PROPOSED RULEMAKING

INSURANCE DEPARTMENT

[31 PA. CODE CH. 84c]

Valuation of Life Insurance Policies

The Insurance Department (Department) proposes to adopt Chapter 84c (relating to valuation of life insurance policies), to read as set forth in Annex A, under the authority of sections 206, 506, 1501 and 1502 of The Administrative Code of 1929 (71 P. S. §§ 66, 186, 411 and 412) and section 301(c)(1) and (3) of The Insurance Department Act of 1921 (40 P. S. § 71(c)(1) and (2)) (act).

Purpose

The purpose of the proposed rulemaking is to implement section 301(c)(1) and (3) of the act by adopting select mortality factors for use in determining minimum standards of valuation and by interpreting the minimum reserve standard for the valuation of life insurance plans with nonlevel premiums or benefits and plans with secondary guarantees. Reserves held by life insurance companies that market life insurance policies in this Commonwealth must comply with the minimum standards of valuation. The Department's adoption of the proposed rulemaking will help to assure the solvency of insurance companies by requiring adequate reserves.

Section 301(c)(1) of the act establishes as a minimum standard of valuation any mortality table adopted after 1980 by the NAIC and approved by regulation by the Commissioner for this purpose. The select mortality factors in the proposed rulemaking were adopted by the National Association of Insurance Commissioners (NAIC) as part of the Valuation of Life Insurance Model Regulation.

Section 301(c)(3) of the act provides that the minimum reserve valuation method for policies with nonlevel premiums or benefits shall be a method consistent with the principles of the act. The proposed rulemaking defines a valuation method that is intended to be consistent with the principles of the act.

The proposed rulemaking is patterned after the NAIC's Valuation of Life Insurance Model Regulation adopted in March 1999. The Department is seeking to implement the NAIC model regulation as part of a Nationwide initiative by State insurance regulators to achieve uniform reserve requirements. The majority of states are in the process of implementing the NAIC Valuation of Life Insurance Model Regulation with an effective date of January 1, 2000. The Department believes that it is essential that life insurance companies have uniform reserving requirements throughout the United States. For the Commonwealth to have different requirements would place a financial burden on life insurance companies doing business in this Commonwealth and may cause life insurance companies to cease doing business in this Commonwealth, to the detriment of insurance consumers of this Commonwealth. The Insurance Federation of Pennsylvania, representing a substantial portion of the life insurance industry operating in this Commonwealth, has expressed support for the adoption of this proposed rulemaking.

Explanation of Regulatory Requirements

The following is a description of the significant features in the proposed rulemaking.

Section 84c.2 (relating to applicability) provides that the proposed rulemaking will apply to policies issued on and after the effective date of the rulemaking. The section also describes policies that are exempt from the proposed rulemaking.

Section 84c.4 (relating to segmented and unitary reserve methods) defines the segmented and unitary minimum reserve valuation methods to be applied in the valuation of life insurance plans with nonlevel premiums or benefits and plans with secondary guarantees.

Section 84c.5 (relating to general requirements for basic reserves and premium deficiency reserves) sets forth by reference to the Appendix A table of select mortality factors that may be used in determining the minimum mortality standard. In accordance with section 301(c)(1) of the act, select mortality factors may at the option of the insurer be used in determining the minimum mortality standard. The section also describes rules for using select mortality factors that are less than the factors in the Appendix in determining the minimum mortality standard for calculating deficiency reserves.

Section 84c.6 (relating to minimum valuation standard for policies with guaranteed nonlevel gross premiums or guaranteed nonlevel benefits (other than universal life policies)) describes the rules for using the segmented and unitary minimum reserve valuation methods for the valuation of policies with nonlevel premiums or benefits. An optional exemption is provided for yearly renewable term insurance and reinsurance and for certain juvenile policies.

Section 84c.7 (relating to minimum valuation standard for flexible premium and fixed premium universal life insurance policies that contain provisions resulting in the ability of a policyowner to keep a policy in force over a secondary guarantee period) describes the rules for using the segmented minimum reserve valuation method for the valuation of universal life insurance policies that contain a secondary guarantee. The section also describes the policy provisions that are considered as a secondary guarantee.

Affected Parties

The proposed rulemaking will apply to life insurance companies and fraternal benefit societies marketing life insurance policies in this Commonwealth.

Fiscal Impact

State Government

There will be no increase in cost to the Department due to the adoption of the proposed rulemaking. The Department currently reviews valuation filings submitted by domestic life insurance companies and fraternal benefit societies for compliance with the minimum standards of valuation. The proposed select mortality factors and the interpretation of the minimum reserve standard for plans with nonlevel premiums or benefits and for plans with secondary guarantees will not affect the time required to review a valuation filing.

General Public

Consumers will benefit from the advantages of purchasing life insurance from an insurance industry that is establishing sound and reasonable reserves to fulfill contractual obligations. Insurers may increase premium rates for policies sold after the effective date of this proposal because of an increase in the required reserves.

Political Subdivisions

Adoption of the proposed rulemaking will not impose additional costs on political subdivisions. Because this rulemaking promotes stability and sound reserves in the insurance industry, political subdivisions' tax revenues may benefit as a result of fewer insurance company insolvencies. Fewer insolvencies may also result in less unemployment.

Private Sector

The specific select factors and the rules for using the segmented reserve valuation method in the proposed rulemaking do not apply to policies issued prior to the effective date of this proposal. An insurance company may need to increase reserves on policies issued on and after the effective date of the proposal. The rulemaking does permit an insurance company to recognize the company's specific mortality experience in calculating deficiency reserves. This should ensure that the reserves for a company are sound and reasonable.

Paperwork

The adoption of the proposed rulemaking will not impose additional paperwork on the Department or the insurance industry. The select mortality factors and the interpretation of the minimum reserve standard affect an insurance company's reserve calculation but will not result in additional paperwork.

Effectiveness/Sunset Date

The proposed rulemaking will become effective upon final adoption and publication in the Pennsylvania Bulletin as final rulemaking. No sunset date has been assigned.

Contact Person

Questions or comments regarding the proposed rule-making may be addressed in writing to Peter J. Salvatore, Regulatory Coordinator, 1326 Strawberry Square, Harrisburg, PA 17120 within 30 days following the publication of this notice in the Pennsylvania Bulletin.

Questions or comments may also be E-mailed to psalvato@ins.state.pa.us or faxed to (717) 772-1969.

Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on December 21, 1999, the Department submitted a copy of these proposed rulemaking to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the Senate Banking and Insurance Committee and the House Insurance Committee. In addition to the submitted proposed rulemaking, the Department has provided IRRC and the Committees with a copy of a detailed Regulatory Analysis Form prepared by the agency in compliance with Executive Order 1996-1, "Regulatory Review and Promulgation." A copy of that material is available to the public upon request.

If IRRC has objections to any portion of the proposed rulemaking, it will notify the agency within 10 days of the close of the Committees' review period. The notification shall specify the regulatory review criteria that have not been met by that portion. The Regulatory Review Act specifies detailed procedures for the agency, the Governor and the General Assembly to review these objections before final publication of the regulations.

> M. DIANE KOKEN, Insurance Commissioner

Fiscal Note: 11-196. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 31. INSURANCE PART IV. LIFE INSURANCE

CHAPTER 84c. VALUATION OF LIFE INSURANCE POLICIES

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84c.3. Definitions

84c.4.

Segmented and unitary reserve methods.

General requirements for basic reserves and premium defi-84c.5.

84c.6. Minimum valuation standard for policies with guaranteed nonlevel gross premiums or guaranteed nonlevel benefits (other than universal life policies).

84c.7. Minimum valuation standard for universal life insurance policies that contain provisions resulting in the ability of a policyowner to keep a policy in force over a secondary guarantee period.

§ 84c.1. Purpose.

This chapter implements section 301(c)(1) and (3) of the act (40 P. S. § 71(c)(1) and (3)) by adopting select mortality factors for use in determining minimum standards of valuation and by interpreting the minimum reserve standard for the valuation of life insurance plans with nonlevel premiums or benefits and plans with secondary guarantees. The method for calculating basic reserves defined in this chapter will constitute the Commissioner's Reserve Valuation Method for policies to which this chapter is applicable.

§ 84c.2. Applicability.

- (a) This chapter applies to all life insurance policies, with or without nonforfeiture values, issued on or after (Editor's Note: The blank refers to the effective date of adoption of this proposal.), subject to the following exceptions:
 - (b) This chapter does not apply to:
- (1) An individual life insurance policy issued on or (Editor's Note: The blank refers to the after effective date of adoption of this proposal.) if the policy is issued in accordance with and as a result of the exercise of a reentry provision contained in the original life insurance policy of the same or greater face amount, (Editor's Note: The blank refers to issued before the effective date of adoption of this proposal.) that guarantees the premium rates of the new policy. This chapter also does not apply to subsequent policies issued as a result of the exercise of the reentry provision, or a derivation of the provision, in the new policy.
- (2) A universal life policy that meets all the following requirements:
- (i) Secondary guarantee period, if any, is 5 years or less.
- (ii) Specified premium for the secondary guarantee period is not less than the net level reserve premium for the secondary guarantee period based on the 1980 CSO valuation tables and the applicable maximum valuation interest rate.
- (iii) The initial surrender charge is not less than 100% of the first year annualized specified premium for the secondary guarantee period.
- (3) A variable life insurance policy that provides for life insurance, the amount or duration of which varies according to the investment experience of any separate account.

- (4) A variable universal life insurance policy that provides for life insurance, the amount or duration of which varies according to the investment experience of any separate account.
- (5) A group life insurance certificate unless the certificate provides for a stated or implied schedule of maximum gross premiums required to continue coverage in force for a period in excess of 1 year.

§ 84c.3. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

Act—The Insurance Department Act of 1921 (40 P. S. §§ 1—321).

Appointed actuary—The actuary as defined in § 84b.4 (relating to definitions).

Basic reserves—Reserves calculated in accordance with section 301 of the act (40 P. S. § 71).

 ${\it Commissioner-} \hbox{\bf The Insurance Commissioner of the Commonwealth}.$

Deficiency reserves—The excess, if greater than zero, of minimum reserves calculated in accordance with section 303 of the act (40 P. S. § 73) over basic reserves.

Guaranteed gross premiums—The premiums under a policy of life insurance that are guaranteed and determined at issue.

Maximum valuation interest rates—The interest rates defined in section 301(c)(2) of the act that are to be used in determining the minimum standard for the valuation of life insurance policies.

NAIC—The National Association of Insurance Commissioners

1980 CSO valuation tables—The Commissioners' 1980 Standard Ordinary Mortality Table without 10-year selection factors, adopted in section 301(c)(1) of the act and the smoker and nonsmoker variations of the table adopted in § 84.6 (relating to 1980 CSO and 1980 CET smoker and nonsmoker mortality tables).

Scheduled gross premium—The smallest illustrated gross premium at issue for other than universal life insurance policies. For universal life insurance policies, the term means the smallest specified premium described in § 84c.7(a)(3) (relating to minimum valuation standard for universal life insurance policies that contain provisions resulting in the ability of a policyowner to keep a policy in force over a secondary guarantee period), if any, or else the minimum premium described in § 84c.7(a)(4).

Tabular cost of insurance—The net single premium at the beginning of a policy year for 1-year term insurance in the amount of the guaranteed death benefit in that policy year.

10-year select mortality factors—The select mortality factors adopted in section 301(c)(1) of the act.

Universal life insurance policy—An individual life insurance policy under the provisions of which separately identified mortality and expense charges and interest credits other than in connection with dividend accumulations, premium deposit funds or other supplementary accounts are made to the policy.

§ 84c.4. Segmented and unitary reserve methods.

(a) Segmented reserves. Segmented reserves shall be calculated as follows:

- (1) Segmented reserves shall equal the present value of all future guaranteed benefits less the present value of all future net premiums in the current segment and in all subsequent segments.
- (2) The length of each segment is determined by the contract segmentation method, as described in subsection (b).
- (3) The net premiums within each segment are a uniform percentage of the respective guaranteed gross premiums within the segment. The uniform percentage for each segment is such that, at the beginning of the segment, the present value of the net premiums within the segment equals the present value of the death benefits within the segment, plus the present value of any unusual guaranteed cash value occurring at the end of the segment, less any unusual guaranteed cash value occurring at the start of the segment, plus for the first segment only, the excess of subparagraph (i) over subparagraph (ii), as follows:
- (i) A net level annual premium equal to the present value, at the date of issue, of the benefits provided for in the first segment after the first policy year, divided by the present value, at the date of issue, of an annuity of 1 per year payable on the first and each subsequent anniversary within the first segment on which a premium falls due. However, the net level annual premium may not exceed the net level annual premium on the 19-year premium whole life plan of insurance of the same renewal year equivalent level amount at an age 1 year higher than the age at issue of the policy.
- (ii) A net 1-year term premium for the benefits provided for in the first policy year.
- (4) The interest rates used in the present value calculations for any policy may not exceed the maximum valuation interest rate, determined with a guarantee duration equal to the sum of the lengths of all segments of the policy.
- (b) Contract segmentation method. The contract segmentation method is the method of dividing the period from issue to mandatory expiration of a policy into successive segments. The segments shall be calculated as follows:
- (1) The length of a particular contract segment shall be set equal to the minimum of the value t for which G_t is greater than R_t (if G_t never exceeds R_t the segment length is deemed to be the number of years from the beginning of the segment to the mandatory expiration date of the policy), where G_t and R_t are as follows:

$$G_{t} = \frac{GP_{x+k+t}}{GP_{x+k+t-1}} \quad R_{t} = \quad \frac{q_{x+k+t}}{q_{x+k+t-1}}$$

- (i) R_1 may be increased or decreased by 1% in any policy year, at the company's option, but R_t may not be less than 1.
- (ii) If GP_{x+k+t} is greater than 0 and $GP_{x+k+t-1}$ is equal to 0, G_t shall be deemed to be 1,000. If GP_{x+k+t} and $GP_{x+k+t-1}$ are both equal to 0, G_t shall be deemed to be 0.
- (2) The symbols used in paragraph (1) have the following meanings:
 - (i) x = original issue age.
- (ii) k =the number of years from the date of issue to the beginning of the segment.
- (iii) $t = 1, 2, \ldots$; t is reset to 1 at the beginning of each segment.

- (iv) $GP_{x+k+t-1} = Guaranteed$ gross premium per thousand of face amount for year t of the segment, ignoring policy fees only if level for the premium paying period of the policy.
- (v) $q_{x+k+t-1}$ = valuation mortality rate for deficiency reserves in policy year k+t but using the mortality of § 84c.5(b)(2) (relating to general requirements for basic reserves and premium deficiency reserves) if § 84c.5(b)(3) is elected for deficiency reserves.
- (c) *Unitary reserves*. Unitary reserves shall be calculated as follows:
- (1) Unitary reserves shall equal the present of all future guaranteed benefits less the present value of all future modified net premiums to the mandatory expiration of the policy.
- (2) Modified net premiums are a uniform percentage of the respective guaranteed gross premiums, where the uniform percentage is such that, at issue, the present value of the net premiums equals the present value of all death benefits and pure endowments, plus the excess of subparagraph (i) over subparagraph (ii), as follows:
- (i) A net level annual premium equal to the present value, at the date of issue, of the benefits provided for after the first policy year, divided by the present value, at the date of issue, of an annuity of 1 per year payable on the first and each subsequent anniversary of the policy on which a premium falls due. However, the net level annual premium may not exceed the net level annual premium on the 19-year premium whole life plan of insurance of the same renewal year equivalent level amount at an age 1 year higher than the age at issue of the policy.
- (ii) A net 1-year term premium for the benefits provided for in the first policy year.
- (3) The interest rates used in the present value calculations for any policy may not exceed the maximum valuation interest rate, determined with a guarantee duration equal to the length from issue to the mandatory expiration of the policy.

§ 84c.5. General requirements for basic reserves and premium deficiency reserves.

- (a) Basic reserves minimum standard. At the election of the company for any one or more specified plans of life insurance, the minimum mortality standard for basic reserves may be calculated using the 1980 CSO valuation tables (or any other valuation mortality table adopted by the NAIC after ______ (Editor's Note: The blank refers to the effective date of adoption of this proposal.) and promulgated by regulation by the Commissioner for the purpose of calculating basic reserves) with select mortality factors. If select mortality factors are elected, they may be one of the following:
 - (1) The 10-year select mortality factors.
- (2) The select mortality factors in Appendix A (relating to select mortality factors).
- (3) Any other table of select mortality factors adopted by the NAIC after _____ (Editor's Note: The blank refers to the effective date of adoption of this proposal.) and promulgated by regulation by the Commissioner for the purpose of calculating basic reserves.
- (b) *Deficiency reserves minimum standard.* Deficiency reserves, if any, are calculated for each policy as the excess, if greater than zero, of the quantity A over the basic reserve. The quantity A is obtained by recalculating the basic reserve for the policy using guaranteed gross premiums instead of net premiums when the guaranteed

- gross premiums are less than the corresponding net premiums. At the election of the company for any one or more specified plans of insurance, the quantity A and the corresponding net premiums used in the determination of quantity A may be based upon the 1980 CSO valuation tables (or any other valuation mortality table adopted by the NAIC after _______(Editor's Note: The blank refers to the effective date of adoption of this proposal.) and promulgated by regulation by the Commissioner for the purpose of calculating deficiency reserves) with select mortality factors. If select mortality factors are elected, they may be one of the following:
 - (1) The 10-year select mortality factors.
 - (2) The select mortality factors in Appendix A.
- (3) For durations in the first segment, X% of the select mortality factors in Appendix A, subject to the following:
- (i) X may vary by policy year, policy form, underwriting classification, issue age, or any other policy factor expected to affect mortality experience.
 - (ii) X may not be less than 20%.
 - (iii) X may not decrease in any successive policy years.
- (iv) X is such that, when using the valuation interest rate used for basic reserves, the actuarial present value of future death benefits, calculated using the mortality rates resulting from the application of X, is greater than or equal to the actuarial present value of future death benefits calculated using anticipated mortality experience without recognition of mortality improvement beyond the valuation date.
- (v) X is such that the mortality rates resulting from the application of X are at least as great as the anticipated mortality experience, without recognition of mortality improvement beyond the valuation date, in each of the first 5 years after the valuation date.
- (vi) The appointed actuary shall increase X at any valuation date when it is necessary to continue to meet all the requirements of paragraph (3).
- (vii) The appointed actuary may decrease X at any valuation date as long as X does not decrease in any successive policy years and as long as it continues to meet all the requirements of paragraph (3).
- (viii) The appointed actuary shall specifically take into account the adverse effect on expected mortality and lapsation of any anticipated or actual increase in gross premiums.
- (ix) If X is less than 100% at any duration for any policy, the following requirements shall be met:
- (A) The appointed actuary shall annually prepare an actuarial opinion and memorandum for the company in conformance with § 84b.8 (relating to statement of actuarial opinion based on an asset adequacy analysis).
- (B) The appointed actuary shall annually opine for all policies subject to this chapter as to whether the mortality rates resulting from the application of X meet the requirements of paragraph (3). This opinion shall be supported by an actuarial report, subject to appropriate Actuarial Standards of Practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries. The X factors shall reflect anticipated future mortality, without recognition of mortality improvement beyond the valuation date, taking into account relevant emerging experience.
- (4) Any other table of select mortality factors adopted by the NAIC after _____ (Editor's Note: The blank

refers to the effective date of adoption of this proposal.) and promulgated by regulation by the Commissioner for the purpose of calculating deficiency reserves.

- (c) Application of select mortality factors. The select mortality factors may be used in calculating the minimum mortality standard for basic and deficiency reserves only for the first segment. However, if the first segment is less than 10 years, the appropriate 10-year select mortality factors may be used thereafter through the 10th policy year from the date of issue.
- (d) *Policy fees.* In determining basic reserves or deficiency reserves, guaranteed gross premiums without policy fees may be used when the calculation involves the guaranteed gross premium but only if the policy fee is a level dollar amount after the first policy year. In determining deficiency reserves, policy fees may be included in guaranteed gross premiums, even if not included in the actual calculation of basic reserves.
- (e) Changes in guarantees. Reserves for policies that have changes to guaranteed gross premiums, guaranteed benefits, guaranteed charges or guaranteed credits that are unilaterally made by the insurer after issue and that are effective for more than 1 year after the date of the change shall be the greatest of the following:
 - (1) Reserves calculated ignoring the guarantee.
- (2) Reserves assuming the guarantee was made at issue.
- (3) Reserves assuming that the policy was issued on the date of the guarantee.
- (f) *Documentation.* The Commissioner may require that the company document the extent of the adequacy of reserves for specified blocks, including policies issued prior to ______ (Editor's Note: The blank refers to the effective date of adoption of this proposal.). This documentation may include a demonstration of the extent to which aggregation with other nonspecified blocks of business is relied upon in the formation of the appointed actuary opinion under and consistent with § 84b.8.

§ 84c.6. Minimum valuation standard for policies with guaranteed nonlevel gross premiums or guaranteed nonlevel benefits (other than universal life policies).

- (a) Basic reserves. Basic reserves shall be calculated as the greater of the segmented reserves and the unitary reserves. Both the segmented reserves and the unitary reserves for any policy shall use the same valuation mortality table and selection factors. At the option of the insurer, in calculating segmented reserves and net premiums, either of the following adjustments may be made:
- (1) Treat the unitary reserve, if greater than zero, applicable at the end of each segment as a pure endowment and subtract the unitary reserve, if greater than zero, applicable at the beginning of each segment from the present value of guaranteed life insurance and endowment benefits for each segment.
- (2) Treat the guaranteed cash surrender value, if greater than zero, applicable at the end of each segment as a pure endowment and subtract the guaranteed cash surrender value, if greater than zero, applicable at the beginning of each segment from the present value of guaranteed life insurance and endowment benefits for each segment.
- (b) *Deficiency reserves.* The deficiency reserve at any duration shall be calculated as follows:

- (1) On a unitary basis if the corresponding basic reserve is unitary.
- (2) On a segmented basis if the corresponding basic reserve is segmented. The segment lengths shall equal those determined for segmented basic reserves.
- (3) On the segmented basis if the corresponding basic reserve is equal to both the segmented reserve and the unitary reserve. The segment lengths shall equal those determined for segmented basic reserves.
- (c) Minimum value. Basic reserves may not be less than the tabular cost of insurance for the balance of the policy year, if mean reserves are used. Basic reserves may not be less than the tabular cost of insurance for the balance of the current modal period or to the paid-to-date, if later, but not beyond the next policy anniversary, if mid-terminal reserves are used. The tabular cost of insurance shall use the same valuation mortality table and interest rates as that used for the calculation of the segmented reserves. However, if select mortality factors are used, they shall be the 10-year select factors. Total reserves (including basic reserves, deficiency reserves and any reserves held for supplemental benefits that would expire upon contract termination) may not be less than the amount that the policyowner would receive (including the cash surrender value of the supplemental benefits, if any, referred to in this section), exclusive of any deduction for policy loans, upon termination of the policy.
- (d) Unusual pattern of guaranteed cash surrender values. The following requirement applies to any policy with an unusual pattern of guaranteed cash surrender values. This calculation is independent of the segmented and unitary reserves.
- (1) The reserves actually held prior to the first unusual guaranteed cash surrender value may not be less than the reserves calculated by treating the first unusual guaranteed cash surrender value as a pure endowment and treating the policy as an *n* year policy providing term insurance plus a pure endowment equal to the unusual cash surrender value, where *n* is the number of years from the date of issue to the date the unusual cash surrender value is scheduled.
- (2) The reserves actually held subsequent to any unusual guaranteed cash surrender value may not be less than the reserves calculated by treating the policy as an n year policy providing term insurance plus a pure endowment equal to the next unusual guaranteed cash surrender value, and treating any unusual guaranteed cash surrender value at the end of the prior segment as a net single premium. *n* shall equal the number of years from the date of the last unusual guaranteed cash surrender value prior to the valuation date to the earlier of the date of the next unusual guaranteed cash surrender value, if any, that is scheduled after the valuation date or the mandatory expiration date of the policy. The net premium for a given year during the n year period shall equal the product of the net to gross ratio and the respective gross premium where the net to gross ratio is subparagraph (i) divided by subparagraph (ii) as follows:
- (i) The present value, at the beginning of the n year period, of death benefits payable during the n year period plus the present value, at the beginning of the n year period, of the next unusual guaranteed cash surrender value, if any, minus the amount of the last unusual guaranteed cash surrender value, if any, scheduled at the beginning of the n year period.

- (ii) The present value, at the beginning of the *n* year period, of the scheduled gross premiums payable during the *n* year period.
- (3) A policy is considered to have an unusual pattern of guaranteed cash surrender values if any future guaranteed cash surrender value exceeds the prior year's guaranteed cash surrender value by more than the sum of the following:
 - (i) 110% of the scheduled gross premium for that year.
- (ii) 110% of 1 year's accrued interest on the sum of the prior year's guaranteed cash surrender value and the scheduled gross premium using the nonforfeiture interest rate used for calculating policy guaranteed cash surrender values.
 - (iii) 5% of the first policy year surrender charge, if any.
- (e) Optional exemption for yearly renewable term reinsurance. At the option of the company, the following approach for reserves on yearly renewable term reinsurance may be used:
- (1) Calculate the valuation net premium for each future policy year as the tabular cost of insurance for that future year.
- (2) Basic reserves shall never be less than the tabular cost of insurance for the appropriate period, as defined in subsection (c).
- (3) Deficiency reserves shall never be less than the sum of the present values, at the date of valuation, of the excess in each policy year of the valuation net premium over the respective maximum guaranteed gross premium. The excess for each policy year may not be less than zero.
- (4) The calculations use the maximum valuation interest rate and the 1980 CSO valuation tables with or without 10-year select mortality factors, or any other table adopted after ______ (Editor's Note: The blank refers to the effective date of adoption of this proposal.) by the NAIC and promulgated by regulation by the Commissioner for the purpose of calculating basic and deficiency reserves.
- (5) A reinsurance agreement shall be considered yearly renewable term reinsurance for purposes of subsection (e) if only the mortality risk is reinsured.
- (6) If the assuming company chooses this optional exemption, the ceding company's reinsurance reserve credit shall be limited to the amount of reserve held by the assuming company for the affected policies.
- (f) Optional exemption for attained-age-based yearly renewable term life insurance policies. At the option of the company, the following approach for reserves for attained-age-based yearly renewable term life insurance policies may be used:
- (1) Calculate the valuation net premium for each future policy year as the tabular cost of insurance for that future year.
- (2) Basic reserves shall never be less than the tabular cost of insurance for the appropriate period, as defined in subsection (c).
- (3) Deficiency reserves shall never be less than the sum of the present values, at the date of valuation, of the excess in each policy year of the valuation net premium over the respective maximum guaranteed gross premium. The excess for each year may not be less than zero.
- (4) The calculations use the maximum valuation interest rate and the 1980 CSO valuation tables with or

- without 10-year select mortality factors, or any other table adopted after ______ (*Editor's Note:* The blank refers to the effective date of adoption of this proposal.) by the NAIC and promulgated by regulation by the Commissioner for the purpose of calculating basic and deficiency reserves.
- (5) A policy shall be considered an attained-age-based yearly renewable term life insurance policy for purposes of subsection (f) if both of the following apply:
- (i) The premium rates (on both the initial current premium scale and the guaranteed maximum premium scale) are based upon the attained age of the insured so that the rate for any given policy at a given attained age of the insured is independent of the year the policy was issued.
- (ii) The premium rates (on both the initial current premium scale and the guaranteed maximum premium scale) are the same as the premium rates for policies covering all insureds of the same sex, risk class, plan of insurance and attained age.
- (6) For policies that become attained-age-based yearly renewable term policies and meet the conditions in paragraph (5) after an initial period of coverage, the approach of subsection (f) may be used after the initial period if the initial period is constant for all insureds of the same sex, risk class and plan of insurance or if the initial period runs to a common attained age for all insureds of the same sex, risk class and plan of insurance.
- (7) If the approach in subsection (f) is elected, the approach shall be applied in determining reserves for all attained-age-based yearly renewable term life insurance policies issued on or after ______ (Editor's Note: The blank refers to the effective date of adoption of this proposal.).
- (g) Exemption from unitary reserves for certain renewable term life insurance policies. Unitary basic reserves and unitary deficiency reserves need not be calculated for a policy if the following conditions are met:
- (1) The policy consists of a series of periods where the length of the period is the same for each period, except that for the final renewal period the length may be truncated or extended to reach the expiry age, provided that this final renewal period is less than 10 years and less than twice the length of the earlier periods, and for each period, the premium rates on both the initial current premium scale and the guaranteed maximum premium scale are level.
- (2) The guaranteed gross premiums in all periods are not less than the corresponding net premiums based upon the 1980 CSO valuation tables with or without the 10-year select mortality factors.
- (3) There are no cash surrender values in any policy year.
- (h) Exemption from unitary reserves for certain juvenile policies. Unitary basic reserves and unitary deficiency reserves need not be calculated for a policy if the following conditions are met, based upon the initial current premium scale at issue:
 - (1) At issue, the insured is age 24 or younger.
- (2) Until the insured reaches the end of the juvenile period, which shall occur at or before age 25, the gross premiums and death benefits are level, and there are no cash surrender values.

- (3) After the end of the juvenile period, gross premiums are level for the remainder of the premium paying period, and death benefits are level for the remainder of the life of the policy.
- § 84c.7. Minimum valuation standard for universal life insurance policies that contain provisions resulting in the ability of a policyowner to keep a policy in force over a secondary guarantee period.
 - (a) General requirements.
- (1) Each of the following shall be considered a policy with a secondary guarantee:
- (i) A policy with a guarantee that the policy will remain in force at the original schedule of benefits, subject only to the payment of specified premiums.
- (ii) A policy in which the minimum premium at any duration is less than the corresponding 1-year valuation premium, calculated using the maximum valuation interest rate and the 1980 CSO valuation tables with or without 10-year select mortality factors, or any other table adopted after _______ (Editor's Note: The blank refers to the effective date of adoption of this proposal.) by the NAIC and promulgated by regulation by the Commissioner for this purpose.
- (2) A secondary guarantee period is the period for which the policy is guaranteed to remain in force subject only to a secondary guarantee. When a policy contains more than 1 secondary guarantee, the minimum reserve shall be the greatest of the respective minimum reserves at that valuation date of each unexpired secondary guarantee, ignoring all other secondary guarantees. Secondary guarantees that are unilaterally changed by the insurer after issue shall be considered to have been made at issue. Reserves described in subsections (b) and (c) shall be recalculated from issue to reflect these changes.
- (3) Specified premiums mean the premiums specified in the policy, the payment of which guarantees that the policy will remain in force at the original schedule of benefits, but which otherwise would be insufficient to keep the policy in force in the absence of the guarantee if maximum mortality and expense charges and minimum interest credits were made and any applicable surrender charges were assessed.
- (4) The minimum premium for any policy year is the premium that, when paid into a policy with a zero account value at the beginning of the policy year, produces a zero account value at the end of the policy year. The minimum premium calculation shall use the policy cost factors (including mortality charges, loads and expense charges) and the interest crediting rate, which are all guaranteed at issue.

- (5) The 1-year valuation premium means the net 1-year premium based upon the original schedule of benefits for a given policy year. The 1-year valuation premiums for all policy years are calculated at issue. The select mortality factors defined in § 84c.5(b)(2)—(4) (relating to general requirements for basic reserves and premium deficiency reserves) may not be used to calculate the 1-year valuation premiums.
- (6) The 1-year valuation premium should reflect the frequency of fund processing, as well as the distribution of deaths assumption employed in the calculation of the monthly mortality charges to the fund.
- (b) Basic reserves for the secondary guarantees. Basic reserves for the secondary guarantees shall be the segmented reserves for the secondary guarantee period. In calculating the segments and the segmented reserves, the gross premiums shall be set equal to the specified premiums, if any, or otherwise to the minimum premiums, that keep the policy in force and the segments will be determined according to the contract segmentation method as defined in § 84c.4(b)(relating to segmented and unitary reserve methods).
- (c) Deficiency reserves for the secondary guarantees. Deficiency reserves, if any, for the secondary guarantees shall be calculated for the secondary guarantee period in the same manner as described in § 84c.6(b) (relating to minimum valuation standard for policies with guaranteed nonlevel gross premiums or guaranteed nonlevel benefits (other than universal life policies)) with gross premiums set equal to the specified premiums, if any, or otherwise to the minimum premiums that keep the policy in force.
- (d) *Minimum reserves*. The minimum reserves during the secondary guarantee period are the greater of the basic reserves for the secondary guarantee plus the deficiency reserve, if any, for the secondary guarantees or the minimum reserves required by other rules or regulations governing universal life plans.

Appendix A

SELECT MORTALITY FACTORS

These tables apply to both age last birthday and age nearest birthday mortality tables.

For sex-blended mortality tables, compute select mortality factors in the same proportion as the underlying mortality. For example, for the 1980 CSO-B Table, the calculated select mortality factors are 80% of the appropriate male table in this appendix, plus 20% of the appropriate female table in this appendix.

Male, Aggregate

Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
0-15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
17	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	96	98	98	99	99	100	100	90	92	92	92	92	93	93	96	97	98	98	99	100
19	83	84	84	87	87	87	79	79	79	81	81	82	82	82	85	88	91	94	97	100
20	69	71	71	74	74	69	69	67	69	70	71	71	71	71	74	79	84	90	95	100
21	66	68	69	71	66	66	67	66	67	70	70	70	70	71	71	77	83	88	94	100
22	65	66	66	63	63	64	64	64	65	68	68	68	68	69	71	77	83	88	94	100
23	62	63	59	60	62	62	63	63	64	65	65	67	67	69	70	76	82	88	94	100

Male, Aggregate (Continued)

Issue								idic, i	-88-	gutt	(Com		ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
24 25	60 52	56 53	56 55	59 56	59 58	60 58	61 60	61 60	61 60	64 63	64 62	64 63	66 64	67 67	70 69	76 75	82 81	88 88	94 94	100 100
26	51	52	55	56	58	58	57	61	61	62	63	64	66	69	66	73	80	86	93	100
27 28	51 49	52 51	55 56	57 58	58 60	60 60	61 61	61 62	60 62	63 63	63 64	64 66	67 65	66 66	67 68	74 74	80 81	87 87	93 94	100 100
29	49	51	56	58	60	61	62	62	62	64	64	62	66	67	70	76	82	88	94	100
30	49	50	56	58	60	60	62	63	63	64	62	63	67	68	71	77	83	88	94	100
31 32	47 46	50 49	56 56	58 59	60 60	62 62	63 63	64 66	64 62	62 63	63 66	66 67	68 70	70 72	72 73	78 78	83 84	89 89	94 95	100 100
33	43	49	56	59	62	63	64	62	65	66	67	70	72	3	75	80	85	90	95	100
34 35	42 40	47 47	56 56	60 60	62 63	63 61	61 62	63 65	66 67	67 68	70 71	71 73	73 74	75 76	76 76	81 81	86 86	90 90	95 95	100 100
36	38	42	56	60	59	61	63	65	67	68	70	72	74	76	77	82	86	91	95	100
37	38 37	45	56 53	57 58	61 61	62 62	63 65	65 66	67 67	68 69	70 69	72 73	74 75	76 76	76 77	81 82	86 86	90 91	95 95	100
38 39	37 37	44 41	53	58	62	63	65	65	66	68	69	73 72	73 74	76 76	76	81	86	90	95 95	100 100
40	34	40	53	58	62	63	65	65	66	68	68	71	75	76	77	82	86	91	95	100
41 42	34 34	41 43	53 53	58 58	62 61	63 62	65 63	64 63	64 63	66 64	68 66	70 69	74 72	76 75	77 77	82 82	86 86	91 91	95 95	100 100
43	34	43	54	59	60	61	63	62	62	64	66	67	72	74	77	82	86	91	95	100
44 45	34 34	44 45	54 53	58 58	59 59	60 60	61 60	60 60	61 59	62 60	64 63	67 66	71 71	74 74	77 77	82 82	86 86	91 91	95 95	100 100
46	31	43	52	56	57	58	59	59	59	60	63	67	71	74	75	80	85	90	95	100
47	32	42	50	53	55	56	57	58	59	60	65	68	71	74	75	80	85	90	95	100
48 49	32 30	41 40	47 46	52 49	54 52	56 54	57 55	57 56	57 57	61 61	65 66	68 69	72 72	73 73	74 74	79 79	84 84	90 90	95 95	100 100
50	30	38	44	47	51	53	54	56	57	61	66	71	72	73	75	80	85	90	95	100
51	28	37	42	46	49	53	54	56	57	61	66	71	72	73	75	80	85	90	95	100
52 53	28 27	35 35	41 39	45 44	49 48	51 51	54 53	56 55	57 57	61 61	66 67	71 71	72 74	74 75	75 76	80 81	85 86	90 100	100 100	100 100
54	27	33	38	44	48	50	53	55	57	61	67	72	74	75	76	81	100	100	100	100
55 56	25 25	32	37 37	43	47	50 49	53 51	55 54	57 56	61	68 67	72 70	74 73	75 74	78 100	100	100	100	100	$\frac{100}{100}$
57	24	31	38	43	47	49	51	54	56	59	66	69	72	100	100	100	100	100	100	100
58	24	31	38	43	48	48	50	53	56	59	64	67	100	100	100	100	100	100	100	100
59 60	23 23	30 30	39 39	43 43	48 48	48 47	51 50	53 52	55 53	58 57	63 100	100 100								
61	23	30	39	43	49	49	50	52	53	75	100	100	100	100	100	100	100	100	100	100
62 63	23 22	30 30	39 39	44 45	49 50	49 50	51 52	52 75	75 75	75 75	100 100									
64	22	30	39	45	50	51	75	75	75	75	100	100	100	100	100	100	100	100	100	100
65 66	22 22	$\frac{30}{30}$	39	45 45	50 60	65 65	70 70	70 70	70 70	70 70	100	100	100	100	100	100	100	100	100	$\frac{100}{100}$
67	22	30	39	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
68	23	32	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
69 70	23 48	52 52	55 55	60 60	60 60	65 65	70 70	70 70	70 70	70 70	100 100									
71	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
72 73	48 48	52 52	55 55	60 60	60 60	65 65	70 70	70 70	70 70	70 70	100 100									
74	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
75	48	52	55	60	60	65	70	70 70	70	100	100	100	100	100	100	100	100	100	100	100
76 77	48 48	52 52	55 55	60 60	60 60	65 65	70 70	70 70	70 100	100 100										
78 70	48	52	55	60	60	65	70	100	100	100	100	100	100	100	100	100	100	100	100	100
79 80	48 48	52 52	55 55	60 60	60 60	65 100	100 100													
81	48	52	55	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
82 83	48 48	52 52	55	100	100	100 100	100 100	100 100	100 100	100 100	100 100	100	100	100	100 100	100	100	100	100	100
ია	40	52	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Male, Aggregate (Continued)

Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
84	48	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
85 +	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

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Issue	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
Age 0-15	100	100		100	100	100	100	100	100	100	100	100	100		100	100	100	100	100	100
			100											100						
16 17	100 100																			
18	93	95	96	98	99	100	100	90	92	92	92	92	95	95	96	97	98	98	99	100
19	80	81	83	86	87	87	79	79	79	81	81	82	83	83	86	89	92	94	97	100
20	65	68	69	72	74	69	69	67	69	70	71	71	72	72	75	80	85	90	95	100
21 22	63 62	66 65	68 66	71 62	66 63	66 64	67 64	66 64	67 67	70 68	70 68	70 68	71 70	71 70	73 73	78 78	84 84	89 89	95 95	100 100
23	60	62	58	60	62	62	63	63	64	67	68	68	67	69	71	77	83	88	94	100
24	59	55	56	58	59	60	61	61	63	65	67	66	66	69	71	77	83	88	94	100
25	52	53	55	56	58	58	60	60	61	64	64	64	64	67	70	76	82	88	94	100
26	51	53	55	56	58	60	61	61	61	63	64	64	66	69	67	74	80	87	93	100
27 28	51 49	52 52	55 57	58 58	60 60	60 61	61 63	61 62	62 62	63 64	64 66	66 66	67 63	66 66	67 68	74 74	80 81	87 87	93 94	100 100
29	49	51	57	60	61	61	62	62	63	64	66	63	65	67	68	74	81	87	94	100
30	49	51	57	60	61	62	63	63	63	64	62	63	66	68	70	76	82	88	94	100
31	47	50	57	60	60	62	63	64	64	62	63	65	67	70	71	77	83	88	94	100
32 33	46 45	50 49	57 56	60 60	62 62	63 63	64 64	64 62	62 63	63 65	65 66	66 68	68 71	71 73	72 74	78 79	83 84	89 90	94 95	100 100
34	43	49	56	62	63	64	62	62	65	66	67	70	72	73 74	74 74	79 79	84	90	95 95	100
35	41	47	56	62	63	61	62	63	66	67	68	70	72	74	75	80	85	90	95	100
36	40	47	56	62	59	61	62	63	66	67	68	70	72	74	75	80	85	90	95	100
37	38	45	56	58	59	61	62	63	66	67	67	69	71	73	74	79	84	90	95	100
38 39	38 37	45 41	53 53	58 58	61 61	62 62	63 63	65 64	65 65	67 67	68 68	70 70	72 71	74 73	73 73	78 78	84 84	89 89	95 95	100 100
40	34	41	53	58	61	62	63	64	64	66	67	69	71	73	73 72	78 78	83	89	94	100
41	34	41	53	58	61	61	62	62	63	65	65	67	69	71	71	77	83	88	94	100
42	34	43	53	58	60	61	62	61	61	63	64	66	67	69	71	77	83	88	94	100
43	32	43	53	58	60	61	60	60	60	60	62	64	66	68	69	75 75	81	88	94	100
44 45	32 32	44 44	52 52	57 57	59 59	60 60	60 59	59 57	59 57	58 57	60 59	62 61	65 63	67 66	69 68	75 74	81 81	88 87	94 94	100 100
46	32	42	50	54	56	57	57	56	55	56	59	61	63	65	67	74	80	87	93	100
47	30	40	48	52	54	55	55	54	54	55	59	61	62	63	66	73	80	86	93	100
48	30	40	46	49	51	52	53	53	54	55	57	61	62	63	63	70	78	85	93	100
49 50	29 29	39 37	43 42	48 45	50 47	51 48	50 49	51 50	53 51	54 54	57 57	61 61	61 61	62 61	62 61	70 69	77 77	85 84	92 92	100 100
51	27	35	40	43	45	47	48	50	51	53	57	60	61	61	62	70	77	85	92	100
52	27	34	39	43	43	45	48	49	50	53	56	60	60	62	62	70	77	85	100	100
53	25	31	37	41	44	45	47	49	50	51	56	59	61	61	62	70	77	100	100	100
54	25	30	36	39	43	44	47	48	49	51	55 56	59	59 50	61	62	70	100	100	100	100
55	24	29	35	38	42	43	45	48	49	50	56	58	59	61	62	100	100	100	100	100
56 57	23 23	29 28	35 35	38 38	42 42	42 42	44 43	47 45	48 47	50 49	55 53	57 55	58 56	59 100	100 100	100 100	100 100	100 100	100 100	100 100
58	22	28	33	37	41	41	43	45	45	47	51	53	100	100	100	100	100	100	100	100
59	22	26	33	37	41	41	42	44	44	46	50	100	100	100	100	100	100	100	100	100
60	20	26	33	37	41	40	41	42	42	45	100	100	100	100	100	100	100	100	100	100
61 62	20 19	26 25	33 32	37	41 40	40	41	42 42	42 75	75 75	100	100 100	100	100	100 100	100 100	100	100	100 100	100
63	19 19	25 25	32 33	38 36	40 40	40 40	41 41	42 75	75 75	75 75	100 100	100	100 100	100 100	100	100	100 100	100 100	100	100 100
64	18	24	32	36	39	40	75	75	75	75	100	100	100	100	100	100	100	100	100	100
65	18	24	32	36	39	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
66	18	24	32	36	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
67	18	24	32	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100

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Issue							IVI	aie, iv	1011511	iokei	(Con		u) ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
68	18	24	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
69	18	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
70	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
71	48	52	55	60	60	65	70	70	0	70	100	100	100	100	100	100	100	100	100	100
72	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
73	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
74	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
75	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
76	48	52	55	60	60	65	70	70	70	100	100	100	100	100	100	100	100	100	100	100
77	48	52	55	60	60	65	70	70	100	100	100	100	100	100	100	100	100	100	100	100
78	48	52	55	60	60	65	70	100	100	100	100	100	100	100	100	100	100	100	100	100
79	48	52	55	60	60	65	100	100	100	100	100	100	100	100	100	100	100	100	100	100
80	48	52	55	60	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
81	48	52	55	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
82	48	52	55	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
83	48	52	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
84	48	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
85+	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
									Male	e, Sm	oker									
Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
0-15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
17	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	98	100	100	100	100	100	100	99	99	99	100	99	99	99	100	100	100	100	100	100

issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
0-15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
17	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	98	100	100	100	100	100	100	99	99	99	100	99	99	99	100	100	100	100	100	100
21	95	98	99	100	95	96	96	95	96	97	97	96	96	96	96	97	98	98	99	100
22	92	95	96	90	90	93	93	92	93	95	95	93	93	92	93	94	96	97	99	100
23	90	92	85	88	88	89	89	89	90	90	90	90	89	90	92	94	95	97	98	100
24	87	81	82	85	84	86	88	86	86	88	88	86	86	88	89	91	93	96	98	100
25	77	78	79	82	81	83	83	82	83	85	84	84	84	85	86	89	92	94	97	100
26	75	77	79	82	82	83	83	82	83	84	84	84	84	85	81	85	89	92	96	100
27	73	75	78	82	82	83	83	82	82	82	82	84	84	80	81	85	89	92	96	100
28	71	73	79	82	81	82	83	81	81	82	82	82	80	80	81	85	89	92	96	100
29	69	72	78	81	81	82	82	81	81	81	81	77	80	80	81	85	89	92	96	100
30	68	71	78	81	81	81	82	81	81	81	76	77	80	80	81	85	89	92	96	100
31	65	70	77	81	79	81	82	81	81	76	77	79	81	81	83	86	90	93	97	100
32	63	67	77	78	79	81	81	81	76	77	77	80	83	83	85	88	91	94	97	100
33	60	65	74	78	79	79	81	76	77	77	79	80	83	85	85	88	91	94	97	100
34	57	62	74	77	79	79	75	76	77	79	79	81	83	85	87	90	92	95	97	100
35	53	60	73	77	79	75	75	76	77	79	80	82	84	86	88	90	93	95	98	100
36	52	59	71	75	74	75	75	76	77	79	79	81	83	85	87	90	92	95	97	100
37	49	58	70	71	74	74	75	76	77	78	79	81	84	86	86	89	92	94	97	100
38	48	55	66	70	72	74	74	75	76	78	79	81	83	85	87	90	92	95	97	100
39	45	50	65	70	72	72	74	74	75	77	79	81	84	86	86	89	92	94	97	100
40	41	49	63	68	71	72	73	74	74	76	78	80	83	85	86	89	92	94	97	100
41	40	49	63	68	71	72	72	72	73	75	76	78	81	84	85	88	91	94	97	100
42	40	49	62	68	70	71	71	71	71	73	75	76	81	83	85	88	91	94	97	100
43	39	50	62	67	69	69	70	70	70	71	73	76	79	83	85	88	91	94	97	100
44	39	50	60	66	68	69	68	69	69	69	71	74	79	81	85	88	91	94	97	100
45	37	50	60	66	68	68	68	67	67	67	69	73	78	81	85	88	91	94	97	100
46	37	48	58	63	65	67	66	66	66	67	71	74	78	81	84	87	90	94	97	100
47	36	47	55	61	63	64	64	64	65	67	71	75	79	81	84	87	90	94	97	100
48	35	46	53	58	60	62	63	63	65	67	72	75 77	79	81	83	86	90	93	97	100
49	34	45	51	56	58	59	61	62	63	67	72	77	80	81	83	86	90	93	97	100
50	34	43	49	53	55	57	60	61	63	67	73	78	80	81	81	85	89	92	96	100
51	32	42	47	52	55	57	60	61	63	67	73	78	80	83	84	87	90	94	97	100
52	32	40	46	50	54	56	60	61	63	67	73	78	81	84	85	88	91	94	100	100

Male, Smoker (Continued)

Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
53	30	37	44	49	54	56	59	61	65	67	74	79	83	85	87	90	92	100	100	100
54	30	36	43	48	53	55	59	61	65	67	74	80	84	85	89	91	100	100	100	100
55	29	35	42	47	53	55	59	61	65	67	75	80	84	86	90	100	100	100	100	100
56	28	35	42	47	53	55	57	60	63	68	74	79	83	85	100	100	100	100	100	100
57	28	35	42	47	53	54	57	60	64	67	74	78	81	100	100	100	100	100	100	100
58	26	33	43	48	54	54	56	59	63	67	73	78	100	100	100	100	100	100	100	100
59	26	33	43	48	54	53	57	59	63	66	73	100	100	100	100	100	100	100	100	100
60	25	33	43	48	54	53	56	58	62	66	100	100	100	100	100	100	100	100	100	100
61	25	33	43	49	55	55	57	59	63	75	100	100	100	100	100	100	100	100	100	100
62	25	33	43	50	56	56	58	61	75	75	100	100	100	100	100	100	100	100	100	100
63	24	33	45	51	56	56	59	75	75	75	100	100	100	100	100	100	100	100	100	100
64	24	34	45	51	57	57	75	75	75	75	100	100	100	100	100	100	100	100	100	100
65	24	34	45	52	57	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
66	24	35	45	53	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
67	25	35	45	60	60	65	70	70	0	70	100	100	100	100	100	100	100	100	100	100
68	25	36	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
69	27	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
70	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
71	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
72	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
73	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
74	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
75	48	52	55	60	60	65	70	70	70	70	100	100	100	100	100	100	100	100	100	100
76	48	52	55	60	60	65	70	70	70	100	100	100	100	100	100	100	100	100	100	100
77	48	52	55	60	60	65	70	70	100	100	100	100	100	100	100	100	100	100	100	100
78	48	52	55	60	60	65	70	100	100	100	100	100	100	100	100	100	100	100	100	100
79	48	52	55	60	60	65	100	100	100	100	100	100	100	100	100	100	100	100	100	100
80	48	52	55	60	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
81	48	52	55	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
82	48	52	55	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
83	48	52	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
84	48	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
85+	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Female, Aggregate

Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
0-15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
17	99	100	100	100	100	100	100	100	93	95	96	97	97	100	100	100	100	100	100	100
18	83	83	84	84	84	84	86	78	78	79	82	84	85	88	88	90	93	95	98	100
19	65	66	68	68	68	68	63	63	64	66	69	71	72	74	75	80	85	90	95	100
20	48	50	51	51	51	47	48	48	49	51	56	57	58	61	63	70	78	85	93	100
21	47	48	50	51	47	47	48	49	51	53	57	60	61	64	64	71	78	86	93	100
22	44	47	48	45	47	47	48	49	53	54	60	61	63	64	66	73	80	86	93	100
23	42	45	44	45	47	47	49	51	53	54	61	64	64	67	69	75	81	88	94	100
24	39	40	42	44	47	47	50	51	54	56	64	64	66	69	70	76	82	88	94	100
25	34	38	41	44	47	47	50	53	56	57	64	67	69	71	73	78	84	89	95	100
26	34	38	41	45	49	49	51	56	58	59	66	69	70	73	70	76	82	88	94	100
27	34	38	41	47	50	51	54	57	59	60	69	70	73	70	71	77	83	88	94	100
28	34	37	43	47	53	53	56	59	62	63	70	73	70	72	74	79	84	90	95	100
29	34	38	43	49	54	56	58	60	63	64	73	70	72	74	75	80	85	90	95	100
30	35	38	43	50	56	56	59	63	66	67	70	71	74	75	76	81	86	90	95	100
31	35	38	43	51	56	58	60	64	67	65	71	72	74	75	76	81	86	90	95	100
32	35	39	45	51	56	59	63	66	65	66	72	72	75	76	76	81	86	90	95	100
33	36	39	44	52	58	62	64	65	66	67	72	74	75	76	76	81	86	90	95	100
34	36	40	45	52	58	63	63	66	67	68	74	74	76	76	76	81	86	90	95	100
35	36	40	45	53	59	61	65	67	68	70	75	74	75	76	75	80	85	90	95	100
36	36	40	45	53	55	62	65	67	68	70	74	74	74	75	75	80	85	90	95	100
37	36	41	47	52	57	62	65	67	68	69	72	72	73	75	74	79	84	90	95	100

PENNSYLVANIA BULLETIN, VOL. 30, NO. 1, JANUARY 1, 2000

Female, Aggregate (Continued)

Issue							_ ~		7-85	8	(001	Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
38	34	41	44	52	57	63	66	68	69	70	72	71	72	74	75	80	85	90	95	100
39	34	40	45	53	58	63	66	68	69	69	70	70	70	73	74	79	84	90	95	100
40	32	40	45	53	58	65	65	67	68	69	70	69	70	73	73	78	84	89	95	100
41	32	40	45	53	57	63	64	67	68	68	69	69	69	73	74	79	84	90	95	100
42	32 31	40 39	45 45	52 51	56 55	61 59	63 61	65 65	66 65	68 66	69 68	68 69	70 69	74 74	75 77	80 82	85 86	90 91	95 95	100 100
43 44	31	39 39	45 45	50	54	58	61	63	64	66	67	68	71	74 75	78	82	87	91	95 96	100
45	31	38	44	49	53	56	59	62	63	65	67	68	71	77	79	83	87	92	96	100
46	29	37	43	48	51	54	59	62	63	65	67	69	71	77	78	82	87	91	96	100
47	28	35	41	46	49	54	57	61	62	66	68	69	71	77	77	82	86	91	95	100
48	28	35	41	44	49	52	57	61	63	66	68	71	72	75	77	82	86	91	95	100
49	26	34	39	43	47	52	55	61	63	67	69	71	72	75	75	80	85	90	95	100
50	25	32	38	41	46	50	55	61	63	67	69	72	72	75	74	79	84	90	95	100
51 52	25 23	32 30	38 36	41 41	45 45	50 51	55 56	61 61	63 62	66 65	68 66	69 68	71 68	74 73	74 73	79 78	84 84	90 89	95 100	100 100
52 53	23	30	36	41	47	51	56	61	62	63	65	66	68	72	72	78	83	100	100	100
54	22	29	35	41	47	53	57	61	61	62	62	66	66	69	70	76	100	100	100	100
55	22	29	35	41	47	53	57	61	61	61	62	63	64	68	69	100	100	100	100	100
56	22	29	35	41	45	51	56	59	60	61	62	63	64	67	100	100	100	100	100	100
57	22	29	35	41	45	50	54	56	58	59	61	62	63	100	100	100	100	100	100	100
58	22	30	36	41	44	49	53	56	57	57	61	62	100	100	100	100	100	100	100	100
59 60	22	30	36	41	44	48	51	53	55	56	59	100	100	100	100	100	100	100	100	100
60	22	30	36	41	43	47	50	51	53	55	100	100	100	100	100	100	100	100	100	100
61 62	22 20	29 28	35 33	39 39	42 41	46 45	49 47	50 49	52 80	80 80	100 100									
63	20	28	33	38	41	44	46	80	80	80	100	100	100	100	100	100	100	100	100	100
64	19	27	32	36	40	42	80	80	80	80	100	100	100	100	100	100	100	100	100	100
65	19	25	30	35	39	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
66	19	25	30	35	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
67	19	25	30	72	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
68	19	25	68	72	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
69 70	19 60	64 60	68 64	72 68	72 68	72 72	75 75	75 75	80 80	80 80	100 100									
	60			68	68															
71 72	60	60 60	64 64	68	68	72 72	75 75	75 75	80 80	80 80	100 100									
73	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
74	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
75	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
76	60	60	64	68	68	72	75	75	80	100	100	100	100	100	100	100	100	100	100	100
77	60	60	64	68	68	72	75	75	100	100	100	100	100	100	100	100	100	100	100	100
78 70	60	60	64	68	68	72	75 100	100	100	100	100	100	100	100	100	100	100	100	100	100
79 80	60 60	60 60	64 64	68 68	68 68	72 100	100 100													
81	60	60	64	68	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
82	60	60	64	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
83	60	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
84	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
85+	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
								E.		Non										

Female, Nonsmoker

Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
0-15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
17	96	98	98	98	98	99	99	99	92	92	93	95	95	97	99	99	99	100	100	100
18	78	80	80	80	80	81	81	74	75	75	78	79	82	83	85	88	91	94	97	100
19	60	62	63	63	63	65	59	59	60	60	64	67	67	70	72	78	83	89	94	100
20	42	44	45	45	45	42	42	42	45	45	50	51	53	56	58	66	75	83	92	100
21	41	42	44	45	41	42	42	44	47	47	51	53	54	57	59	67	75	84	92	100
22	39	41	44	41	41	42	44	45	49	49	54	56	57	58	60	68	76	84	92	100

Female, Nonsmoker (Continued)

Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
23	38	41	38	40	41	42	44	46	49	50	56	57	58	60	62	70	77	85	92	100
24 25	36 32	36 34	38 37	40 40	41 41	42 43	46 46	47 49	50 51	51 53	58 59	59 60	60 62	62 63	63 64	70 71	78 78	85 86	93 93	100 100
26	32	34	37	41	43	45	47	50	53	53	60	62	63	64	62	70	77	85	92	100
27	32	34	38	43	46	47	49	51	53	55	62	63	64	62	62	70	77	85	92	100
28	30	34	39	43	47	49	51	53	56	58	63	63	61	62	63	70	78	85	93	100
29 30	30 31	35 35	40 40	45 46	50 51	51 52	52 53	55 56	58 59	59 60	64 62	61 62	62 63	63 65	63 65	70 72	78 79	85 86	93 93	100 100
31	31	35	40	46	51	53	55	58	60	58	62	62	63	65	65	72	79	86	93	100
32	32	35	40	45	51	53	56	59	57	58	62	63	63	65	64	71	78	86	93	100
33 34	32 33	36 36	41 41	47 47	52 52	55 55	58 55	55 57	58 58	59 59	63 63	63 65	65 64	65 65	65 64	72 71	79 78	86 86	93 93	100 100
35	33	36	41	47	52	53	57	58	59	61	63	64	64	64	64	71	78	86	93	100
36	33	36	41	47	49	53	57	58	59	61	63	64	63	64	63	70	78	85	93	100
37 38	32 32	36 37	41 39	44 45	49 50	53 54	57 57	58 58	59 60	60 60	62 61	62 61	61 61	62 62	63 61	70 69	78 77	85 84	93 92	100 100
39	30	35	39	45	50	54	57	58	60	59	60	60	59	60	61	69	77	84	92	100
40	28	35	39	45	50	54	56	57	59	59	60	59	59	59	60	68	76	84	92	100
41 42	28 27	35 35	39 39	45 44	49 49	52 52	55 54	55 55	58 56	57 57	58 57	59 57	58 58	59 60	60 61	68 69	76 77	84 84	92 92	100 100
42 43	27	34	39 39	44	49 47	52 50	53	53	55	57 55	56	57 57	56	60	61	69	77	84	92	100
44	26	34	38	42	47	50	52	53	54	55	55	55	56	61	62	70	77	85	92	100
45	26	33	38	42	45	48	51	51	52	53	54	55	56	61	62	70	77	85	92	100
46 47	24 24	32 30	37 35	40 39	43 42	47 45	49 47	51 49	52 51	53 53	54 54	55 55	56 56	60 59	61 60	69 68	77 76	84 84	92 92	100 100
48	23	30	35	37	40	44	47	49	50	53	54	55	55	59	57	66	74	83	91	100
49 50	23 21	29 27	33 32	35 34	39 37	42 41	45 44	48 48	50 50	53 53	54 54	55 55	55 55	57 56	56 55	65 64	74 73	82 82	91 91	100 100
51	21	26	30	34	37	41	44	48	49	51	53	53	54	55	55	64	73	82	91	100
52	20	25	30	33	37	41	44	47	48	50	50	51	51	55	53	62	72	81	100	100
53	19	24	29	32	37	41	43	47	48	48	49	49	51	52	52	62	71	100	100	100
54 55	18 18	24 23	29 28	32 32	37 37	41 41	43 43	45 45	47 45	47 45	47 46	49 46	49 47	51 50	51 50	61 100	100 100	100 100	100 100	100 100
56	18	23	28	32	36	39	42	44	44	45	46	46	46	49	100	100	100	100	100	100
57	18	23	28	31	35	38	41	42	44	44	45	45	46	100	100	100	100	100	100	100
58 59	17 17	23 23	26 26	31 30	35 33	36 35	38 38	41 39	41 40	42 41	45 44	45 100	100 100							
60	17	23	26	30	32	34	36	38	39	40	100	100	100	100	100	100	100	100	100	100
61	17	22	25	29	32	33	35	36	38	80	100	100	100	100	100	100	100	100	100	100
62 63	16 16	22 20	25 24	28 28	30 30	32 32	34 34	35 80	80 80	80 80	100 100									
64	14	21	24	27	29	30	80	80	80	80	100	100	100	100	100	100	100	100	100	100
65	15	19	23	25	28	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
66 67	15 15	19 19	23 22	25 72	72 72	72 72	75 75	75 75	80 80	80 80	100 100									
68	13	18	68	72	72	72	75	75 75	80	80	100	100	100	100	100	100	100	100	100	100
69	13	64	68	72	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
$\frac{70}{71}$	$\frac{60}{60}$	60	64	68	68	72 72	75 75	75	80	80	100	100	100	100	100	100	100	100	100	100
71 72	60	60 60	64 64	68	68	72 72	75 75	75 75	80 80	80 80	100	100	100 100	100	100	100 100	100 100	100 100	100	100 100
73	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
74 75	60 60	60 60	64 64	68 68	68 68	72 72	75 75	75 75	80 80	80 80	100 100									
76	60	60	64	68	68	72	75	75	80	100	100	100	100	100	100	100	100	100	100	100
77	60	60	64	68	68	72	75	75	100	100	100	100	100	100	100	100	100	100	100	100
78 79	60 60	60 60	64 64	68 68	68 68	72 72	75 100	100 100												
80	60	60	64	68	68	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
81	60	60	64	68	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
82	60	60	64	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Female, Nonsmoker (Continued)

Issue							101	,	. 10113	шоке	1 (00		ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
83	60	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
84	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
85+	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
									Fema	le, Sn	noker									
Issue													ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
0-15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16 17	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100	100 100
18	99	100	100	100	100	100	100	95	96	97	100	100	100	100	100	100	100	100	100	100
19	87	89	92	92	92	92	84	84	86	86	92	93	95	96	99	99	99	100	100	100
20	74	77	80	80	80	73	73	73	75	77	83	83	86	88	90	92	94	96	98	100
21 22	71 68	74 71	78 75	78 70	71 71	71 71	73 73	74 74	77 78	79 79	85 88	86 90	88 89	89 89	90 92	92 94	94 95	96 97	98 98	100 100
23	65	69	67	70	70	70	73	77	79	81	89	90	90	92	92	94	95	97	98	100
24	62	60	64	69	70	70	74	77	79	81	92	90	92	93	93	94	96	97	99	100
25	53	58	63	67	69	70	74	78	81	82	92	93	93	95	95	96	97	98	99	100
26 27	53 52	58 56	63 63	69 70	71 74	72 74	75 78	79 81	82 82	82 84	93 93	93 95	95 95	96 90	90 90	92 92	94 94	96 96	98 98	100 100
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29 30	51 51	56 56	64 64	71 72	78 79	78 79	81 82	84 85	86 88	88 89	95 90	90 90	90 92	92 93	92 93	94 94	95 96	97 97	98 99	100 100
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31 32	51	56	64	71	78 78	81	85	86	84	85	90	90	92 92	93 94	93	94	96	97	99	100
33	51	57	62	71	78	82	85	83	84	85	90	92	93	93	93	94	96	97	99	100
34 35	51 51	56 56	62 62	71 71	78 78	82 79	81 83	83 84	85 85	86 86	90 90	92 91	92 91	94 93	93 93	94 94	96 96	97 97	99 99	100 100
36	49	56	62	71	74	79	83	84	85	86	90	90	91	93	92	94	95	97	98	100
37	48	55	62	67	74	79	83	84	85	86	89	90	89	92	91	93	95	96	98	100
38	47	55	57	66	72	77	81	84	86	86	87	88	88	90	91	93	95	96	98	100
39 40	45 41	50 50	57 57	66 66	72 72	77 77	81 81	83 83	85 84	86 85	86 86	87 86	86 86	89 89	90 89	92 91	94 93	96 96	98 98	100 100
41	40	50	57	65	71	76	79	81	83	84	85	86	85	89	90	92	94	96	98	100
42	40	49	57	65	69	74	77	80	82	83	84	85	86	90	92	94	95	97	98	100
43	39	49	55	63	69	73	76	78	80	82	83	84	85	92	93	94	96	97	99	100
44 45	39 37	48 47	55 55	62 61	67 65	71 70	75 73	78 76	80 78	80 80	82 81	84 84	86 86	93 94	96 97	97 98	98 98	98 99	99 99	100 100
46	36	46	53	59	63	68	71	75	77	79	83	85	86	93	96	97	98	98	99	100
47	34	44	51	57	62	66	70	75	77	80	83	85	86	93	94	95	96	98	99	100
48 49	34 33	44 42	50 48	54 53	60 58	64 63	69 68	74 74	77 77	80 81	84 84	86 86	87 87	92 92	92 91	94 93	95 95	97 96	98 98	100 100
50	31	41	46	51	57	61	67	74 74	77	81	85	87	87	91	90	92	94	96	98	100
51	30	39	45	51	56	61	67	74	75	80	83	85	85	90	90	92	94	96	98	100
52	29	38	45	50	56	62	68	74	75	79	81	83	84	90	90	92	94	96	100	100
53 54	28 28	37 36	43 43	49 49	57 57	62 63	68 69	73 73	74 74	77 75	79 78	81 80	83 81	89 87	89 89	91 91	93 100	100 100	100 100	100 100
55	26	35	42	49	57	63	69	73	73	74	76	78	79	86	87	100	100	100	100	100
56	26	35	42	49	56	62	67	71	72	74	76	78	79	85	100	100	100	100	100	100
57	26	35	42	49	55	61	66	69	72	73	76	78	79	100	100	100	100	100	100	100
58 59	28 28	36 36	43 43	49 49	55 54	59 57	63 63	68 67	69 68	72 70	76 76	78 100	100 100							
60	28	36	43	49	53	57	61	64	67	69	100	100	100	100	100	100	100	100	100	100
61	26	35	42	48	52	56	59	63	66	80	100	100	100	100	100	100	100	100	100	100
62 62	26 25	33	41	47 46	51 51	55 55	58 57	62	80	80	100	100	100	100	100	100	100	100	100	100
63 64	25 25	33 33	41 40	46 45	51 50	55 53	57 80	80 80	80 80	80 80	100 100									
65	24	32	39	44	49	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
66	24	32	39	44	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
67	24	32	39	72	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100

Female, S	Smoker ((Continued))
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Issue												Dura	ation							
Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
68	24	32	68	72	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
69	24	64	68	72	72	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
70	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
71	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
72	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
73	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
74	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
75	60	60	64	68	68	72	75	75	80	80	100	100	100	100	100	100	100	100	100	100
76	60	60	64	68	68	72	75	75	80	100	100	100	100	100	100	100	100	100	100	100
77	60	60	64	68	68	72	75	75	100	100	100	100	100	100	100	100	100	100	100	100
78	60	60	64	68	68	72	75	100	100	100	100	100	100	100	100	100	100	100	100	100
79	60	60	64	68	68	72	100	100	100	100	100	100	100	100	100	100	100	100	100	100
80	60	60	64	68	68	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
81	60	60	64	68	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
82	60	60	64	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
83	60	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
84	60	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
85 +	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

 $[Pa.B.\ Doc.\ No.\ 00\text{-}11.\ Filed\ for\ public\ inspection\ December\ 30,\ 1999,\ 9\text{:}00\ a.m.]$

PENNSYLVANIA PUBLIC UTILITY COMMISSION

[52 PA. CODE CH. 59]

[L-00990145]

Procedures to Ensure Customer Consent to a Change of Natural Gas Suppliers

The Pennsylvania Public Utility Commission (Commission) on November 4, 1999, adopted a proposed rule-making order to promulgate proposed regulations to implement and codify section 2206(b) of the Natural Gas Choice and Competition Act, 66 Pa.C.S. § 2206(b) (act) which requires the establishment of procedures to ensure that natural gas suppliers do not change a customer's gas supplier without direct oral confirmation from the customer of record or written evidence of the customer's consent to a change of supplier. The contact persons are Terrence J. Buda, Law Bureau (717) 787-5755 and Daniel Mumford, Bureau of Consumer Services (717) 783-1957.

Executive Summary

On June 22, 1999, Governor Tom Ridge signed the act into law. The act revised 66 Pa.C.S. (relating to public utility code) (code), by inter alia, adding Chapter 22 (relating to Natural Gas Choice and Competition Act) to restructure the gas utility industry. The purpose of the act is to permit customers to buy natural gas supply service from their choice of gas suppliers.

Section 2206(b) of the act requires the "[t]he Commission shall, by order or regulation, establish procedures to ensure that a natural gas distribution company does not change a retail gas customer's natural gas supplier without direct oral confirmation from the customer or record or written evidence of the customer's consent to a change of supplier." The purpose of this proposed rulemaking is to implement and codify this provision of the act.

Public Meeting held November 4, 1999

Commissioners Present: John M. Quain, Chairperson; Robert K. Bloom, Vice Chairperson; Nora Mead Brownell; and Aaron Wilson Jr.

Proposed Rulemaking Order and Final Interim Guidelines

By the Commission:

At public meeting of August 26, 1999, the Commission issued a tentative order establishing interim guidelines to ensure customer consent to a change of natural gas suppliers. The guidelines were undertaken as part of the implementation duties performed by the Commission under the act. Signed into law on June 22, 1999, by Governor Tom Ridge, the act revised the code by, inter alia, adding Chapter 22 relating to restructuring of the natural gas industry. The Commission is the agency charged with implementing the act. Section 2206(b) of the act states that "[t]he Commission shall, by order or regulation, establish procedures to ensure that a natural gas distribution company does not change a retail gas customer's natural gas supplier without direct oral confirmation from the customer of record or written evidence of the customer's consent to a change of supplier." The purpose of the tentative order was to propose interim guidelines relating to the procedures for changing a customer's natural gas supplier to prevent unauthorized changing of suppliers, commonly referred to as "slamming." The tentative order was entered August 27, 1999, at Docket No. M-00991249F0006 and a 20-day comment period was set.

Comments were filed by the Pennsylvania Gas Association (PGA), the Office of Consumer Advocate (OCA), Natural Fuel Resources (NFR), T. W. Phillips Gas and Oil Company (T. W. Phillips), Columbia Gas of Pennsylvania (Columbia), United Gas Management (United), PG Energy Inc. (PG Energy) and the Peoples Natural Gas Company (PNG). We thank the parties for their suggestions on developing these guidelines.

The instant order, based on review and consideration of all of the comments, presents a section-by-section summary of comments. The proposed section titles from the tentative order are used as headings. Any substantive changes to a section as a result of consideration of the comments are discussed immediately following the summary of comments for that section. The final interim guidelines, as revised under the discussion in the instant order, appear in Annex A of this order.

§ 59.91. Definitions.

Summary of Comments

PG Energy recommends revision of the definition of "customer" to limit it to the scope of the instant guidelines. PG Energy suggests the definition be revised to read as follows:

Customer - A purchaser of natural gas in whose name a service account exists with either a natural gas distribution company or a natural gas supplier. In addition, the term shall include all persons identified in writing by the customer, pursuant to the procedures set forth in these guidelines, as authorized to act on a customer's behalf in changing the customer's natural gas supplier.

PG Energy also suggests that the term "customer" be used "solely and consistently throughout the guidelines."

Discussion/Resolution

We agree with PG Energy that the definition of "customer" is improved by wording that limits its applicability to the scope of this proceeding. We have, therefore, revised the definition of "customer" accordingly. However, we shall replace the word "guidelines" with "regulations" since these provisions are intended to become final regulations.

For residential customers who wish to designate a consenting individual to act on the customer's behalf for other matters relating to the customer's account, they may do so by utilizing applicable provisions of our Chapter 56 (relating to standards and billing practices for residential utility service), such as § 56.33(2) or § 56.131 (relating to third-party guarantor; and third-party notification). Since the guidelines contain this clear definition of the term "customer," we have also adopted PG Energy's other recommendation to consistently use the term "customer" in place of terms such as "customer of record," "customer or a person authorized to act on the customer's behalf" and "customer or authorized party."

§ 59.92. Customer contacts with the natural gas. Distribution Company (NGDC).

Summary of Comments

T. W. Phillips suggested that in addition to the customer contacting the NGDC, this section should also refer to a "person authorized to act for the customer." United agrees with the proposed language of this section because it allows suppliers to not only manage their supply forecasts by controlling the enrollment timing, but also helps insure that customers with bad credit history are not given the opportunity to game the system by enrolling in a NGS's program without the NGS's consent, or securement of an appropriate security deposit.

Discussion/Resolution

With respect to T. W. Phillips suggestion, we will not adopt it because, as noted previously, the definition of the term "customer" in the guidelines has been revised to clearly include "persons identified in writing by the

customer, under the procedures set forth in these proposed regulations, as authorized to act on a customer's behalf in changing the customer's natural gas supplier."

§ 59.93. Customer contacts with NGS.

Summary of Comments

The NFR recommended that subsection (a) be modified to clearly place the responsibility on the customer's new NGS to notify the NGDC of the customer's request to switch suppliers. To accomplish this, the NFR suggested replacing "contacted NGS" with "customer's new NGS" in the fourth line under the heading "Customer Contacts with NGS."

The NFR, PNG and United expressed concerns with the requirement in subsection (a)(1) that the NGS notify the NGDC "by the end of the next business day following the customer contact." The NFR pointed out that this requirement conflicts with the customer's 3-day right of rescission found in the tentative interim customer information order [Docket No. M-00991249F000] entered by the Commission on August 27, 1999. The NFR suggested that the communication to the NGDC should be required no later than the end of the fourth day following the request. In NFR's opinion, this change will allow an NGS to wait for the rescission period to end, thereby avoiding the need to retract switch requests if a customer exercises the right of rescission. The PNG also expressed concerns that confusion could result from sending out confirmation letters before the customer's 3-day rescission right expires, along with the additional administrative burden this will place on NGDCs if the rescission right is exercised. United suggested that a customer request should not be forwarded to the NGDC until all statutory "cooling off periods" have expired; the NGS has completed the customer's credit review; and that any verification procedure a NGS might use has been completed.

The PNG suggests that NGSs should have the option of batching supplier requests and transmitting them to the NGDC on a monthly basis before the beginning of the next available billing cycle. The PNG claimed that this is a process that they have used in their Energy Choice Program since 1997 and that batching requests is easier for both NGSs and NGDCs "without jeopardizing the timeliness of the customer's start date."

Discussion/Resolution

We agree with the NFR recommendation that subsection (a) be modified to clearly place the responsibility on the customer's new NGS to notify the NGDC of the customer's request to switch suppliers. With respect to the parties' concerns with the requirement in subsection (a)(1) that the NGS notify the NGDC "by the end of the next business day following the customer contact," we have altered the language in this guideline to recognize that NGSs may choose to apply the Chapter 56 credit provisions. Instead of requiring notification by the end of the next business day "following the customer contact," we will require notification by the end of the next business day "following completion of the application process." This new wording will allow NGSs to implement appropriate credit practices. Customers who contact an NGS that has chosen to apply the Chapter 56 credit provisions as part of the application process will not be disadvantaged since one of the requirements of these provisions is that applicants receive a full explanation of the credit and deposit procedures. See § 56.36(2). If a customer does not want to continue discussion with an NGS upon being informed by the NGS that its application process includes a credit check and possible request for a

deposit, then the customer can shop elsewhere. We believe this revision in subsection (a)(1) more accurately conveys the intent of this guideline; that is, that the NGS inform the NGDC in a timely manner once the NGS and customer reach an agreement. We have rejected PNG's suggestion that NGSs should have the option of batching supplier requests and transmitting them to the NGDC on a monthly basis before the beginning of the next available billing cycle. We have rejected this suggestion because we believe it will unnecessarily delay some customer requests and, therefore, fail to reflect our desire to see that customer requests to change suppliers are processed without unnecessary delays. For the same reason, we have rejected the suggestion to allow NGSs to wait for the 3-day rescission period to end before informing the NGDC of the customer's request to switch. While we recognize that some rescissions will occur during this 3-day period and thus cause additional administrative activity, we do not want the overwhelming majority of customer requests to be delayed for this reason. With the revision noted above, we believe the guideline strikes the proper balance between the establishment of an appropriate application period, and our desire to see that customer requests to change suppliers are processed without unnecessary delays.

§ 59.94. Time frame requirement.

Summary of Comments

Columbia was concerned that by requiring NGDCs to make the change of suppliers effective at the beginning of the first feasible billing period following the 10-day waiting period, NGDCs will be placed in the position of "facilitating the breach of existing contracts that customers may have had with other NGSs," and will place NGDCs in the inappropriate position of "investigating and determining which NGS is the proper entity to provide service to the customer." Columbia recommends continuation of their current practice of rejecting an enrollment if an NGS submits a request to enroll a customer that is currently being served by another NGS. In such instances, Columbia's information system rejects the enrollment and sends a notice to the NGS. The NGS must then contact and inform the customer that their contract with their current NGS must first be terminated before service with the new NGS can be initiated.

United suggests that the term "switch" be changed to "enroll" to conform with utility operational rules already in place.

Discussion/Resolution

With respect to Columbia's concerns, we disagree with their analysis. Our experience to date with electric competition indicates that suppliers do not share with the distribution companies all of the terms of their contracts with customers. These terms, as well as any claims that one party has breached these terms, are clearly a matter between the customer and supplier. Suppliers may certainly pursue any complaints they may have regarding breach of contract, but that would be directed at the other party to the contract, not the NGDC who properly responds to an authorized customer request to change suppliers. We want the decision to change suppliers to remain with the customer, not the NGDC. In our view, the NGDCs would more likely become a party involved in disputes about switches if we modify the proposed method of NGDC processing of customer requests to change suppliers, and adopt in its place the "gatekeeper-type" model suggested by Columbia. Therefore, we have not modified the language in this guideline as recommended by Columbia.

Regarding United's suggestion to use the term "enroll" instead of "switch," we decline to do so since we believe the term "switch" more accurately reflects that the focus of the instant guidelines is on "change" of natural gas suppliers, not initial enrollment.

§ 59.95. Persons authorized to act on behalf of a customer.

Summary of Comments

In addition to a signed authorization document, T. W. Phillips suggested that this guideline be modified to allow NGDCs to establish an electronic confirmation procedure for identification by the customer of third parties authorized to act on the customer's behalf.

Columbia is concerned that allowing third parties to change NGSs could increase slamming, and maintaining a record of authorized third parties would pose an increased administrative burden on NGDCs. This is especially a problem if the customer authorizes many different people to switch NGSs since the proposed guideline places no limit on the number of people a customer can authorize. Columbia suggests that this provision be eliminated from the guidelines, or at a minimum, customers should be limited to one authorized agent.

United "does not believe that the proposed guideline is either feasible or even-handed" and notes that "the current practice is not for the NGDC to insure that their communications are with the customer of record, but to assume that a householder or spouse who suggests that they have the ostensible authority to bind the accountholder is sufficient."

PG Energy believed that the proposed guideline is "overly broad and should be revised to appropriately identify the narrow scope of authority vested in the third party by the customer."

Discussion/Resolution

In regard to T. W. Phillips suggestion that this guideline be modified to allow an electronic confirmation procedure established by the NGDC for identification by the customer of a third party to act on the customer's behalf, we are reluctant to allow use of an electronic confirmation procedure without additional information. Therefore, we have not revised the guideline to allow electronic designation of third parties to act for a customer. However, we would be receptive to NGDC pilot programs for electronic designation of third parties to act for a customer. These pilots would help all parties identify and address any legal or technical issues that may be involved with electronic communications of this nature.

Regarding Columbia's comments, we disagree that this guideline would increase slamming, or pose an undue increased administrative burden on NGDCs. As noted previously in the instant order, Chapter 56 allows customers to designate third-party guarantors, as well as designate third parties to receive termination notices. These customer options have been in effect since 1978 without any indication from NGDCs that they pose an unreasonable administrative hardship. Nor is there any indication that this guideline has posed undue increased administrative burden on electric distribution companies in electric competition. Moreover, while Columbia asserts this practice may increase the incidences of slamming, we view it as an added protection against unauthorized switches since NGSs know in advance that they must deal only with persons authorized to make decisions on

an account. For these reasons, we have not modified this guideline as recommended by Columbia.

We disagree with United that the proposed guideline is neither feasible nor even-handed. Our view is that it reflects a practice to ensure compliance with section 2206(b) of the act which states that "The Commission shall, by order or regulation, establish procedures to ensure that a natural gas distribution company does not change a retail gas customer's natural gas supplier without direct oral confirmation from the customer of record or written evidence of the customer's consent to a change of supplier." [emphasis added]. The instant guideline allows NGDCs to verify that a person other than the customer of record has the customer's permission to act on behalf of the customer.

§ 59.98. Valid written authorization.

Summary of Comments

Both the OCA and NFR address the use of contracts in their comments. The OCA suggested the following:

"in certain types of sales circumstances, particularly door to door solicitations or offerings at public gatherings, the Commission should require that the customer sign the actual Terms of Service document itself and not an alternative document accompanying the Terms of Service document. In these types of sales situations, the opportunity for hard sell is obvious and it is possible that the written document will be presented to the customer as a mere formality or possibly even be misrepresented."

The NFR requested "clarification as to whether or not a signed contract will be acceptable as authorization to switch." The NFR also suggested that the guidelines should let NGSs use their own discretion as to how verbal or electronic switch requests be validated.

T. W. Phillips suggested that the guidelines should be revised to allow NGDCs "to utilize an electronic confirmation procedure to verify a customer's consent to a change of natural gas supplier."

Discussion/Resolution

Regarding the OCA's suggestion that in certain types of sales circumstances, particularly door-to-door solicitations or offerings at public gatherings, the Commission should require that the customer sign the actual Terms of Service document itself, we disagree with this approach. We believe the best way to ensure that the purpose of a written authorization is clearly understood by a customer is to keep it limited to the sole purpose of obtaining the customer's consent to change supplier. A "hard sell" sales approach may actually be easier to close if the customer is asked to sign a form filled with extensive information since the customer may not take the opportunity to read the whole document before signing. A document whose sole purpose is to obtain the customer's consent to change suppliers is more likely to be read and understood in such circumstances.

With respect to NFR's request for clarification as to whether or not a signed contract will be acceptable as a valid written authorization to switch, it does not since it has purposes other than obtaining the customer's consent. For NGSs that intend to implement practices which rely on written rather than oral customer authorization, we advise that they develop a separate written authorization form whose sole purpose is to obtain the customer's consent to change suppliers.

In regard to T. W. Phillips suggestion that the guidelines should be revised to allow NGDCs to utilize an electronic authorization procedure, we are reluctant to include in the instant guidelines use of an electronic authorization procedure. Our reluctance is based, in part, on the difficulties parties have encountered setting up electronic communications between electric distribution companies and suppliers. Therefore, we have not revised the guideline to allow electronic authorizations. However, as previously stated in regard to T. W. Phillips' other suggestion to establish an electronic confirmation procedure for identification of third parties, we would be receptive to NGDC pilot programs for electronic authorizations to help all parties identify and address any legal or technical issues that may be involved with electronic communications of this nature.

§ 59.97. Customer dispute procedures.

Summary of Comments

The proposed guidelines under this section require that when a customer contacts a NGDC with a slamming allegation, the NGDC must "consider the matter a customer registered dispute." The PGA objected to this requirement for numerous reasons. First, the PGA pointed out it would require the NGDCs to investigate and address slamming allegations in accordance with the Chapter 56 dispute provisions, which the PGA characterized as "costly and detailed standards." Moreover, the PGA noted that the proposed guideline conflicts with the Chapter 56 definition of "dispute" and "initial inquiry," since the guidelines require that customer contacts alleging unauthorized switching must automatically be considered a customer registered dispute. The PGA also argued that, if adopted, the NGDCs "stand to have a significant number of registered disputes entered on their records, and to incur significant investigation costs, even where the NGDC does little more than change the name of the supplier on the customer's bill." Further, the PGA rejected the argument that this provision is necessary, in part, to prevent an NGDC from favoring an affiliate NGS by discriminating in their application of dispute procedures. The PGA asserted that existing and pending standards of conduct proceedings and the code's prohibitions against undue discrimination are sufficient to address these concerns. The PGA also rejected the imposition of dispute requirements in the name of maintaining a "competitive balance between electric and gas service." The PGA urged the Commission to lift these requirements from the electric industry, instead of placing them on both industries. For all these reasons, the PGA recommended the guidelines be revised to allow the NGDC, once it has ascertained that it has fulfilled its responsibilities under the guidelines, to refer the customer to the NGS and not have to classify the contact as a dispute.

The NFR suggested that the procedures under subsection (b) of the proposed guidelines be made discretionary and applicable only in cases of repeated intentional slamming. The NFR believed that as proposed, this section could "unjustly penalize" an NGS for an unintentional error. In addition, since the customer receives written notice of an NGS switch and is provided an opportunity to cancel the switch, the customer should not "be relieved of paying for gas it received after a switch."

Discussion/Resolution

After careful consideration of the comments regarding these procedures, we are not convinced that it is in the public interest to alter the requirements in this guideline. Consumers who contact either the NGDC or the NGS and allege slamming will have their grievance addressed by application of procedures which fully reflect the Commis-

sion's firm intolerance for this practice. The Chapter 56 dispute provisions have been applied by NGDCs for 20 years and, therefore, can be applied by NGDC customer service representatives with limited additional training. Certainly, one clarification that customer service representatives will need to be informed of is the standard that all slamming complaints are to be considered disputes on the initial call from the customer. We believe this is reasonable and necessary to both ensure satisfactory resolution of the customer's claim, and to ensure that complaints against affiliated suppliers are not handled differently than disputes against nonaffiliated suppliers.

In regard to PGA's concern that NGDCs stand to have a significant number of registered disputes entered on their records and incur significant investigation costs, parties must recognize that we are attempting to establish a process that reflects our often stated "zero tolerance" to slamming incidences. Simply put, we do not intend to tolerate numerous slamming complaints. If PGA's concern is realized and a "significant number" of customers need to complain to the NGDC about unauthorized switches, the Commission will take immediate enforcement action. This action often requires Commission staff review of appropriate company records. Any increased costs associated with the investigation of slamming complaints or the retention of appropriate records, must be balanced against the benefit to be derived for consumers. We find that any increased costs are offset by the fact that this guideline enhances the Commission's ability to find and stop inappropriate practices relating to changing suppliers.

We also disagree with the PGA's contention that it is not important to maintain a "competitive balance between electric and gas service." Some suppliers will offer both gas and electric supply to customers. It would be counterproductive to our goal of developing competitive gas and electric markets to impose substantively different rules for essentially the same activity.

Finally, in regard to the NFR's suggestion that the procedures under subsection (b) of the proposed guidelines be made discretionary and applicable only in cases of repeated intentional slamming, we have not altered this procedure as recommended since we believe the customer is entitled to relief so long as the customer's claim is filed in a timely manner, regardless of whether the customer was adversely affected intentionally or unintentionally.

§ 59.98. Provider of last resort.

No parties commented on this section of the guidelines. Therefore, we have retained them as proposed.

§ 59.99. Record maintenance.

No parties commented on this section of the guidelines. Therefore, we have retained them as proposed.

Information Needed to Process a Selection Request

Summary of Comments

In the preamble to the tentative order, the Commission invited parties to comment on "what information a natural gas distribution company needs from a natural gas supplier to accurately process a supplier selection request."

The PGA suggested that NGSs should be required to provide some form of customer identification, and that guideline (a)(1) should be revised by adding a requirement that an NGS "provide such customer identification

data as required by the natural gas distribution company or established by Commission order."

The OCA, NFR and T. W. Phillips agreed that an NGS should have to submit a name, address and account number. The OCA stated that this "will aid in preventing the situation where a customer is inadvertently switched due to an incorrect account number, or a transposition of an account number," and will also require a procedure for NGSs and NGDCs to address information that does not match. The NFR also suggested that mailing address and date of customer switch request should be added to the list of required information.

Columbia suggested that in addition to the account number, "enrollment type and rate code" are the only other pieces of information that "allows it to properly match the NGS's record to Columbia's." Peoples claims that they do not need any information other than the account number to process a request.

Discussion/Resolution

The comments have helped clarify that, to aid in preventing unauthorized supplier selections caused by inadvertent errors, the "information match" by the NGDC is more important than the specific information required by each NGDC. Our current view is that specific customer identification data requirements will evolve on the basis of review of each natural gas distribution company's restructuring filing, or established with uniform requirements by Commission order. To help reduce the number of errors, however, we have revised guideline (a)(1) under the Customer Contacts with Natural Gas Suppliers section to require that NGDCs verify the accuracy of the information provided by the NGS by matching at least two data elements with their records. If, for example, an NGDC matches account number and customer name, it is more likely to identify errors than if the NGDC matches just one of these data elements with their records.

Third-Party Verification

Summary of Comments

Vice Chairman Bloom attached a statement to the tentative order inviting parties to comment on the use of a third party to verify NGS selection requests.

The PGA and Peoples objected to any third-party verification system which NGDCs would be required to financially support.

Columbia and T. W. Phillips suggested that third-party verification is unnecessary. T. W. Phillips "sees no need for the Commission to establish an independent third-party verification procedure" as long as customers receive a 10-day confirmation letter.

The OCA believed that "independent third-party verification is an important protection and a good business practice to be implemented particularly by those suppliers receiving oral authorizations to switch" and it "would provide an additional layer of protection for both customers and suppliers." The OCA also "submits that the Commission's clear policy of zero tolerance may prove to be the most effective deterrent to slamming." If thirdbe the most effective deterrent to slamming." party verification is used, the OCA suggests that the third-party verifier should be completely independent of the NGS, operate from facilities that are physically separate from the NGS, and should receive no compensation or commission of any kind based upon the number of confirmed sales. The cost of the third-party verification procedure should be incurred by the NGS that utilizes the procedure. The OCA also noted that the "form and content of oral confirmation is not made clear, nor is the

necessity for verification or for record keeping." The OCA went on to note the importance of record maintenance by the NGS in case the switch later becomes the subject of a dispute.

Discussion/Resolution

We greatly appreciate the comments of parties regarding third-party verification. Upon consideration of the comments, we have not revised the guidelines to include a third-party verification method. Essentially, we agree with the OCA's opinion that the proposed guidelines strike the proper balance between the need to assure that a customer's supplier is not changed without their consent, and the desire of all parties to create a market "that does not unduly hinder the move to competitive natural gas supply."

Conclusion

As we indicated in the tentative order (page 4), "given the ambitious implementation of customer choice, which is to begin November 1, 1999, sufficient time does not exist to complete a rulemaking proceeding and have final regulations." Therefore, we shall finalize these interim guidelines which must receive mandatory compliance. At the same time, we shall initiate the rulemaking proceeding to establish final-form regulations.

Accordingly, this proposal is promulgated under sections 501 and 1501 of the 66 Pa.C.S.; sections 201 and 202 of the act of July 31, 1968 (P. L. 769 No. 240) (45 P. S. §§ 1201 and 1202) and the regulations promulgated thereunder in 1 Pa. Code §§ 7.1, 7.2 and 7.5; section 204 (b) of the Commonwealth Attorneys Act (71 P. S. § 732.204(b)); section 5 of the Regulatory Review Act (71 P. S. § 745.5); and section 612 of The Administrative Code of 1929 (71 P. S. § 232), and the regulations promulgated thereunder in 4 Pa. Code §§ 7.251—7.725; *Therefore,*

It Is Ordered That:

- (1) The proposed rulemaking at Docket No. L-00990145 is hereby granted to consider the regulations set forth in Annex A.
- (2) The Secretary shall submit this order and Annex A to the Office of Attorney General for review as to form and legality and to the Governor's Budget Office for review of fiscal impact.
- (3) The Secretary shall submit this order and Annex A for review and comment to the Independent Regulatory Review Commission and the Legislative Standing Committees.
- (4) The Secretary shall certify this order and Annex A, and deposit them with the Legislative Reference Bureau to be published in the *Pennsylvania Bulletin*. An original and 15 copies of any comments referencing the docket number of the proposed regulations be submitted within 30 days of publication in the *Pennsylvania Bulletin* to the Pennsylvania Public Utility Commission, Attn: Secretary, P. O. Box 3265, Harrisburg, PA 17105-3265. The Secretary shall specify publication of the order in accordance with 45 Pa.C.S. § 727.
- (5) The proposed regulations in Annex A are hereby adopted as Final Interim Guidelines at Docket No. M-00991249F0006 to provide mandatory guidance until a time as final regulations are approved at Docket No. L-00990145.
- (6) A copy of this order and any accompanying statements of the Commissioners be served upon all jurisdictional natural gas distribution companies, the OCA, the Office of Small Business Advocate, the Natural Gas

Competition Legislative Stakeholders, the Pennsylvania Natural Gas Association and all parties to this proceeding.

(7) A copy of this order shall be posted on the Commission's web site and shall be made available, upon request, to all interested parties.

By the Commission

JAMES J. MCNULTY, Secretary

Fiscal Note: 57-211. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 52. PUBLIC UTILITIES PART I. PUBLIC UTILITY COMMISSION Subpart C. FIXED SERVICE UTILITIES

CHAPTER 59. GAS SERVICE STANDARDS FOR CHANGING A CUSTOMER'S NATURAL GAS SUPPLIER

59.91.	Definitions.
59.92.	Customer contacts with the NGDC.
59.93.	Customer contacts with the NGS.
59.94.	Time frame requirement.
59.95.	Persons authorized to act on behalf of a customer.
59.96.	Valid written authorization.
59.97.	Customer dispute procedures.
59.98.	Provider of last resort.
59.99.	Records maintenance.

§ 59.91. Definitions.

Sec.

The following words and terms, when used in this section and §§ 59.92—59.99, have the following meanings, unless the context clearly indicates otherwise:

Act—The National Gas Choice and Competition Act, 66 Pa.C.S. Chapter 22.

Customer—A purchaser of natural gas in whose name a service account exists with either a NGDC or a NGS. The term includes all persons identified in writing by the customer, under §§ 59.92—59.99, as authorized to act on a customer's behalf in changing the customer's natural gas supplier.

NGDC—*Natural gas distribution company*—A natural gas distribution company as defined in section 2202 of the act (relating to definitions).

NGS—Natural gas supplier—A supplier as defined in section 2202 of the act.

§ 59.92. Customer contacts with the NGDC.

When a customer orally contacts the NGDC to request a change of natural gas suppliers, the NGDC company shall notify the customer that the selected natural gas supplier be contacted directly to initiate the change.

§ 59.93. Customer contacts with the NGS.

- (a) When a contact occurs between a customer and an NGS to request a change of the NGS, upon receiving direct oral confirmation or written authorization from the customer to change the NGS, the customer's new NGS shall:
- (1) Notify the NGDC of the customer's NGS selection by the end of the next business day following completion of the application process. The NGDC shall verify the accuracy of the information provided by the NGS by matching at least two data elements with their records.
- (2) Upon receipt of this notification, the NGDC shall send the customer a confirmation letter noting the pro-

posed change of the NGS. This letter shall include notice of a 10-day waiting period in which the order may be canceled before the change of the NGS takes place. The notice shall include the date service with the new NGS will begin unless the customer contacts the NGDC to cancel the change. The 10-day waiting period shall begin on the day the letter is mailed. The letter shall be mailed by the end of the next business day following the receipt of the notification of the customer's selection of an NGS.

§ 59.94. Time frame requirement.

When a customer has provided the NGS with oral confirmation or written authorization to change NGSs, consistent with the Commission's data transfer and exchange standards, the NGDC shall make the change at the beginning of the first feasible billing period following the 10-day waiting period, as prescribed in § 59.93 (relating to customer contacts with the NGS).

§ 59.95. Persons authorized to act on behalf of a customer.

Any customer may identify persons authorized to make changes to the customer's account. To accomplish this, the customer shall provide the NGDC with a signed document identifying by name those persons who have the authority to initiate a change of the customer's NGS.

§ 59.96. Valid written authorization.

A document signed by the customer whose sole purpose is to obtain the customer's consent to change NGSs shall be accepted as valid and result in the initiation of the customer's request. Documents not considered as valid include canceled checks, signed entries into contests and documents used to claim prizes won in contests.

§ 59.97. Customer dispute procedures.

- (a) When a customer contacts an NGDC or an NGS and alleges that the customer's NGS has been changed without consent, the company contacted shall:
 - (1) Consider the matter a customer registered dispute.
- (2) Investigate and respond to the dispute consistent with the requirements in §§ 56.151 and 56.152 (relating to utility company dispute procedures).
- (b) When the customer's dispute has been filed within the first two billing periods since the customer should reasonably have known of a change of NGSs and the dispute investigation establishes that the change occurred without the customer's consent, the customer is not

- responsible for any NGS charges rendered during that period. If the customer has made payments during this period, the company responsible for initiating the change of supplier shall issue a complete refund within 30 days of the close of the dispute. The refund or credit provision applies only to the natural gas supply charges.
- (c) A customer who has had an NGS changed without having consented to that change shall be switched back to the original NGS for no additional fee. Charges involved in the switch back to the prior NGS shall be the responsibility of the company that initiated the change without the customer's consent.
- (d) When a customer files an informal complaint with the Commission alleging that the customer's NGS was changed without the customer's consent, the Bureau of Consumer Services will issue an informal decision that includes a determination of customer liability for NGS bills or administrative charges that might otherwise apply, rendered since the change of the NGS.
- (e) In addition to customer-specific remedies, the Commission may, after investigation and decision, assess fines under 66 Pa.C.S. Chapter 33 (relating to violations and penalties) and initiate proceedings to revoke the license of an NGS that demonstrates a pattern of violating §§ 59.91—59.96, this section and §§ 59.98 and 59.99. The Commission may order a particular NGS that has a pattern of violating §§ 59.91—59.96, this section and §§ 59.98 and 59.99 to obtain written authorization from every new customer as a condition of providing service in this Commonwealth. This section is not intended to limit the Commission's authority.

§ 59.98. Provider of last resort.

Sections 59.91—59.97, this section and § 59.99 do not apply in instances when the customer's service is discontinued by the NGS and subsequently provided by the provider of last resort because no other NGS is willing to provide service to the customer.

§ 59.99. Record maintenance.

Each NGDC and each NGS shall preserve all records relating to unauthorized change of NGS disputes for 3 years from the date the customers filed the dispute. These records shall be made available to the Commission or its staff upon request.

 $[Pa.B.\ Doc.\ No.\ 00\text{-}12.\ Filed\ for\ public\ inspection\ December\ 30,\ 1999,\ 9:00\ a.m.]$