of which are attributable to his or her contributions, the value of the lump sum which returns employee contributions is equal to the excess of the amount described in paragraph (b)(1) of this section over the amount computed in paragraph (b)(2) of this section.

(1) The amount of accumulated mandatory employee contributions remaining in the plan as of the date of termination plus interest from the date of termination to the date of distribution.

(2) The excess of benefit payments made from the plan between date of plan termination and the date of distribution, over the amount of payments that would have been made if the employee contributions had been paid as a lump sum on the date of plan termination, with interest accumulated on the excess from the date of payment to the date of distribution.

(c) *Interest assumptions.* The interest rate used under this section to credit interest between the date of termination to the date of distribution shall be a reasonable rate and shall be the same for both paragraphs (a) and (b).

§ 2610.28 Other lump sum benefits.

The value of a lump sum benefit which is not covered under § 2610.26 or § 2610.27 is equal to—

(a) the value under the qualifying bid, if an insurer provides the benefit; or

(b) the present value of the benefit as of the date of distribution, determined using reasonable actuarial assumptions, if the benefit is to be distributed other than by the purchase of the benefit from an insurer. The PBGC reserves the right to review the actuarial assumptions as to reasonableness and re-value the benefit if the actuarial assumptions are unreasonable.

Subpart C—Trusteed Plans

§ 2610.41 Purpose and scope.

This subpart sets forth the rules for calculating the value of a benefit to be paid a participant or beneficiary under a terminating pension plan that has been or will be placed into trusteeship by PBGC.

§ 2610.42 Mathematical symbols and terms.

(a) *Fundamental symbols.* The following fundamental symbols represent the basic actuarial concepts used in computing the present value of a benefit:

- x represents the insurance age of a participant.
- q_x represents the probability that an individual whose present age is x will not survive to attain age $x + 1$.
- l_x represents the number of people within a closed group expected to survive to age x and is calculated to four decimal places.
- ω represents the first age for which $l_x = 0$. Since the values of l_x are carried to four decimal places, ω is the first age for which l_x is less than .00005.
- i represents an effective annual interest rate which is the amount of money that one invested at the beginning of a year will earn during the year, where interest is paid at the end of the year.
- m represents the number of times per year payments of benefits are made. It also represents the number of times per year the amount of a death benefit decreases.
- n represents a period of time consisting of n years.
- p represents the percentage of a benefit which continues to be paid to a survivor under a joint and survivor annuity.

(b) *Derived symbols.* The following derived symbols and commutation functions are representations of actuarial computations in a condensed form and are used to facilitate the expression of actuarial equations:

- v is the present value of one dollar payable one year from today, and is computed by the equation $v = \frac{1}{1+i}$.
- d_x is equal to the number of people within a closed group alive at age x, that is, l_x, who are not expected to attain the age of $x+1$, and is computed by the following equation, rounded to four decimal places $d_x = q_x \cdot l_x$.
- l_{x+1} is equal to the number of people within a closed group expected to be alive at age $x+1$, and is computed by the equation $l_{x+1} = l_x - d_{x\odot 1}$.
- D_x is equal to the quantity $v^x \cdot l_x$.
- N_x is equal to the sum of all D_y's for all ages y equal to or greater than x, to the last age when a person in a closed group is expected to be alive, and is computed by the equation $N_x = D_x + D_{x+1} + D_{x+2} + \cdots + D_{\omega-2} + D_{\omega-1}$.
- $N_x^{(m)}$ is a modification of N_x used in situations where annuity payments are made in equal amounts m times a year, and is computed by the equation $N_x^{(m)} = N_x - \frac{m-1}{2m} \cdot D_x$.
- C_x is equal to the quantity $v^{x+1} \cdot d_x$.
- M_x is equal to the sum of all C_y's for all ages y equal to or greater than x, to the last age when a person in a closed group is expected to be alive, and is computed by the equation $M_x = C_x + C_{x+1} + C_{x+2} + \cdots + C_{\omega-1}$.
- R_x is equal to the sum of all M_y's for all ages y equal to or greater than x, to the last age when a person in a closed group is expected to be alive, and is computed by the equation $R_x = M_x + M_{x+1} + M_{x+2} + \cdots + M_{\omega-1}$.
- C_x is a modification of C_x used in situations where death benefits are payable upon death, (rather than at the end of the year of death), and is computed by the equation $C_x = (1+i) \cdot C_x$. M_x is a modification of M_x used in situations where death benefits are payable upon death, (rather than at the end of the year of death) and is computed by the equation $M_x = (1+i) \cdot M_x$. R_x is a modification of R_x used in situations where death benefits are payable upon death, (rather than at the end of the year of death), and is computed by the equation $R_x = (1+i) \cdot R_{x\odot 1}$.
- $D_{x:y}$ is a modificaition of D_x used in situations where the status of another life limits annuity payments, and is computed by the equation $D_{x:y} = \frac{(1+i)^{\frac{1}{2}(x+y)} D_x \cdot D_y}{10{,}000}$.

$N_{x,y}$ is equal to the sum of all $D_{w,z}$'s for all pairs of ages of the form $w=x+t$, $z=y+t$, where t is a non-negative integer, and is computed by the equation $N_{x,y}=D_{x,y}+DG2_{x+1,y+1}+DG2_{x+2,y+2}+\ldots$.

$N_{x,y}^{(m)}$ is a modification of $N_{x,y}$ used in situations where annuity payments are made in equal amounts m times per year, and is computed by the equation

$$N_{x:y}^{(m)} = N_{x:y} - \frac{m-1}{2m} \cdot D_{x:y} .$$

(c) *Acturial notation.* The following actuarial notations are used in this subpart:

a represents the present value of an annuity of one dollar per annum.

A represents the present value of a death benefit which provides for the payment of one dollar at the end of the year in which death occurs.

DA represents the present value of a death benefit which provides payments of uniformly decreasing amounts over a specified period of time with no payments if death occurs after the expiration of the period.

. is a notation which, when placed over a symbol representing the value of an annuity, indicates that payments are to be made at the beginning of the payment period, for example $\ddot{a}_x$.

$\overline{\ }$ is a notation which, when placed over a symbol representing a period of time, indicates that an annuity or death benefit payment will not be made beyond that period of time.

: is a notation which separates two symbols in a suffixed subscript representing the status of two periods of life or time, when two such periods are utilized in the context of an actuarial symbol. For example, $a_{x:\overline{n}}$ indicates that the annuity is payable until the expiration of a life aged x, or a term certain of n years, whichever is earlier.

- is a notation which, when placed over a symbol indicating the value of a death benefit, indicates that the benefit is payable immediately upon death. When placed over two symbols in a suffixed subscript representing the existence of a life or a period of time, it indicates that benefit payments continue during the existence of either. For example, $\bar{A}_{x:\overline{n}}$ represents the present value of a benefit payable immediately upon death, and $\bar{a}_{x:\overline{n}}$ represents an annuity payable until the later of the end of a life age x or the passage of n years.

| is a notation which, when placed over a symbol in a suffixed subscript indicating the existence of a life or a period of time, indicates that expiration of such life or period of time causes payments to commence, if such expiration occurs before the expiration of the other period represented in the subscript. For example, $A^{1}_{x:\overline{n}|}$ indicates that payment is made only if the death of the individual, age x, occurs before the expiration of n years.

§ 2610.43 General.

(a) *Valuation.* The plan administrator shall determine the present value of all plan benefits by using the applicable formulas in this subpart, or any other formulas or approximations that are at least as accurate as the formulas and approximations set forth in this subpart, along with PBGC interest and mortality rates in effect at the valuation date.

(b) *Form of benefit to be valued.* The form of benefit to be valued is the normal form payable under the plan, the form for which a participant or beneficiary had made a valid election under the terms of the plan prior to the date of termination, or the form which a participant is receiving.

(c) *Valuation of annuities payable for periods other than whole numbers of years.* For an annuity payable for a period other than a whole numbers of years, the plan administrator shall value the annuity by using a method that is at least as accurate as a linear interpolation.

§ 2610.44 Immediate annuities.

(a) *General.* The plan administrator shall determine the value of an immediate annuity, which is not being received as a disability benefit, by using the appropriate formula from Paragraphs (c)-(o) of this section along with the interest rate for immediate annuities, as set forth in Appendix B to this part, and mortality rates for healthy lives, as set forth in Tables I and II of Appendix A to this part, in effect on the valuation date. All the forms of benefits in this section are assumed to be paid at the beginning of the appropriate period.

(b) *Disability benefits.* (1) The plan administrator shall determine the value of a disability benefit which is not being received or which is not eligible to be received in connection with Social Security disability benefits in accordance with Paragraph (a) of this section, except that the mortality rates for disabled lives not receiving Social Security disability benefits, as set forth is Tables III and IV of Appendix A to this part, in effect on the valuation date shall be used.

(2) The plan administrator shall determine the value of a disability benefit which depends on the receipt of or eligibility for Social Security disability benefits in accordance with Paragraph (a) of this section, except that the mortality rates for disabled lives receiving Social Security disability benefits, as set forth in Tables V and VI of Appendix A, in effect on the valuation date shall be used.

(c) *Life annuity payable periodically.* A life annuity payable periodically is an annuity for the life of the participant. The plan administrator shall compute the value of this annuity by using the following actuarial equation:

$$\ddot{a}_x^{(m)} = \frac{N_x^{(m)}}{D_x} .$$

(d) *Annuity certain payable periodically.* An annuity certain payable periodically is an annuity for a fixed period of time. The plan administrator shall compute the value of this annuity by using the following actuarial equation:

$$\ddot{a}_{\overline{n}|}^{(m)} = \frac{1-v^n}{m(1-v^{1/m})} .$$

(e) *Annuity certain and continuous.* An annuity certain and continuous is an annuity which ceases upon the later of 1) the death of the participant, or 2) the passage of a specified period of time. The plan administrator shall compute the value of this annuity by using the following actuarial equation:

$$\ddot{a}_{x:\overline{n}|}^{(m)} = \ddot{a}_{\overline{n}|}^{(m)} + \frac{N_{x+n}^{(m)}}{D_x} .$$

(f) *Temporary life annuity.* A temporary life annuity is an annuity which ceases upon the earlier of 1) the death of the participant, or 2) the passage of a specified period of time. The plan administrator shall compute the value of this annuity by using the following actuarial equation:

$$\ddot{a}_{x:\overline{n}|}^{(m)} = \frac{N_x^{(m)} - N_{x+n}^{(m)}}{D_x} .$$

(g) *Joint annuity.* A joint annuity is an annuity payable with respect to more than one person, that is payable only as long as both the participant and the beneficiary are alive. The plan administrator shall compute the value of this annuity by using the following actuarial equation:

$$\ddot{a}^{(m)}_{x:y} = \frac{N^{(m)}_{x:y}}{D_{x:y}} .$$

(h) *Joint and survivor annuity (joint basis).* A joint and survivor annuity (joint basis) is an annuity payable with respect to more than one person, that is payable for as long as both the participant and beneficiary are alive, and upon the death of either, payments continue in an equal or reduced amount for the life of the survivor. The plan administrator shall compute the value of this annuity by using the following actuarial expression:

$$p\left(\ddot{a}^{(m)}_{x} + \ddot{a}^{(m)}_{y}\right) + (1-2p)\,\ddot{a}^{(m)}_{x:y} .$$

(i) *Joint and survivor annuity (contingent basis).* A joint and survivor annuity (contingent basis) is an annuity payable with respect to more than one person, that is payable to the participant for life, and, upon his or her death, is payable to his or her beneficiary for life in an equal or reduced amount. The plan administrator shall compute the value of this annuity by using the following actuarial expression:

$$\ddot{a}^{(m)}_{x} + p\left(\ddot{a}^{(m)}_{y} - \ddot{a}^{(m)}_{x:y}\right) .$$

(j) *Annuity certain and joint thereafter.* An annuity certain and joint thereafter is an annuity payable with respect to more than one person, that is payable until the later of (1) the death of either the participant or the beneficiary, or (2) the passage of a specified period of time. The plan administrator shall compute the value of this annuity by using the following actuarial expression:

$$\ddot{a}^{(m)}_{\overline{n}|} + \frac{N^{(m)}_{x+n:y+n}}{D_{x:y}} .$$

(k) *Annuity certain and joint and survivor (joint basis) thereafter.* An annuity certain and joint and survivor (joint basis) thereafter is an annuity payable with respect to more than one person, that is payable in a certain amount until the later of (1) the death of either the participant or beneficiary, or (2) the passage of a specified period of time, and payments continue in an equal or reduced amount for the life of the survivor. The plan administrator shall compute the value of this annuity using the following actuarial expression:

$$\ddot{a}^{(m)}_{\overline{n}|} + p\left(\frac{N^{(m)}_{x+n}}{D_x} + \frac{N^{(m)}_{y+n}}{D_y}\right) + (1-2p)\,\frac{N^{(m)}_{x+n:y+n}}{D_{x:y}} .$$

(l) *Annuity certain and joint and survivor (contingent basis) thereafter.* An annuity certain and joint and survivor (contingent basis) thereafter is an annuity that is payable in a certain amount until the later of (1) the death of the participant, or (2) the passage of a specified period of time, and payments continue in an equal or reduced amount for the life of the beneficiary. The plan administrator shall compute the value of this annuity using the following actuarial expression:

$$\ddot{a}^{(m)}_{\overline{n}|} + \frac{N^{(m)}_{x+n}}{D_x} + p\left(\frac{N^{(m)}_{y+n}}{D_y} - \frac{N_{x+n:y+n}}{D_{x:y}}\right) .$$

(m) *Single life cash refund annuity.* A cash refund annuity is an annuity under which if the participant dies after retirement and prior to the time when he or she has received annuity payments equal to a fixed sum (usually the amount of his or her mandatory employee contributions, with or without interest), then the balance of the fixed sum is paid as a lump-sum death benefit. The plan administrator shall determine the value of a cash refund annuity by adding the values of—

(1) a life annuity payable periodically, valued in accordance with § 2610.44(c), and

(2) a death benefit in the form of decreasing term insurance decreasing periodically, valued in accordance with § 2610.47(e).

(n) *Installment refund annuity.* An installment refund annuity is an annuity under which if the participant dies after retirement and prior to the time he or she has received annuity payments equal to a fixed amount (usually the amount of his or her mandatory employee contributions, with or without interest), then the balance is paid as a death benefit in periodic installments, each (except possibly the last) equal in amount to the participant's annuity payments. The plan administrator shall compute the value of an installment refund annuity by valuing it as an annuity certain and continuous in accordance with §2610.44(e). The period certain is determined by dividing the fixed amount by the amount of the periodic annuity payment.

§ 2610.45 Deferred annuities.

(a) *Definitions.* For the purposes of this section:

"x" represents the age of the participant at the valuation date.

"y" represents the age of the participant at the date at which annuity payments are expected to begin. This is the normal retirement date or, if the participant is entitled to an early retirement benefit, the date chosen by the participant, or, if no date has been chosen, the expected retirement age determined under Subpart D.

"n" represents the period of deferment, that is, the quantity y-x.

"G_x" represents the present value of the deferred annuity as of the valuation date.

"G_y" represents the present value of the deferred annuity on the date

payments are expected to begin, computed as an immediate annuity as of that date. If payments are expected to begin before the normal retirement date, the amount of the monthly annuity benefit may be reduced according to the plan provisions.

"R(x,y)" represents a factor used to adjust the value of G_y for anticipated mortality experience and interest experience during the period of deferment.

"k_1", "k_2", "k_3", "n_1", and "n_2" represent quantities used to compute the factor R(x,y) pursuant to Paragraph (b) of this section. The values for k_1, k_2, k_3, n_1, and n_2 are set forth in Appendix B to this part.

(b) *Valuation.* The plan administrator shall determine the value of a deferred annuity by first determining the value of the annuity as of the date of payments are expected to begin, using the interest and mortality rates in effect on the valuation date, and then adjusting that value to reflect the period of deferment. This is expressed by the equation $G_x = R(x,y)\, G_y$, with G_y and R(x,y) determined in accordance with Paragraphs (1) and (2) of this section.

(1) G_y is determined as an immediate annuity as of the date payments are to begin, using the appropriate formula set forth in § 2610.44 and the interest and mortality rates in effect on the valuation date.

(2) R(x,y) is computed by using the k's and n's in Appendix B, Table III, in effect on the valuation date, and the l_y and l_x for the participant only, whether the annuity is payable to the participant alone or to the participant and a beneficiary. R(x,y) is computed under paragraph (i), (ii) or (iii) below, as appropriate.

(i) If n is less than or equal to n_1, ($n \leq n_1$), then

$$R(x,y) = \frac{l_y}{l_x} \cdot K_1^{-n} .$$

(ii) If n is greater than n_1 and less than or equal to n_1+n_2, ($n_1 < n \leq n_1+n_{2G1}$), then

$$R(x,y) = \frac{l_y}{l_x} \cdot K_1^{-n_1} \cdot K_2^{-(n-n_1)} .$$

(iii) If n is greater than n_1+n_2, ($n_1+n_2 < n$), then

$$R(x,y) = \frac{l_y}{l_x} \cdot K_1^{-n_1} \cdot K_2^{-n_2} \cdot K_3^{-(n-n_1-n_2)} .$$

§ 2610.46 Early retirement benefits.

(a) *Definitions.* For the purposes of this section—

"Annuity starting date" means the date a participant has selected to begin receiving his or her benefit, where the selection was validly made according to the terms of the plan before the valuation date; and

"Expected retirement age" means the age determined in accordance with Subpart D of this part, when a participant eligible to receive an early retirement benefit has not validly selected an annuity starting date prior to the valuation date.

(b) *Valuation in trusteed plans.* An early retirement benefit is valued as an immediate annuity in accordance with § 2610.44 if the participant's expected retirement age determined under Subpart D of this part or his or her age at the annuity starting date, whichever is appropriate, is the same as his or her age at the date of termination. An early retirement benefit is valued as a deferred annuity in accordance with § 2610.45, if the participant's expected retirement age determined under Subpart D of this part or his or her age at the annuity starting date, whichever is appropriate, is greater than his or her age at the date of termination.

(c) *Valuation in non-trusteed plans.* An early retirement benefit that is to be provided by an insurer pursuant to a qualifying bid, is valued in accordance with § 2610.25(a). An early retirement benefit that is to be provided by PBGC in accordance with Part 2615 is valued as an immediate annuity in accordance with § 2610.44, if the participant's expected retirement age determined under Subpart D of this part is the same as his or her age at the date of distribution, or as a deferred annuity in accordance with § 2610.45, if the participant's expected retirement age determined under Subpart D of this part is greater than his or her age at the date of distribution.

§ 2610.47 Death benefits.

(a) The plan administrator shall determine the value of a death benefit by using the appropriate formula from Paragraphs (b)–(f) of this section.

(b) *Death benefit in the form of whole life insurance.* A death benefit in the form of whole life insurance is a benefit which is payable at death, whenever death occurs. The plan administrator shall compute the value of this benefit by using the following actuarial equation:

$$\bar{A}_x = \frac{\bar{M}_x}{D_x} .$$

(c) *Death benefit in the form of term insurance.* A death benefit in the form of term insurance is a benefit which is payable at death, if death occurs within a stated period of time. The plan administrator shall compute the value of this benefit by using the following actuarial equation:

$$\bar{A}^{\,1}_{x:\overline{n}|} = \frac{\bar{M}_x - \bar{M}_{x+n}}{D_x} .$$

(d) *Death benefit in the form of term insurance decreasing annually.* A death benefit in the form of term insurance decreasing annually is a benefit which is payable at death, if death occurs within a stated period of time, and in an initial amount of n, if death occurs at the beginning of the covered period, which amount decreases each year during the covered period. The plan administrator shall compute the value of this benefit using the following actuarial equation:

$$(D\bar{A})^{1}_{x:\overline{n}|} = \frac{nM_x - R_{x+1} + R_{x+n+1}}{D_x} .$$

(e) *Death benefit in the form of term insurance decreasing periodically.* A death benefit in the form of term insurance decreasing periodically is a benefit in an initial amount of n−1/m,

which is payable at death, if death occurs within a stated period of time. This amount decreases by 1/m, m times each year during the covered period.

$$(D^{(m)}\bar{A})^{1}_{x:\overline{n-1/m|}} = \frac{n\bar{M}_x - \bar{R}_{x+1} + \bar{R}_{x+n+1} - \frac{m+1}{2m}(M_x - M_{x+n})}{D_x}.$$

(f) *Death benefit in the form of geometrically increasing term insurance.* A death benefit in the form of geometrically increasing term insurance is generally a pre-retirement death benefit in an initial amount of 1 which is payable in a lump sum at death, if death occurs within a stated period of time. This amount accrues interest at a rate of j% per annum, to the end of the covered period. The plan administrator shall compute the value of this benefit by using the formula in Paragraph (d) of this section with an interest rate of (i–j%) per annum, where i is the interest rate for death benefits in effect on the date of plan termination as set forth in Appendix B, Table II, of this part, and j is the interest rate specified in the plan, or if the death benefit returns mandatory employee contributions, j is the greater of the interest rate specified in the plan or the interest rate required by § 204(c) of the Act or § 411(c) of the Code.

§ 2610.48 Withdrawal of employee contributions.

The value of a lump sum benefit that returns mandatory employee contributions in lieu of an annuity benefit and, if any, pre-retirement death benefit is the amount of mandatory employee contributions as of the date of termination plus interest to that date at a rate equal to the greater of the interest rate payable under the plan, if any, or the interest rate required under § 204(c) of the Act or § 411(c) of the Code.

Subpart D—Expected Retirement Age

§ 2610.61 Purpose and scope.

This subpart sets forth the rules and procedures a plan administrator shall follow to determine the expected retirement age (XRA) for plan participants entitled to early retirement benefits for whom the annuity starting date is not known as of the valuation date. This applies to all trusteed plans which have such early retirement benefits and to non-trusteed plans for which the PBGC will provide the early retirement benefit according to Subpart D of Part 2615. The plan administrator shall determine an XRA under § 2610.63, § 2610.64 or § 2610.65, as appropriate, for each active participant or participant with a deferred vested benefit who is entitled to an early retirement benefit and who as of the valuation date has not selected an annuity starting date.

§ 2610.62 Definitions.

For the purposes of this subpart, the following definitions apply:

"Earliest retirement age at valuation date" means the later of (a) a participant's age on his or her birthday nearest to the valuation date, or (b) the earliest age at which the participant can retire under the terms of the plan.

"Expected retirement age" ("XRA") means the age at which a participant is expected to begin receiving benefits. This is the age to which a participant's benefit payment is assumed to be deferred for valuation purposes. An XRA is equal to or greater than the participant's earliest retirement age at valuation date but less than his or her normal retirement age.

"Monthly benefit" means—

(a) for trusteed plans, the guaranteed benefit payable by PBGC; or

(b) for non-trusteed plans, the vested accrued benefit payable under the plan.

"Normal retirement age" ("NRA") means the earlier of the normal retirement age specified in the plan or the age at which an unreduced benefit is first payable.

§ 2610.63 XRA when a participant must retire to receive a benefit.

(a) *Applicability.* Except as provided in § 2610.65, the plan administrator shall determine the XRA under this section when plan provisions or established plan practice require a participant to retire from his or her job to begin receiving his or her early retirement benefit.

(b) *Data needed.* The plan administrator shall determine for each participant who is entitled to an early retirement benefit—

(1) the amount of the participant's guaranteed monthly benefit payable at normal retirement age in the normal form payable under the terms of the plan or in the form validly elected by the participant before the date of termination;

(2) the calendar year in which the participant reaches normal retirement age ("NRA");

(3) the participant's NRA; and

(4) the participant's earliest retirement age at valuation date.

(c) *Procedure.* (1) The plan administrator shall determine whether a participant is in the high, medium or low retirement rate category using the applicable Selection of Retirement Rate Category Table in Appendix C, by using the participant's benefit determined under Paragraph (b)(1) of this section, and the year in which the participant reaches NRA.

(2) Based on the retirement rate category determined under paragraph (c)(1), the plan administrator shall determine the XRA from Table II–A, II–B or II–C, as appropriate, by using the participant's NRA and earliest retirement age at valuation date.

§ 2610.64 XRA when a participant need not retire to receive a benefit.

(a) *Applicability.* Except as provided in § 2610.65, the plan administrator shall determine the XRA under this section when plan provisions or established plan practice do not require a participant to retire from his or her job to begin receiving his or her early retirement benefit.

(b) *Data needed.* The plan administrator shall determine for each participant—

(1) the participant's NRA; and

(2) the participant's earliest retirement age at valuation date.

(c) *Procedure.* Participants in this case are always assigned to the high retirement rate category and therefore the plan administrator shall use Table II–C of Appendix C to determine the XRA. The plan administrator shall determine the XRA from Table II–C by using the participant's NRA and earliest retirement age at valuation date.

§ 2610.65 Special rule for facility closing.

(a) *Applicability.* The plan administrator shall determine the XRA under this section, rather than § 2610.63 or § 2610.64, when both the conditions set forth in paragraphs (a) (1) and (2) of this section exist.

(1) The facility at which the participant is or was employed permanently closed within one year before the valuation date, or is in the

process of being permanently closed on the valuation date.

(2) The participant left employment at the facility less than one year before the valuation date or was still employed at the facility on the valuation date.

(b) *XRA.* The XRA is equal to the earliest retirement age at valuation date.

Appendix A.—Construction of Mortality Tables

The plan administrator shall construct mortality tables of l_x's for a closed group of at least 10,000 lives using the q_x's contained in the tables in Appendix A and the following procedure.

(1) $l_{15} = 10{,}000$.

(2) Compute l_{16} from the equation $l_{16} = l_{15} - d_{15}$ where $d_{15} = l_{15} \cdot q_{15}$.

(3) Compute l_{17} from the equation $l_{17} = l_{16} - d_{16}$.

(4) This process is continued until the first age x when $l_x = 0$. That is, until the age is reached when no person will be alive. l_x will equal zero for all ages equal to and beyond.

The PBGC has calculated mortality tables based on 10,000 lives. They are set forth in Appendix C to this part.

Table I.—*Mortality Rates for Healthy Male Participants*

[For plans that terminate on or after Sept., 2, 1974]

Age	q_x
11	0.000000
12	0.000000
13	0.000000
14	0.000000
15	0.001437
16	0.001414
17	0.001385
18	0.001351
19	0.001311
20	0.001267
21	0.001219
22	0.001167
23	0.001149
24	0.001129
25	0.001107
26	0.001083
27	0.001058
28	0.001083
29	0.001111
30	0.001141
31	0.001173
32	0.001208
33	0.001297
34	0.001398
35	0.001513
36	0.001643
37	0.001792
38	0.001948
39	0.002125
40	0.002327
41	0.002556
42	0.002818
43	0.003095
44	0.003410
45	0.003769
46	0.004180
47	0.004635
48	0.005103
49	0.005616
50	0.006196
51	0.006853
52	0.007543
53	0.008278
54	0.009033
55	0.009875
56	0.010814
57	0.011863
58	0.012952
59	0.014162
60	0.015509
61	0.017010
62	0.018685
63	0.020517
64	0.022562
65	0.024847
66	0.027232
67	0.029634
68	0.032073
69	0.034743
70	0.037667
71	0.040871
72	0.044504
73	0.048504
74	0.052913
75	0.057775
76	0.063142
77	0.068628
78	0.074648
79	0.081256
80	0.088518
81	0.096218
82	0.104310
83	0.112816
84	0.122079
85	0.132174
86	0.143179
87	0.155147
88	0.168208
89	0.182461
90	0.198030
91	0.215035
92	0.232983
93	0.252545
94	0.273878
95	0.297152
96	0.322553
97	0.349505
98	0.378365
99	0.410875
100	0.445768
101	0.483830
102	0.524301
103	0.568365
104	0.616382
105	0.668696
106	0.725745
107	0.786495
108	0.852659
109	0.924666
110	1.000000

Table II.—*Mortality Rates for Healthy Female Participants*

[For plans that terminate on or after Sept. 2, 1974]

Age	q_x
11	0.000000
12	0.000000
13	0.000000
14	0.000000
15	0.000000
16	0.000000
17	0.000000
18	0.000000
19	0.000000
20	0.001437
21	0.001414
22	0.001385
23	0.001351
24	0.001311
25	0.001267
26	0.001219
27	0.001167
28	0.001149
29	0.001129
30	0.001107
31	0.001083
32	0.001058
33	0.001083
34	0.001111
35	0.001141
36	0.001173
37	0.001208
38	0.001297
39	0.001398
40	0.001513
41	0.001643
42	0.001792
43	0.001948
44	0.002125
45	0.002327
46	0.002556
47	0.002818
48	0.003095
49	0.003410
50	0.003769
51	0.004180
52	0.004635
53	0.005103
54	0.005616
55	0.006196
56	0.006853
57	0.007543
58	0.008278
59	0.009033
60	0.009875
61	0.010814
62	0.011863
63	0.012952
64	0.014162
65	0.015509
66	0.017010
67	0.018685
68	0.020517
69	0.022562
70	0.024847
71	0.027232
72	0.029634
73	0.032073
74	0.034743
75	0.037667
76	0.040871
77	0.044504
78	0.048504
79	0.052913
80	0.05775
81	0.063142
82	0.068628
83	0.074648
84	0.081256
85	0.088518
86	0.096218
87	0.104310
88	0.112816
89	0.122079
90	0.132174
91	0.143179
92	0.155147
93	0.168208
94	0.182461
95	0.198030
96	0.215035
97	0.232983
98	0.252545
99	0.273878
100	0.297152
101	0.322553
102	0.349505
103	0.378365
104	0.410875
105	0.445768
106	0.483830
107	0.524301
108	0.568365
109	0.161382
110	1.000000

Table III.—*Mortality Rates for Disabled Male Participants*

[For plans that terminate on or after Sept. 2, 1974]

Age	q_x
11	0.000000
12	0.000000
13	0.000000
14	0.000000
15	0.001351
16	0.001311
17	0.001267
18	0.001219
19	0.001167
20	0.001149
21	0.001129
22	0.001107

Table III.—*Mortality Rates for Disabled Male Participants*—Continued

[For plans that terminate on or after Sept. 2, 1974]

Age	q_x
23	0.001083
24	0.001058
25	0.001083
26	0.001111
27	0.001141
28	0.001173
29	0.001208
30	0.001297
31	0.001398
32	0.001513
33	0.001643
34	0.001792
35	0.001948
36	0.002125
37	0.002327
38	0.002556
39	0.002818
40	0.003095
41	0.003410
42	0.003769
43	0.004180
44	0.004635
45	0.005103
46	0.005616
47	0.006196
48	0.006853
49	0.007543
50	0.008278
51	0.009033
52	0.009875
53	0.010814
54	0.011863
55	0.012952
56	0.014162
57	0.015509
58	0.017010
59	0.018685
60	0.020517
61	0.022562
62	0.024847
63	0.027232
64	0.029634
65	0.032073
66	0.034743
67	0.037667
68	0.040871
69	0.044504
70	0.048504
71	0.052913
72	0.057775
73	0.063142
74	0.068628
75	0.074648
76	0.081256
77	0.088518
78	0.096218
79	0.104310
80	0.112816
81	0.122079
82	0.132174
83	0.143179
84	0.155147
85	0.168208
86	0.182461
87	0.196030
88	0.215035
89	0.232983
90	0.252545
91	0.273878
92	0.297152
93	0.322553
94	0.349505
95	0.378865
96	0.410875
97	0.445768
98	0.483830
99	0.524301
100	0.568365
101	0.616382
102	0.668696
103	0.725745
104	0.786495
105	0.852659
106	0.924668
107	1.000000

Table IV.—*Mortality Rates for Disabled Female Participants*

[For plans that terminate on or after Sept. 2, 1974]

Age	q_x
11	0.000000
12	0.000000
13	0.000000
14	0.000000
15	0.000000
16	0.000000
17	0.000000
18	0.000000
19	0.000000
20	0.001351
21	0.001311
22	0.001267
23	0.001219
24	0.001167
25	0.001149
26	0.001129
27	0.001107
28	0.001083
29	0.001058
30	0.001083
31	0.001111
32	0.001141
33	0.001173
34	0.001208
35	0.001297
36	0.001398
37	0.001513
38	0.001643
39	0.001792
40	0.001948
41	0.002125
42	0.002327
43	0.002556
44	0.002818
45	0.003095
46	0.003410
47	0.003769
48	0.004180
49	0.004635
50	0.005103
51	0.005616
52	0.006196
53	0.006853
54	0.007543
55	0.008278
56	0.009033
57	0.009875
58	0.010814
59	0.011863
60	0.012952
61	0.1014162
62	0.1015509
63	0.1017010
64	0.1018685
65	0.1020517
66	0.1022562
67	0.1024847
68	0.1027232
69	0.1029634
70	0.1032073
71	0.1034743
72	0.1037667
73	0.1040871
74	0.1044504
75	0.1048504
76	0.1052913
77	0.1057775
78	0.1063142
79	0.1068628
80	0.1074648
81	0.1081256
82	0.1088518
83	0.1096219
84	0.1104310
85	0.112816
86	0.122079
87	0.132174
88	0.143179
89	0.155147
90	0.168208
91	0.182461
92	0.198030
93	0.215035
94	0.232983
95	0.252545
96	0.273878
97	0.297152
98	0.322553
99	0.349505
100	0.378865

Table IV.—*Mortality Rates for Disabled Female Participants*—Continued

[For plans that terminate on or after Sept. 2, 1974]

Age	q_x
101	0.410875
102	0.445768
103	0.483830
104	0.524301
105	0.568365
106	0.616382
107	0.668696
108	0.725745
109	0.786495
110	1.000000

Table V.—*Mortality Rates for Disabled Male Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Sept. 4, 1974 and before Dec. 1, 1980]

Age	q_x
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0510
21	0.0510
22	0.0510
23	0.0510
24	0.0510
25	0.0510
26	0.0514
27	0.0518
28	0.0510
29	0.0502
30	0.0495
31	0.0488
32	0.0482
33	0.0476
34	0.0473
35	0.0470
36	0.0469
37	0.0469
38	0.0471
39	0.0473
40	0.0476
41	0.0482
42	0.0488
43	0.0495
44	0.0504
45	0.0514
46	0.0525
47	0.0537
48	0.0550
49	0.0567
50	0.0580
51	0.0595
52	0.0612
53	0.0623
54	0.0645
55	0.0662
56	0.0679
57	0.0695
58	0.0712
59	0.0729
60	0.0746
61	0.0763
62	0.0780
63	0.0797
64	0.0813
65	0.0822
66	0.0829
67	0.0841
68	0.0851
69	0.0859
70	0.0873
71	0.0889
72	0.0907
73	0.0921
74	0.0933
75	0.0947
76	0.0967
77	0.0982
78	0.0991

Table V.—*Mortality Rates for Disabled Male Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Sept. 4, 1974 and before Dec. 1, 1980]

Age	q_x
79	0.1043
80	0.1128
81	0.1221
82	0.1322
83	0.1432
84	0.1551
85	0.1682
86	0.1825
87	0.1980
88	0.2150
89	0.2330
90	0.2525
91	0.2739
92	0.2972
93	0.3226
94	0.3495
95	0.3789
96	0.4109
97	0.4458
98	0.4838
99	0.5243
100	0.5684
101	0.6164
102	0.6687
103	0.7257
104	0.7865
105	0.8527
106	0.9247
107	1.0000

Table VI.—*Mortality Rates for Disabled Female Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Sept. 4, 1974 and before Dec. 1, 1980]

Age	q_x
11	0.0000
12	0.0000
13	0.0000
14	0.0000
15	0.0000
16	0.0000
17	0.0000
18	0.0000
19	0.0000
20	0.0426
21	0.0426
22	0.0426
23	0.0426
24	0.0426
25	0.0426
26	0.0427
27	0.0428
28	0.0430
29	0.0430
30	0.0432
31	0.0425
32	0.0419
33	0.0413
34	0.0409
35	0.0405
36	0.0402
37	0.0400
38	0.0399
39	0.0397
40	0.0396
41	0.0394
42	0.0393
43	0.0392
44	0.0392
45	0.0392
46	0.0392
47	0.0394
48	0.0396
49	0.0398
50	0.0401
51	0.0403
52	0.0407
53	0.0410
54	0.0413
55	0.0417
56	0.0420

Table VI.—*Mortality Rates for Disabled Female Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Sept. 4, 1974 and before Dec. 1, 1980]

Age	q_x
57	0.0424
58	0.0429
59	0.0435
60	0.0442
61	0.0449
62	0.0456
63	0.0465
64	0.0473
65	0.0484
66	0.0497
67	0.0508
68	0.0522
69	0.0530
70	0.0536
71	0.0538
72	0.0547
73	0.0552
74	0.0561
75	0.0567
76	0.0577
77	0.0590
78	0.0631
79	0.0686
80	0.0746
81	0.0813
82	0.0885
83	0.0962
84	0.1043
85	0.1128
86	0.1221
87	0.1322
88	0.1432
89	0.1551
90	0.1682
91	0.1825
92	0.1980
93	0.2150
94	0.2330
95	0.2525
96	0.2739
97	0.2972
98	0.3226
99	0.3495
100	0.3789
101	0.4109
102	0.4458
103	0.4838
104	0.5243
105	0.5684
106	0.6164
107	0.6687
108	0.7257
109	0.7865
110	0.0000

Table Va.—]*Mortality Rates for Disabled Male Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Dec. 1, 1980]

Age	q_x
11	.0000
12	.0000
13	.0000
14	.0000
15	.0000
16	.0000
17	.0000
18	.0000
19	.0000
20	.0483
21	.0483
22	.0483
23	.0483
24	.0483
25	.0483
26	.0461
27	.0436
28	.0411
29	.0386
30	.0362
31	.0339
32	.0320

Table Va.—]*Mortality Rates for Disabled Male Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Dec. 1, 1980]

Age	q_x
33	.0302
34	.0288
35	.0278
36	.0272
37	.0271
38	.0273
39	.0276
40	.0282
41	.0288
42	.0297
43	.0305
44	.0314
45	.0322
46	.0330
47	.0340
48	.0353
49	.0367
50	.0383
51	.0401
52	.0420
53	.0439
54	.0460
55	.0482
56	.0506
57	.0531
58	.0555
59	.0581
60	.0603
61	.0624
62	.0643
63	.0657
64	.0668
65	.0678
66	.0687
67	.0697
68	.0709
69	.0723
70	.0739
71	.0757
72	.0776
73	.0796
74	.0818
75	.0842
76	.0869
77	.0908
78	.0962
79	.1043
80	.1128
81	.1221
82	.1322
83	.1432
84	.1551
85	.1682
86	.1825
87	.1980
88	.2150
89	.2330
90	.2525
91	.2739
92	.2972
93	.3226
94	.3495
95	.3789
96	.4109
97	.4458
98	.4838
99	.5243
100	.5684
101	6164
102	6687
103	7257
104	7865
105	8527
106	9247
107	1 0000

Table VIa.—]*Mortality Rates for Disabled Female Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Dec. 1, 1980]

Age	q_x
11	.0000
12	.0000

Table VIa.—*Mortality Rates for Disabled Female Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Dec. 1, 1980]

Age	q_x
13	.0000
14	.0000
15	.0000
16	.0000
17	.0000
18	.0000
19	.0000
20	.0263
21	.0263
22	.0263
23	.0263
24	.0263
25	.0263
26	.0257
27	.0253
28	.0247
29	.0242
30	.0237
31	.0232
32	.0227
33	.0222
34	.0218
35	.0214
36	.0212
37	.0210
38	.0208
39	.0208
40	.0209
41	.0210
42	.0213
43	.0216
44	.0219
45	.0224
46	.0229
47	.0235
48	.0242
49	.0249
50	.0257
51	.0264
52	.0272
53	.0281
54	.0288
55	.0295
56	.0301
57	.0307
58	.0315
59	.0323
60	.0331
61	.0339
62	.0347
63	.0355
64	.0362
65	.0370
66	.0378
67	.0386
68	.0394
69	.0402
70	.0411
71	.0421
72	.0433
73	.0447
74	.0465
75	.0492
76	.0529
77	.0578
78	.0631
79	.0686
80	.0746
81	.0813
82	.0885
83	.0962
84	.1043
85	.1128
86	.1221
87	.1322
88	.1432
89	.1551
90	.1682
91	.1825
92	.1980
93	.2150
94	.2330
95	.2525
96	.2739
97	.2972
98	.3226
99	.3495
100	.3789
101	.4109

Table VIa.—*Mortality Rates for Disabled Female Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Dec. 1, 1980]

Age	q_x
102	.4458
103	.4838
104	.5243
105	.5684
106	.6164
107	.6687
108	.7257
109	.7865
110	1.000

Appendix B—Interest Rates and Quantities Used To Value Immediate and Deferred Annuities

The interest rates and quantities for Sections I through XXIII are to be used in conjunction with the Interim Regulation on Valuation of Plan Benefits for plans that terminate after September 2, 1974 and before the effective date of the final regulation on the Valuation of Plan Benefits. The interest rates and factors for Sections XXIV et seq. are to be used with the final regulation on Valuation of Plan Benefits for plans that terminate on or after the effective date of the final regulation.

I. *The following interest rates and quantities used to value benefits shall be effective for plans which terminate on or after September 2, 1974 and on or before September 30, 1975:*

Table I.—*Interest rates for valuing immediate annuities.* An interest rate of 8 percent shall be used to value immediate annuities, to compute the quality "G" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used to value deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0725$
(2) $k_2 = 1.0575$
(3) $k_3 = 1.0425$
(4) $n_1 = 7$
(5) $n_2 = 8$

II. *The following interest rates and quantities used to value benefits shall be effective for plans which terminate on or after October 1, 1975 and on or before December 31, 1975:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 7¾ percent shall be used to value immediate annuities, to compute the quantity "G" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used to value deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0725$
(2) $k_2 = 1.0575$
(3) $k_3 = 1.0425$
(4) $n_1 = 7$
(5) $n_2 = 7$

III. *The following interest rates and quantities used to value benefits shall be effective for plans which terminate on or after January 1, 1976 and on or before February 29, 1976:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 8 percent shall be used to value immediate annuities, to compute the quantity "G" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used to value deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0725$
(2) $k_2 = 1.0525$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 10$

IV. *The following interest rates and quantities used to value benefits shall be effective for plans which terminate on or after March 1, 1976 and on or before May 31, 1976:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 7¼ percent shall be used to value immediate annuities, to compute the quantity "G" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used to value deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.07$
(2) $k_2 = 1.05$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 10$

V. *The following interest rates and quantities used to value benefits shall be effective for plans which terminate on or after June 1, 1976 and on or before August 31, 1976:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 7¼ percent shall be used to value immediate annuities, to compute the quantity "G" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used to value deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0675$

(2) $k_2=1.0475$
(3) $k_3=1.035$
(4) $n_1=7$
(5) $n_2=10$

VI.—*The following interest rates and quantities used to value benefits shall be effective for plans which terminate on or after September 1, 1976 and on or before November 30, 1976:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 7 percent shall be used to value immediate annuities, to compute the quantity "G" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used to value deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.06$
(2) $k_2=1.0475$
(3) $k_3=1.035$
(4) $n_1=8$
(5) $n_2=10$

VII. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after December 1, 1976 but before March 1, 1977:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 7 percent shall be used to value immediate annuities, to compute the quantity "G" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used to value deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.0625$
(2) $k_2=1.0475$
(3) $k_3=1.0375$
(4) $n_1=7$
(5) $n_2=10$

VIII. *The following interest rates and quantities used to value deferred annuities shall be effective for plans that terminate on or after March 1, 1977, but before June 1, 1977:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 7 percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantites used for valuing deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.06$
(2) $k_2=1.0475$
(3) $k_3=1.035$
(4) $n_1=8$
(5) $n_2=10$

IX. *The following interest rates and quantities used to value deferred annuities shall be effective for plans that terminate on or after June 1, 1977, but before December 1, 1977:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 6¾ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8

Table III.—*Interest rates and quantitites used for valuing deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.0625$
(2) $k_2=1.045$
(3) $k_3=1.0375$
(4) $n_1=8$
(5) $n_2=10$

X. *The following interest rates and quantities used to value deferred annuities shall be effective for plans that terminate on or after December 1, 1977, but before March 1, 1978:*

Table I.—*Interest rate for valuing immediate annuities.* An interest rate of 6¾ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6, and for valuing both portions of a cash refund annuity.

Table II.—*Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

Table III.—*Interest rates and quantities used for valuing deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.0625$
(2) $k_2=1.045$
(3) $k_3=1.0375$
(4) $n_1=8$
(5) $n_2=10$

XI. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after March 1, 1978, but before June 1, 1978.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 7 percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and for valuing both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.0625$
(2) $k_2=1.0475$
(3) $k_3=1.0375$
(4) $n_1=7$
(5) $n_2=10$

XII. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after June 1, 1978, but before September 1, 1978.*

I. *Interest rate for valuing immediate annuities.* An interest rate of 7¼ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and for valuing both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.* An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.* The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.0675$
(2) $k_2=1.0475$
(3) $k_3=1.035$
(4) $n_1=7$
(5) $n_2=10$

XIII. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after September 1, 1978, but before March 1, 1979.*

I. *Interest rate for valuing immediate annuities.*—An interest rate of 7¼ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and for valuing both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*—An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*—The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.0675$.
(2) $k_2=1.0475$.
(3) $k_3=1.035$.
(4) $n_1=7$.
(5) $n_2=10$.

XIV. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after March 1, 1979, but before June 1, 1979.*

I. *Interest rates for valuing immediate annuities.*

An interest rate of 7½ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and for valuing both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1=1.0675$
(2) $k_2=1.055$
(3) $k_3=1.04$
(4) $n_1=7$
(5) $n_2=8$

XV. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after June 1, 1979, but before September 1, 1979.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 7½ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and for valuing both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0675$
(2) $k_2 = 1.055$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

XVI. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after September 1, 1979, but before December 1, 1979.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 7¾ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and for valuing both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.07$
(2) $k_2 = 1.0575$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

XVII. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after December 1, 1979, but before March 1, 1980.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 8½ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and for valuing both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0775$.
(2) $k_2 = 1.065$.
(3) $k_3 = 1.04$.
(4) $n_1 = 7$.
(5) $n_2 = 8$.

XVIII. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after March 1, 1980, but before June 1, 1980.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 8¾ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and to value both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.08$
(2) $k_2 = 1.0675$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

XIX. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after June 1, 1980, but before September 1, 1980.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 8¾ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and to value both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.08$
(2) $k_2 = 1.0675$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

XX. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after September 1, 1980, but before December 1, 1980.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 9 percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and to value both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0825$
(2) $k_2 = 1.07$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

XXI. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after December 1, 1980 and before January 1, 1981.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 9¼ percent shall be used to value immediate annuities to compute the quantity "G_y" in § 2610.6 and to value both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.085$
(2) $k_2 = 1.0725$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

XXII. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after January 1, 1981 and before February 1, 1981.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 9½ percent shall be used to value immediate annuities, to compute the quantity "G_y" in § 2610.6 and to value both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity pursuant to § 2610.8.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities pursuant to § 2610.6:

(1) $k_1 = 1.0875$
(2) $k_2 = 1.075$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

XXIII. *The following interest rates and quantities used to value benefits shall be effective for plans that terminate on or after February 1, 1981.*

I. *Interest rate for valuing immediate annuities.*

An interest rate of 9¾ percent shall be used to value immediate annuities, to compute the quantity "G_y" for deferred annuities and to value both portions of a cash refund annuity.

II. *Interest rate for valuing death benefits.*

An interest rate of 5 percent shall be used to value death benefits other than the decreasing term insurance portion of a cash refund annuity.

III. *Interest rates and quantities used for valuing deferred annuities.*

The following factors shall be used to value deferred annuities:

(1) $k_1 = 1.09$
(2) $k_2 = 1.0775$
(3) $k_3 = 1.04$
(4) $n_1 = 7$
(5) $n_2 = 8$

Appendix C—Mortality Rate Tables

The following tables of l_x's are based on 10,000 lives. These tables correspond to the mortality rates, q_x's given in Appendix A.

Table I.—*Mortality Table for Healthy Male Participants*

[For plans that terminate on or after Sept. 2, 1974]

Age x	l_x
15	10,000.0000
16	9,985.6300
17	9,971.5103
18	9,957.6998
19	9,944.2469
20	9,931.2100
21	9,918.6272
22	9,906.5364
23	9,894.9755
24	9,883.6062
25	9,872.4476
26	9,861.5188
27	9,850.8388
28	9,840.4166
29	9,829.7594
30	9,818.8385
31	9,807.6352
32	9,796.1308
33	9,784.2971
34	9,771.6069
35	9,757.9462
36	9,743.1824
37	9,727.1744
38	9,709.7433
39	9,690.8287
40	9,670.2357
41	9,647.7331
42	9,623.0735
43	9,595.9557
44	9,566.2562
45	9,533.6353
46	9,497.7030
47	9,458.0026
48	9,414.1648
49	9,366.1243
50	9,313.5241
51	9,255.8175
52	9,192.3874
53	9,123.0492
54	9,047.5286
55	8,965.8023
56	8,877.2650
57	8,781.2663
58	8,677.0941
59	8,564.7084
60	8,443.4150
61	8,312.4661
62	8,171.0711
63	8,018.3946
64	7,853.8812
65	7,676.6619
66	7,485.9394
67	7,282.0823
68	7,066.2851
69	6,839.6481
70	6,602.0182
71	6,353.3400
72	6,093.6726
73	5,822.4798
74	5,540.0662
75	5,246.9247
76	4,943.7836
77	4,631.6232
78	4,313.7642
79	3,991.7503
80	3,667.3966
81	3,342.7660
82	3,021.1317
83	2,705.9975
84	2,400.7177
85	2,107.6405
86	1,829.0652
87	1,567.1815
88	1,324.0380
89	1,101.3242
90	900.3755
91	722.0741
92	566.8029
93	434.7475
94	324.9542
95	235.9564
96	165.8415
97	112.3488
98	73.0823
99	45.3940
100	26.7427
101	14.8217
102	7.6505
103	3.6393
104	1.5708

Table I.—*Mortality Table for Healthy Male Participants*—Continued

[For plans that terminate on or after Sept. 2, 1974]

Age x	l_x
105	0.6026
106	0.1996
107	0.0547
108	0.0117
109	0.0017
110	0.0001

Table II.—*Mortality Table for Healthy Female Participants*

[For plans that terminate on or after Sept. 2, 1974]

Age x	l_x
15	10,000.0000
16	10,000.0000
17	10,000.0000
18	10,000.0000
19	10,000.0000
20	10,000.0000
21	9,965.8300
22	9,971.5103
23	9,957.6998
24	9,944.2469
25	9,931.2100
26	9,918.6272
27	9,906.5364
28	9,894.9755
29	9,883.6062
30	9,872.4476
31	9,861.5188
32	9,850.8388
33	9,840.4166
34	9,829.7594
35	9,818.8385
36	9,807.6352
37	9,796.1308
38	9,784.2971
39	9,771.6069
40	9,757.9462
41	9,743.1824
42	9,727.1744
43	9,709.7433
44	9,690.8287
45	9,670.2357
46	9,647.7331
47	9,623.0735
48	9,595.9557
49	9,566.2562
50	9,533.6353
51	9,497.7030
52	9,458.0026
53	9,414.1648
54	9,366.1243
55	9,313.5241
56	9,255.8175
57	9,192.3874
58	9,123.0492
59	9,047.5286
60	8,965.8023
61	8,877.2650
62	8,781.2663
63	8,677.0941
64	8,564.7084
65	8,443.4150
66	8,312.4661
67	8,171.0711
68	8,018.3946
69	7,853.8812
70	7,676.6819
71	7,485.9394
72	7,282.0823
73	7,066.2851
74	6,839.6481
75	6,602.0182
76	6,353.3400
77	6,093.6726
78	5,822.4798
79	5,540.0662
80	5,246.9247
81	4,943.7836
82	4,631.6232
83	4,313.7642
84	3,991.7503
85	3,667.3966
86	3,342.7660
87	3,021.1317
88	2,705.9975

Table II.—*Mortality Table for Healthy Female Participants*—Continued

[For plans that terminate on or after Sept. 2, 1974]

Age x	l_x
89	2,400.7177
90	2,107.6405
91	1,829.0652
92	1,567.1815
93	1,324.0380
94	1,101.3242
95	900.3755
96	722.0741
97	566.8029
98	434.7475
99	324.9542
100	235.9564
101	165.8415
102	112.3488
103	73.0823
104	45.3940
105	26.7427
106	14.8217
107	7.6505
108	3.6393
109	1.5708
110	0.6026

Table III.—*Mortality Table for Disabled Male Participants not Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after September 2, 1974]

Age x	l_x
15	10,000.0000
16	9,986.4900
17	9,973.3977
18	9,960.7614
19	9,948.6192
20	9,937.0092
21	9,925.5916
22	9,914.3856
23	9,903.4104
24	9,892.6850
25	9,882.2185
26	9,871.5161
27	9,860.5488
28	9,849.2979
29	9,837.7447
30	9,825.8607
31	9,813.1166
32	9,799.3979
33	9,784.5714
34	9,768.4953
35	9,750.9902
36	9,731.9953
37	9,711.3148
38	9,688.7166
39	9,663.9522
40	9,636.7192
41	9,606.8936
42	9,574.1341
43	9,538.0492
44	9,498.1802
45	9,454.1561
46	9,405.9115
47	9,353.0879
48	9,295.1362
49	9,231.4366
50	9,161.8039
51	9,085.9625
52	9,003.8890
53	8,914.9756
54	8,818.5691
55	8,713.9544
56	8,601.0913
57	8,479.2626
58	8,347.7774
59	8,205.7817
60	8,052.4567
61	7,887.2444
62	7,709.2924
63	7,517.7396
64	7,313.0165
65	7,096.3026
66	6,868.7029
67	6,630.0636
68	6,380.3290
69	6,119.5586
70	5,847.2138
71	5,563.6005

Table III.—*Mortality Table for Disabled Male Participants not Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after September 2, 1974]

Age x	l_x
72	5,269.2137
73	4,964.7849
74	4,651.2985
75	4,332.0892
76	4,008.7074
77	3,682.9759
78	3,356.9662
79	3,033.9656
80	2,717.4926
81	2,410.9160
82	2,116.5938
83	1,836.8351
84	1,573.8389
85	1,329.6625
86	1,106.0026
87	904.2003
88	725.1415
89	569.2107
90	436.5943
91	326.3346
92	236.9587
93	166.5459
94	112.6260
95	73.3927
96	45.5868
97	26.8563
98	14.8846
99	7.6830
100	3.6548
101	1.5775
102	0.6052
103	0.2005
104	0.0550
105	0.0117
106	0.0017
107	0.0001

Table IV.—*Mortality Table for Disabled Female Participants not Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Sept. 2, 1974]

Age x	l_x
15	10,000.0000
16	10,000.0000
17	10,000.0000
18	10,000.0000
19	10,000.0000
20	10,000.0000
21	9,986.4900
22	9,973.3977
23	9,960.7614
24	9,948.6192
25	9,937.0092
26	9,925.5916
27	9,914.3856
28	9,903.4104
29	9,892.6850
30	9,882.2185
31	9,871.5161
32	9,860.5488
33	9,849.2979
34	9,837.7447
35	9,825.8607
36	9,813.1166
37	9,799.3979
38	9,784.5714
39	9,768.4953
40	9,750.9902
41	9,731.9953
42	9,711.3148
43	9,688.7166
44	9,663.9522
45	9,636.7192
46	9,606.8936
47	9,574.1341
48	9,538.0492
49	9,498.1802
50	9,454.1561
51	9,405.9115
52	9,353.0879
53	9,295.1362
54	9,231.4366
55	9,161.8039

Table IV.—*Mortality Table for Disabled Female Participants not Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Sept. 2, 1974]

Age x	l_x
56	9,085.9625
57	9,003.8890
58	8,914.9758
59	8,818.5691
60	8,713.9544
61	8,601.0913
62	8,479.2826
63	8,347.7774
64	8,205.7817
65	8,052.4567
66	7,887.2444
67	7,709.2924
68	7,517.7396
69	7,313.0165
70	7,096.3026
71	6,868.7029
72	6,630.0636
73	6,380.3290
74	6,119.5586
75	5,847.2138
76	5,563.6005
77	5,269.2137
78	4,964.7849
79	4,651.2985
80	4,332.0892
81	4,008.7074
82	3,682.9759
83	3,356.9662
84	3,033.9656
85	2,717.4926
86	2,410.9160
87	2,116.5938
88	1,836.8351
89	1,573.8389
90	1,329.6625
91	1,106.0026
92	904.2003
93	725.1415
94	569.2107
95	436.5943
96	326.3346
97	236.9587
98	166.5459
99	112.6260
100	73.3927
101	45.5868
102	26.8563
103	14.8846
104	7.6830
105	3.6548
106	1.5775
107	0.6052
108	0.2005
109	0.0550
110	0.0117

Table V.—*Mortality Table for Disabled Male Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Sept. 2, 1974 and before Dec. 1, 1980]

Age x	l_x
15	10,000.0000
16	10,000.0000
17	10,000.0000
18	10,000.0000
19	10,000.0000
20	10,000.0000
21	9,490.0000
22	9,006.0100
23	8,546.7035
24	8,110.8216
25	7,697.1697
26	7,304.6140
27	6,929.1568
28	6,570.2265
29	6,235.1449
30	5,922.1406
31	5,628.9946

Table V.—*Mortality Table for Disabled Male Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Sept. 2, 1974 and before Dec. 1, 1980]

Age x	l_x
32	5,354.2997
33	5,096.2225
34	4,853.6423
35	4,624.0650
36	4,406.7339
37	4,200.0581
38	4,003.0754
39	3,814.5305
40	3,634.1032
41	3,461.1199
42	3,294.2939
43	3,133.5324
44	2,978.4225
45	2,828.3100
46	2,682.9349
47	2,542.0808
48	2,405.5711
49	2,273.2647
50	2,144.3706
51	2,019.9971
52	1,899.8073
53	1,783.5391
54	1,672.4246
55	1,564.5532
56	1,460.9798
57	1,361.7793
58	1,267.1356
59	1,176.9155
60	1,091.1184
61	1,009.7210
62	932.6793
63	859.9303
64	791.3939
65	727.0536
66	667.2898
67	611.9715
68	560.5047
69	512.8058
70	468.7558
71	427.8334
72	389.7990
73	354.4442
74	321.7999
75	291.7760
76	264.1448
77	238.6020
78	215.1713
79	193.8478
80	173.6295
81	154.0441
82	135.2353
83	117.3572
84	100.5516
85	84.9560
86	70.6664
87	57.7686
88	46.3314
89	36.3701
90	27.8959
91	20.8522
92	15.1406
93	10.6410
94	7.2082
95	4.6889
96	2.9123
97	1.7156
98	.9508
99	.4908
100	.2335
101	.1008
102	.0387
103	.0128
104	.0035
105	.0007
106	.0001
107	.0000

Table Va.—*Mortality Table for Disabled Male Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Dec. 1, 1980]

Age x	l_x
15	10000.0000
16	10000.0000

Table Va.—*Mortality Table for Disabled Male Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Dec. 1, 1980]

Age x	l_x
17	10000.0000
18	10000.0000
19	10000.0000
20	10000.0000
21	9517.0000
22	9057.3289
23	8619.8599
24	8203.5207
25	7807.2906
26	7430.1965
27	7087.6663
28	6778.6441
29	6500.0418
30	6249.1402
31	6022.9213
32	5818.7443
33	5632.5445
34	5462.4416
35	5305.1233
36	5157.6409
37	5017.3531
38	4881.3828
39	4748.1210
40	4617.0729
41	4486.8714
42	4357.6495
43	4228.2274
44	4099.2664
45	3970.5495
46	3842.6978
47	3715.8867
48	3589.5485
49	3462.8375
50	3335.7513
51	3207.9920
52	3079.3516
53	2950.0168
54	2820.5130
55	2690.7694
56	2561.0743
57	2431.4839
58	2302.3721
59	2174.5905
60	2048.2468
61	1924.7375
62	1804.6339
63	1688.5959
64	1577.6552
65	1472.2678
66	1372.4480
67	1278.1609
68	1189.0731
69	1104.7678
70	1024.8931
71	949.1535
72	877.3025
73	809.2239
74	744.6096
75	683.8842
76	626.3012
77	571.8756
78	519.9493
79	469.9302
80	420.9165
81	373.4371
82	327.8404
83	284.4999
84	243.7595
85	205.9524
86	171.3112
87	140.0469
88	112.3176
89	88.1693
90	67.6259
91	50.5503
92	36.7046
93	25.7960
94	17.4742
95	11.3670
96	7.0600
97	4.1591
98	2.3050
99	1.1898
100	.5660
101	.2443
102	.0937
103	.0310
104	.0085
105	.0018

Table Va.—*Mortality Table for Disabled Male Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Dec. 1, 1980]

Age x	l_x
106	.0003

Table VI.—*Mortality Table for Disabled Female Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Sept. 2, 1974, and before Dec. 1, 1980]

Age x	l_x
15	10,000.0000
16	10,000.0000
17	10,000.0000
18	10,000.0000
19	10,000.0000
20	10,000.0000
21	9,574.0000
22	9,166.1476
23	8,775.6697
24	8,401.8262
25	8,043.9084
26	7,701.2379
27	7,372.3950
28	7,056.8565
29	6,753.4117
30	6,463.0150
31	6,183.8128
32	5,921.0008
33	5,672.9109
34	5,438.6197
35	5,216.1802
36	5,004.9249
37	4,803.7269
38	4,611.5778
39	4,427.5758
40	4,251.8010
41	4,083.4297
42	3,922.5426
43	3,768.3867
44	3,620.6659
45	3,478.7358
46	3,342.3694
47	3,211.3485
48	3,084.8214
49	2,962.6625
50	2,844.7485
51	2,730.6741
52	2,620.6279
53	2,513.9683
54	2,410.8956
55	2,311.3256
56	2,214.9433
57	2,121.9157
58	2,031.9465
59	1,944.7760
60	1,860.1782
61	1,777.9583
62	1,698.1260
63	1,620.6934
64	1,545.3312
65	1,472.2370
66	1,400.9807
67	1,331.3520
68	1,263.7193
69	1,197.7532
70	1,134.2723
71	1,073.4753
72	1,015.7223
73	960.1623
74	907.1613
75	856.2696
76	807.7191
77	761.1137
78	716.2080
79	671.0153
80	624.9837
81	578.3599
82	531.3392
83	484.3157
84	437.7245
85	392.0698
86	347.8443
87	305.3725
88	265.0023
89	227.0540

Table VI.—*Mortality Table for Disabled Female Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Sept. 2, 1974, and before Dec. 1, 1980]

Age x	l_x
90	191.8379
91	159.5706
92	130.4491
93	104.6202
94	82.1269
95	62.9913
96	47.0860
97	34.1891
98	24.0281
99	16.2766
100	10.5879
101	6.5761
102	3,9740
103	2,1470
104	1.1083
105	.5272
106	.2275
107	.0873
108	.0289
109	.0079
110	.0017

Table VIa.—*Mortality Table for Disabled Female Participants Receiving Social Security Disability Benefit Payments*

[For plans that terminate on or after Dec. 1, 1980]

Age x	l_x
15	10000.0000
16	10000.0000
17	10000.0000
18	10000.0000
19	10000.0000
20	10000.0000
21	9737.0000
22	9480.9169
23	9231.5688
24	8988.7785
25	8752.3737
26	8522.1862
27	8303.1660
28	8093.0959
29	7893.1965
30	7702.1811
31	7519.6394
32	7345.1838
33	7178.4481
34	7019.0866
35	6866.0705
36	6719.1366
37	6576.6909
38	6438.5804
39	6304.6579
40	6173.5210
41	6044.4944
42	5917.5600
43	5791.5160
44	5666.4193
45	5542.3247
46	5418.1766
47	5294.1004
48	5169.6890
49	5044.5825
50	4918.9724
51	4792.5548
52	4666.0314
53	4539.1153
54	4411.5662
55	4284.5131
56	4158.1200
57	4032.9605
58	3909.1487
59	3786.0105
60	3663.7223
61	3542.4531
62	3422.3640
63	3303.6079
64	3186.3289
65	3070.9847
66	2957.3583
67	2845.5701
68	2735.7311
69	2627.9433

Table VIa.—*Mortality Table for Disabled Female Participants Receiving Social Security Disability Benefit Payments*—Continued

[For plans that terminate on or after Dec. 1, 1980]

Age x	l_x
70	2522.3000
71	2418.6335
72	2316.8090
73	2216.4912
74	2117.4140
75	2018.9543
76	1919.6217
77	1818.0737
78	1712.9891
79	1604.6995
80	1494.8034
81	1383.2910
82	1270.8295
83	1158.3611
84	1046.9267
85	937.7323
86	831.9561
87	730.3742
88	633.8188
89	543.0559
90	458.8279
91	381.6531
92	312.0014
93	250.2251
94	196.4267
95	150.6593
96	112.6178
97	81.7718
98	57.4692
99	38.9297
100	25.3237
101	15.7286
102	9.2657
103	5.1351
104	2.6507
105	1.2609
106	.5442
107	.2088
108	.0692
109	.0190
110	.0041

Appendix D—Tables Used To Determine Expected Retirement Age

Table I-79.—*Selection of Retirement Rate Category (for Plans With a Valuation Date After Dec. 31, 1978, and Before Jan. 1, 1980)*

Participant reaches NRA in year	Participant's retirement rate category is			
	Low (table II-A)	Medium (table II-B)		High (table II-C)
	If monthly benefit at NRA is			
	Less than	From	To	Greater than
1980	$181	$181	$772	$772
1981	186	186	826	826
1982	191	191	875	875
1983	197	197	919	919
1984	203	203	965	965
1985	209	209	1,013	1,013
1986	215	215	1,064	1,064
1987 and later	225	225	1,117	1,117

Table I-80.—*Selection of Retirement Rate Category (for Plans With a Valuation Date After Dec. 31, 1979, and Before Jan. 1, 1981)*

Participant reaches NRA in year	Participant's retirement rate category is			
	Low (table II-A)	Medium (table II-B)		High (table II-C)
	If monthly benefit at NRA is			
	Less than	From	To	Greater than
1981	$210	$210	$884	$884
1982	232	232	978	978
1983	254	254	1,070	1,070
1984	275	275	1,156	1,156
1985 or later	294	294	1,239	1,239

Table I-81.—*Selection of Retirement Rate Category (for Plans With a Valuation Date After Dec. 31, 1980, and Before Jan. 1, 1982).*

Participant reaches NRA in year	Participant's retirement rate category is			
	Low (table II-A)	Medium (table II-B)		High (table II-C)
	If monthly benefit of NRA is			
	Less than	From	To	Greater than
1982	$236	$236	$995	$995
1983	259	259	1,094	1,094
1984	283	283	1,192	1,192
1985	305	305	1,288	1,288

Table I-81.—*Selection of Retirement Rate Category (for Plans With a Valuation Date After Dec. 31, 1980, and Before Jan. 1, 1982).—Continued*

Participant reaches NRA in year	Participant's retirement rate category is					
	Low (table II-A)		Medium (table II-B)		High (table II-C)	
	If monthly benefit of NRA is					
	Less than		From	To	Greater than	
1986		327	327	1,288		1,288
1987		350	350	1,288		1,288
1988		374	374	1,288		1,288
1989		400	400	1,288		1,288
1990		428	428	1,288		1,288
1991 or later		458	458	1,288		1,288

Table II-A.—*Expected Retirement Ages for Individuals in the Low Category*

Participant's[1]	Normal retirement age										
	60	61	62	63	64	65	66	67	68	69	70
42	53	53	53	54	54	54	54	54	54	54	54
43	53	54	54	54	55	55	55	55	55	55	55
44	54	54	55	55	55	55	55	56	56	56	56
45	54	55	55	56	56	56	56	56	56	56	56
46	55	55	56	56	56	57	57	57	57	57	57
47	56	56	56	57	57	57	57	57	57	57	57
48	56	57	57	57	58	58	58	58	58	58	58
49	56	57	58	58	58	58	59	59	59	59	59
50	57	57	58	58	59	59	59	59	59	59	59
51	57	58	58	59	59	60	60	60	60	60	60
52	58	58	59	59	60	60	60	60	60	60	60
53	58	59	59	60	60	61	61	61	61	61	61
54	58	59	60	60	61	61	61	61	61	61	61
55	59	59	60	61	61	61	62	62	62	62	62
56	59	60	60	61	61	62	62	62	62	62	62
57	59	60	61	61	62	62	62	62	62	62	62
58	59	60	61	61	62	62	63	63	63	63	63
59	59	60	61	62	62	63	63	63	63	63	63
60	60	60	61	62	62	63	63	63	63	63	63
61		61	61	62	63	63	63	63	64	64	64
62			62	62	63	63	63	64	64	64	64
63				63	63	64	64	65	65	65	65
64					64	64	65	65	65	65	65
65						65	65	65	65	65	65
66							66	66	66	66	66
67								67	67	67	67
68									68	68	68
69										69	69
70											70

[1] Participant's earliest retirement age at valuation date.

Table II-B.—*Expected Retirement Ages for Individuals in the Medium Category*

Participant's[1]	Normal retirement age										
	60	61	62	63	64	65	66	67	68	69	70
42	49	49	49	49	49	49	49	49	49	49	49
43	50	50	50	50	50	50	50	50	50	50	50
44	50	51	51	51	51	51	51	51	51	51	51
45	51	51	52	52	52	52	52	52	52	52	52
46	52	52	52	53	53	53	53	53	53	53	53
47	53	53	53	53	53	54	54	54	54	54	54
48	54	54	54	54	54	54	54	54	54	54	54
49	54	55	55	55	55	55	55	55	55	55	55
50	55	55	56	56	56	56	56	56	56	56	56
51	56	56	56	57	57	57	57	57	57	57	57
52	56	57	57	57	57	58	58	58	58	58	58
53	57	57	58	58	58	58	58	58	58	58	58

Table II-B.—*Expected Retirement Ages for Individuals in the Medium Category—Continued*

Participant's[1]	Normal retirement age										
	60	61	62	63	64	65	66	67	68	69	70
54	57	58	58	59	59	59	59	59	59	59	59
55	58	58	59	59	59	60	60	60	60	60	60
56	58	59	59	60	60	60	60	60	60	60	60
57	59	59	60	60	61	61	61	61	61	61	61
58	59	60	60	61	61	61	61	61	61	61	61
59	59	60	61	61	62	62	62	62	62	62	62
60	60	60	61	62	62	62	62	62	62	62	62
61		61	61	62	62	63	63	63	63	63	63
62			62	62	62	63	63	63	63	63	63
63				63	63	64	64	64	64	64	64
64					64	64	64	64	64	64	64
65						65	65	65	65	65	65
66							66	66	66	66	66
67								67	67	67	67
68									68	68	68
69										69	69
70											70

[1] Participant's earliest retirement age at valuation date.

Table II-C.—*Expected Retirement Ages for Individuals in the High Category*

Participant's[1]	Normal retirement age										
	60	61	62	63	64	65	66	67	68	69	70
42	46	46	46	46	46	47	47	47	47	47	47
43	47	47	47	47	47	47	47	47	47	47	47
44	48	48	48	48	48	48	48	48	48	48	48
45	49	49	49	49	49	49	49	49	49	49	49
46	50	50	50	50	50	50	50	50	50	50	50
47	51	51	51	51	51	51	51	51	51	51	51
48	52	52	52	52	52	52	52	52	52	52	52
49	53	53	53	53	53	53	53	53	35	53	53
50	54	54	54	54	54	54	54	54	54	54	54
51	54	55	55	55	55	55	55	55	55	55	55
52	55	55	56	56	56	56	56	56	56	56	56
53	56	56	56	57	57	57	57	57	57	57	57
54	57	57	57	57	57	58	58	58	58	58	58
55	57	58	58	58	58	58	58	58	58	58	58
56	58	58	59	59	59	59	59	59	59	59	59
57	58	59	59	60	60	60	60	60	60	60	60
58	59	59	60	60	60	60	61	61	61	61	61
59	59	60	60	61	61	61	61	61	61	61	61
60	60	60	61	61	61	62	62	62	62	62	62
61		61	61	62	62	62	62	62	62	62	62
62			62	62	62	62	62	62	62	62	62
63				63	63	63	64	64	64	64	64
64					64	64	64	64	64	64	64
65						65	65	65	65	65	65
66							66	66	66	66	66
67								67	67	67	67
68									68	68	68
69										69	69
70											70

[1] Participant's earliest retirement age at valuation date.

Appendix E—Examples of XRA Calculations

The following examples illustrate the procedures under Subpart D used to determine the expected retirement age. These examples use the tables in Appendix C to this part.

Example 1—A plan participant, Q, is employed by a business which terminates its pension plan on September 1, 1980, and the plan is trusteed by PBGC. The business continues under the original employer and Q is still employed by the business. Q is fully vested when the plan terminates and is entitled to receive a guaranteed benefit from the plan of $350 per month at age 65, the normal retirement age. The normal form of benefit is a 10 year certain and continuous annuity. Q is age 56 at the date of plan termination. The plan requires a participant to be age 55 and have 10 years of service to be eligible to receive his or her benefit early. Since Q has 10 years of service, Q will be eligible for early retirement at age 55.

Since Q continues to be employed by the employer who was the plan sponsor, normal plan practice requires Q to leave employment in order to receive a benefit. Therefore, the procedure in § 2610.63 is used to determine the XRA.

The information needed to proceed under § 2610.63 is—

(1) The amount of the guaranteed monthly benefit—$350;

(2) The calendar year in which Q reaches NRA—1989;

(3) Q's NRA—65; and

(4) Q's earliest retirement age at valuation date—56.

Using Table I–80 of Appendix C and items (1) and (2), we find that Q falls into the "medium" retirement rate category. This means that Table II–B is used to find Q's XRA. Entering Table II–B and using items (3) and (4), reading horizontally across from age 56 (the earliest retirement age at valuation date) and vertically down from age 65 (the normal retirement age), the table indicates that Q's XRA is 60.

Q's benefit is then valued by using § 2610.46(b)(2) to determine the present value of $350, reduced by the plan's early retirement reduction factors to age 60, payable as a 10 year certain and continuous annuity deferred to age 60.

Example 2—The XYZ corporation has one pension plan covering two divisions, A and B. XYZ terminates the pension plan on December 1, 1980, and PBGC places the plan into trusteeship. Division A is closed on the date of plan termination, which is the valuation date, and Division B is sold to a new owner. The plan contains no provisions which prevent a participant from receiving a benefit while employed by a successor employer.

Participant S, age 60 at the termination date, left employment with Division A of XYZ in 1976. S is entitled to a guaranteed benefit of $100 per month, payable as a joint and survivor annuity at his normal retirement age, age 65. The plan provides that early retirement can be taken at age 55.

Participant T, age 55 at the date of termination, is employed by the new owner of Division B, and has a guaranteed benefit of $75 per month payable as a 10 year certain and continuous annuity at age 65 (a form for which T made a valid election prior to the date of plan termination).

For participant S, although the facility in which he was employed shut down, he left employment more than one year before the termination of the plan, so the special rule for facility closing in § 2610.65 is not used. Since the plan contains no provision which would require a participant to leave his or her current employment to receive a benefit, the procedure in § 2610.64 is used to determine the XRA.

The information needed for § 2610.64 is—

(1) S's NRA—65; and

(2) S's earliest retirement age at valuation date—60.

Under § 2610.64, the "high" retirement rate table, Table II–C, is always used. Reading horizontally across from age 60 (the earliest retirement at valuation date) and vertically down from age 65, (the normal retirement age), the table indicates that S's XRA is 62. Under § 2610.46(b)(2) S's $100 benefit is reduced by the plan's early retirement reduction factors to age 62 and valued as a joint and survivor annuity deferred to age 62.

Since participant T was never employed at the facility that was closed, the special rule of § 2610.65 would not apply. Since the plan does not require T to leave her current employment to receive a benefit, the procedure in § 2610.64 is used to determine the XRA.

The information needed for § 2610.64 is—

(1) T's NRA—65; and

(2) T's earliest retirement age at valuation date—55. Using the "high" retirement rate table, Table II–C, T's XRA is 58.

Under § 2610.46(b)(2), T's $75 benefit is reduced by the plan's early retirement reduction factors to age 58 and is valued as an 10 year certain and continuous annuity deferred to age 58.

Example 3—R is a plan participant in a pension plan established by ABC Company and is an employee of ABC until December 31, 1980. On that day the company closes, R's employment ceases, and the plan terminates. R is age 45 at the date of termination and has a guaranteed benefit of $100 per month joint and survivor annuity payable at age 65, his normal retirement age. Under the terms of the plan, R is eligible to receive an early retirement benefit at age 55. The plan is trusteed by PBGC.

Since the business closed within one year of the valuation date (the date of plan termination), and R was an active employee on the valuation date, the procedure in § 2610.65 is used to determine the XRA.

R's earliest retirement age at valuation date is 55 and therefore his XRA is 55. Under § 2610.46(b)(2) R's $100 benefit is reduced by the plan's early retirement reduction factors to age 55 and is valued as a joint and survivor annuity deferred to age 55.

Example 4—A plan participant, P, is employed by a business which was sold to a new owner. The plan terminated on the date of sale, October 30, 1980, as a sufficient plan (*i.e.* a non-trusteed plan). The plan provides that benefits may not be received while a participant is employed by a successor employer.

The plan administrator anticipates distributing benefits on December 15, 1980 and has not been able to obtain an insurer's bid which reasonably takes into account the probability that a participant eligible for early retirement will retire at some age between the earliest retirement age possible and the normal retirement age. The plan administrator has requested that PBGC provide the early retirement benefits, as provided for under the Sufficiency regulation (Part 2615 of this chapter).

P is age 62 at the proposed date of distribution and is eligible for an immediate early retirement benefit, but has not chosen a retirement starting date. His accrued vested benefit at the normal retirement age of 65 is $250 per month payable as a joint and survivor annuity.

Since the plan does not allow benefits to be received while a participant is employed by a successor employer, the procedure in § 2610.63 is applicable. The data needed under the section is—

(1) P's monthly benefit at NRA—$250;

(2) The calendar year in which P reaches NRA—1983;

(3) P's NRA—65; and

(4) P's earliest retirement age at valuation date—62.

Using Table I–80 and items (1) and (2), P falls into the "low" retirement rate category. Therefore, Table II–A is used.

Entering Table II–A and using items (3) and (4), we find that P's XRA is 63. Under § 2610.46(c)(3) P's $250 benefit is reduced by the plan's early retirement reduction factors to age 63 and is valued as a joint and survivor annuity deferred to age 63. This benefit will be provided by PBGC.

Effective date: March 1, 1981.

Issued at Washington, D.C., on this 19th day of January 1981.

Ray Marshall,

Chairman, Board of Directors, Pension Benefit Guaranty Corporation.

Issued on the date set forth above pursuant to a resolution of the board of Directors approving this regulation and authorizing its Chairman to issue same.

Henry Rose,

Secretary, Pension Benefit Guaranty Corporation.

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