The Public Utility Commission of Texas (commission) adopts new §26.52 relating to Emergency Operations, §26.53 relating to Inspections and Tests, §26.54 relating to Service Objectives and Performance Benchmarks, and §26.55 relating to Monitoring of Service with changes to the proposed text as published in the November 12, 1999 *Texas Register* (24 TexReg 9927). These new sections replace §23.61(c)-(f) of this title (relating to Telephone Utilities) and enhance the quality of service standards and requirements as they existed in §23.61. The modifications are necessary to ensure safe, reliable, and quality service for telecommunications customers. These modifications reflect current technological changes and update some of the obsolete standards. In addition, these modifications to the service quality standards establish a floor level of service quality for basic telecommunications services, in line with the universal service goal throughout the state of Texas, regardless of market or regional differences. These new sections are adopted under Project Number 19666.

The Appropriations Act of 1997, HB 1, Article IX, Section 167 (Section 167) required that each state agency review and consider for readoption each rule adopted by that agency pursuant to the Government Code, Chapter 2001 (Administrative Procedure Act). Such reviews shall include, at a minimum, an assessment by the agency as to whether the reason for adopting or readopting the rule continues to exist. The commission held three workshops to conduct a preliminary review of its rules. As a result of these workshops, the commission is reorganizing its current substantive rules located in 16 Texas Administrative Code (TAC) Chapter 23 to (1) satisfy the requirements of Section 167; (2) repeal

rules no longer needed; (3) update existing rules to reflect changes in the industries regulated by the commission; (4) do clean-up amendments made necessary by changes in law and commission organizational structure and practices; (5) reorganize rules into new chapters to facilitate future amendments and provide room for expansion; and (6) reorganize the rules according to the industry to which they apply. Chapter 26 has been established for all commission substantive rules applicable to telecommunications service providers.

The commission requested specific comments on the Section 167 requirement as to whether the reason for adopting or readopting the rule continues to exist. No comments were received regarding the 167 requirement. The commission finds that the reason for adopting the rule continues to exist.

A public hearing on the new sections was held at commission offices on Tuesday, January 11, 2000 at 9:00 a.m. Representatives from Southwestern Bell (SWBT), SBC, Sprint, MCI WorldCom (MCIW), JSI, AT&T Communications Southwest (AT&T), Texas Telephone Association (TTA), Texas State Telephone Cooperative Inc. (TSTCI), TXU Communications (TXU), and GTE Southwest Incorporated (GTE) attended the hearing. To the extent that these comments differ from the submitted written comments, such comments are summarized herein.

The commission received comments on the proposed new sections from SWBT, Sprint, GTE, TTA, TXU, and TSTCI. The commission received reply comments from AT&T. In addition, the commission

received supplemental comments in response to questions at the public hearing from MCI, SWBT, TTA, GTE, and Sprint.

Preamble Issue Number 1:

Is the deadline for compliance with the 14,400 bits of data per second standard (by the end of 2002) appropriate?

SWBT commented that the proposed standard can be met with the exception of customers served by basic exchange telecommunications radio service (BETRS) and some loops exceeding 20 miles in length. Sprint stated that there are too many instances where the local loop will not pass this speed without major expense. Sprint stated that it would agree to provide 14.4 Kb per second to any customer that requests the new speed, with a 30-day commitment to provide the service. TSTCI commented that the cost to bring an analog carrier into compliance with the proposed standard might cost up to $800 per line. TTA stated that with few exceptions, member companies are already in a position to comply with the increased standard of 14,400 bits of data per second; however, TTA did not believe it was appropriate for the commission to require companies' voice grade services to meet this high data-specific transmission standard.

The commission finds that 2002 is adequate time for dominant certificated telecommunications utilities (DCTUs) to upgrade to the 14,400 standard, especially in light of the fact that a waiver provision is

included in the rule. The commission finds that if a particular DCTU has hardship in upgrading to the proposed standards the remedy for that DCTU is to file for a waiver and prove that its circumstance justifies a longer implementation timeline.

Preamble Issue Number 2:

Should the deadline for the 14,400 bits of data per second standard be different for companies of different sizes or for lines with loop lengths greater than some given distance?

SWBT commented that no reason exists for the standard not to apply across the board to all carriers. Sprint did not believe that standard should be applied to any DCTU. TSTCI and TTA stated that an exemption should be made for smaller companies or, at a minimum, the time frame for implementation should be extended. Allowing more time for smaller companies would enable the companies to minimize the financial impacts of the network and plant upgrades. TTA added that even though preliminary testing of some long loops (approximately 20-25 miles) showed that the 14,400 requirement could be met in certain circumstances, companies with these longer loops may need additional time to evaluate options to network design that would bring them into compliance. In supplemental comments, TTA clarified that it should not be inferred that all or even most of the long local loops (for purposes of this information anywhere between 7-25 miles) will or should be able to successfully achieve the 14,400 data speed. TTA noted that additional factors like, but not limited to, the type of unit being used, the gauge of the cable, the make up of the line and, in some instances, (when testing include speed to access

the Internet) the Internet Service Provider will impact the achievable results. GTE stated that BETRS customers and existing voice grade lengths in excess of 18 Kft require extensive modifications at exorbitant costs to achieve 14.4 Kbps functionality, and should be excluded entirely from the rule.

The commission finds that the commentors have stated varying distance limits for 14.4 Kbps functionality. The commission concurs with both TTA and SWBT that 14.4 Kbps modems work on lines that are up to the 20 to 25 mile range. In addition, the commission also finds that the cost estimate provided by GTE, discussed in detail in §26.54(b)(3), appears to be based on the assumption that the loop length should not exceed 18 Kft. The commission concludes that 18 Kft is not the appropriate measuring point and therefore, finds that the estimate is not well substantiated. In addition, the commission notes that in setting the universal service fund (USF) amount, the commission approved a forward-looking cost model that included the costs of digital loop carriers (DLCs) as required to limit the length of copper loops to 18 Kft. The commission notes that the USF recipients are eligible to receive the compensation for such loops, and therefore finds that 14.4 Kbps standard at a minimum is appropriate. The commission concurs with commenters that the currently deployed BETRS radios are not capable of handling 14.4 Kbps modems. Therefore, the commission concludes that the carriers that have deployed BETRS may seek a time-specific waiver as provided in the rule for replacing such radios with new generation equipment that are capable of handling 14.4 Kbps modems at a minimum.

Preamble Issue Number 3:

Are there any other factors that might justify a different deadline?

SWBT stated that no other factors would justify a different deadline. TSTCI commented that in situations where the cost of compliance is shown to very high, a waiver should be established. Also, TSTCI stated that emerging technology might provide service in alternate ways that could satisfy the rule. TTA stated that a deadline should not be established.

The commission concurs with SWBT that no other factors justify a different deadline for compliance and that a waiver based on economic and technical reasons may be granted on case by case basis. The commission notes that under the waiver provision, the party requesting the waiver has the burden of proof.

Preamble Issue Number 4:

What would be an appropriate penalty for a violation of a performance benchmark?

SWBT stated that only after repeated violations in a one or two year period should penalties be assessed. Also GTE, SWBT, Sprint, and TSTCI stated that PURA §15.023 established monetary ranges for administrative penalties and therefore, this rule should not address this subject. TTA stated that additional penalty provisions were unnecessary because if substandard performance persists with an individual company, the commission could work on a case-by-case basis with that company. In

addition, GTE and TTA stated that competitive pressures will cause increased performance standards by all utility providers.

The commission agrees with GTE, SWBT, Sprint, and TSTCI that PURA already establishes the monetary range of penalties and therefore, the rule should not address any additional penalties. The commission also finds that repeated violations by any company may require the commission to evaluate and impose corrective measures and or penalties on a case-by-case basis.

Preamble Issue Number 5:

Should there be a difference between severity of violations?

SWBT stated that additional factors, besides the ones set forth in PURA §15.023, should not be considered and there is no need to repeat the statute in the rule. GTE stated that both qualitative and quantitative factors should be taken into consideration when determining whether and what to extent to levy penalties.

The commission addresses these comments in its response to Issue Number 4.

Preamble Issue Number 6:

If so, should the severity of the penalty for non-compliance with the performance benchmarks be based on:

(a) The number of months by which the performance benchmark is missed?

(b) The percent by which the performance benchmark is missed?

(c) The specific performance benchmark that is missed (i.e., different penalties for different benchmarks)?

(d) The size of the company?

(e) The number of access lines?

SWBT stated that any penalty should be based on a case-by-case basis and there is no need for a rule on this as the relevant factors are outlined in PURA §15.023. Sprint and TTA stated that all of these criteria should be taken into account, although not supportive of global penalty provisions. GTE added that the size of the company and access line counts should not be taken into consideration but differentiating features of companies' individual networks such as average loop lengths should be considered.

The commission addresses these comments in its response to Issue Number 4.

Preamble Issue Number 7:

How should a violation be calculated?

(a) An overall company average?

(b) On an exchange-by-exchange basis?

(c) On a wire center-by-wire center basis?

(d) By each specific occurrence (i.e., each separate transaction with the end use customer)?

GTE, Sprint, and TTA stated that if penalties were to be assessed, the penalties should only be calculated on an overall company average. TTA acknowledged that any corrective action plan may need to be on a more specific level.

The commission concurs with TTA and finds that any corrective action plan should be company-specific.

Preamble Issue Number 8:

Should there be a cap with respect to the amount a DCTU could potentially be assessed?

GTE and SWBT stated that PURA already establishes a cap and any penalty should be based on factors enumerated in the statute. Sprint and TTA agreed that rulemaking is not the appropriate place to establish penalties.

The commission addresses these comments in its response to Issue Number 4.

Preamble Issue Number 9:

If so, should the cap be on a monthly or yearly basis?

GTE stated that this should be left to the commission's discretion.

The commission addresses this comment in its response to Issue Number 4.

Preamble Issue Number 10:

Should the penalty amount be payable to the State Treasury or refunded on some basis to the end-use customer?

SWBT stated that it would be improper to label a penalty a refund and remit to customers when the Legislature clearly dictated how such penalties are to be handled. GTE and TTA stated that under PURA §15.027 monies received through administrative penalty payments must be remitted to the State Treasury. In addition, GTE stated that civil penalties are to be paid to the commission under PURA §15.033.

The commission concurs with GTE and TTA that under PURA §15.027 monies received through administrative penalty payments must be remitted to the State Treasury. The commission further addresses these comments in its response to Issue Number 4.

Preamble Issue Number 11:

Should the commission require all certificate of operating authority (COA) and service provider certificate of operating authority (SPCOA) telecommunications carriers, providing service in an area that overlaps the service area of an affiliate incumbent local exchange carrier (ILEC), to provide detailed quarterly reports on quality of service customer complaints in those overlapping areas?

SWBT stated that there is no justification for imposing different rule requirements on certificated telecommunications utilities (CTUs) on the basis of whether they are dominant or non-dominant. Sprint stated that competitive local exchange carriers (CLECs) should not be required to provide quarterly reports because the service standards should not apply to CLECs. Sprint stated that the commission should leave quality of service issues to competition. TSTCI stated that all COA and SPCOA holders should be held to the same reporting requirements for service quality as the ILECs. TTA stated to the extent the commission continues to impose and monitor the proposed quality service and performance levels of the DCTUs, that the commission should also impose and monitor the quality service and performance levels of any other eligible telecommunications provider in the service area and any new

entrants certified to operate in this state. GTE stated that there was no reason to modify the current complaint process.

The commission finds that the service quality standards establish a floor level for basic telecommunications service. The commission also finds that the forces of competition will in general tend to increase the quality of service above the commission-established floor level. As such, the commission chooses not to apply the reporting requirements based on overlapping areas of COA/SPCOA holders at the present time.

Preamble Issue Number 12:

Should the commission require ILECs with service areas also served by affiliate COAs or SPCOAs to provide detailed quarterly reports on quality of service customer complaints in those overlapping areas?

Sprint does not believe that CLECs should be required to follow quality of service standards whether an affiliate or not. GTE stated that there was no reason to modify the current complaint process.

The commission addresses these comments in its response to Issue Number 11.

Application to DCTUs:

SWBT stated that there is no justification for imposing different rule requirements on CTUs on the basis of whether they are dominant or non-dominant. GTE stated that it was only appropriate to apply service quality standards to carriers of last resort (COLRs) and to carriers who obtain state or federal high cost universal service support and hold themselves out as eligible telecommunications carriers (ELTELs). GTE proposed that the appropriate determination to whom the rules apply is whether the carrier receives USF support, not whether the carrier is dominant or non-dominant.

AT&T commented that if the commission adopted the 14,400 bits per second standard, customers would be assured of the availability of this level of data transmission from the ILEC serving the exchange. AT&T added that by exempting CLECs from this standard, the commission will allow the competitive market to determine the types and levels of service available in an exchange. AT&T argued that such a result is consistent with the public interest, will enhance Texas' economic future by providing for increased customer choices for telecommunications services, and is consistent with the legislative policies. AT&T stated that it was sympathetic to concerns of increased costs, but added that the costs would be much greater if they applied to CLECs. AT&T stated that the difference in impact is an important distinction between CLECs and ILECs and justifies continuation of the current commission practice of not imposing these requirements on CLECs. AT&T added that the costs to CLECs could be very high and may prevent some CLECs from providing service in Texas, thus creating a barrier to entry.

MCIW commented that if the proposed rules were applied to CLECs, it would be anti-competitive and not permitted under PURA. MCIW stated that as the competitive market is beginning to take hold, applying the proposed standard to CLECs would direct resources away from development and deployment of the newest services and technologies. Application of the proposed rules on CLECs would impose competition-quashing high costs on CLECs. In addition, MCIW stated that it is beyond the authority of the commission to impose a universal application of the rules to CLECs. MCIW stated that legislators consciously singled out those PURA provisions that should apply to all telecommunications providers, and the PURA provisions authorizing the rules at issue were not among those amended. MCIW stated that PURA §54.251(b) clearly imposes the carrier of last resort obligations on ILECs, and the baseline service quality standards established should not apply to CLECs.

The commission notes that under Substantive Rule §26.417(c)(1)(D), one of the criteria for designation of ETPs is the requirement that the LEC is in compliance with the service quality standards defined in former §23.61(c), (d) and (e), now being adopted as §§26.52 - 26.54. In addition, the commission notes that the rules published in Project Number 21163, *Rulemaking to Amend Texas Universal Service Fund Rules to Comply with Senate Bill 560*, as proposed, would give the commission authority to revoke a portion of the ETP designation of any telecommunications provider determined not to be in compliance with the quality of service standards in that portion of their ETP designation. The commission however, does not believe that the rule as published should be changed.

Section 26.54 (b)(3):

Numerous commenters opined regarding the requirement to upgrade existing networks to 14.4 Kbps standards. TTA stated that the proposed changes would introduce a significant and, in some companies' cases, costly increased requirement to previously approved and still valid industry standards for voice-grade service provided by dominant certificated telecommunication utilities (DCTUs). TTA acknowledged that the trend for higher speed data-type transmission services has increased. However, TTA stated that it is not necessary or appropriate for the commission to mandate these increased technological updates to meet data-specific requirements for the voice network. TTA cautioned the commission that while the proposed rule may attempt to prohibit the companies from directly passing these costs on to the individual customers, PURA supports the companies' ability to recover costs incurred as a direct result of legislative or regulatory mandates from the universal service fund. Sprint reurged its position that although it did not agree with the proposed standards, that upon a customer's request, it would be amenable to the upgrade, with most requests met within 30 days of request.

Sprint also indicated that any loop length beyond 36 Kft is not economically feasible, as a pair gain device would have to be installed just to reach this length. Sprint contends that a more realistic demarcation point is 26 Kft, so that load coils, rather than pair gain devices could be used for a single customer to accomplish the proposed transmission speeds.

SWBT stated its position that based on past testing SWBT has concluded that some existing loops that exceed 20 miles in length may meet or exceed a 14.4 Kbps standard. However, SWBT indicated that based on the limited testing actually conducted, it is concerned whether the 14.4 Kbps standard could be reliably met on all loops that exceed 20 miles in length. In addition, SWBT stated that it knows of no new technology that has been field tested which could replace BETRS.

GTE stated that there are many things outside the company's control that influence the modem speed attainable on a voice access line. GTE stated that it and other competitors in the market offer a full range of switched digital data services such as Basic Rate ISDN, to customers who require higher data speeds than the public switched telephone network will support.

GTE stated that Chapter 58 and 59 electing companies cannot be required to comply with ubiquitous deployment of 14.4 Kbps functionality by 2002 per PURA §§58.053 and 59.029. GTE stated that it cannot be required to provide capital expenditures in excess of 10% of the average annual intrastate capital additions for the previous five years, which for GTE is approximately $30 million. GTE also stated that it would be discriminatory to require that level of functionality by 2002 from the non-Chapter 58 and 59 companies if the same standard would not apply equally to other carriers of last resort (COLRs) and eligible telecommunications carriers (ELTELs).

GTE stated that if the commission decides to adopt an increase, the requirement should only apply to non-BETRs customer loops less than 18 Kft and to customers who do not have ancillary equipment on

the line in question. In addition, the clause disallowing charges to individual customers should be struck as the commission already has rate jurisdiction over the relevant utilities and the clause could be read to prohibit Texas universal service fund (TUSF) increases which would be a violation of PURA §56.025(b).

GTE estimated that at a minimum the cost to upgrade to 14.4 Kbps would be $3 million, if the requirement were limited to customers with local loop lengths less than 18 Kft and no ancillary equipment connected to the line. If loop lengths greater than 18 Kft were included, GTE estimated that the cost for upgrading would be approximately $400 million, which doesn't include another $40-60 million to upgrade BETRs to simply provide PSTN-grade service.

GTE, in supplemental comments, reiterated its position that industry standards currently consider 18 Kft as the threshold for reliable data transmission speeds of 14.4 Kbps. Although GTE admitted that the Bellcore guidelines indicate that 14.4 Kbps may be reliably assured at a loaded loop length of 25 Kft, GTE stated this applies only in theory when conditions are ideal. GTE stated that conditions in the real world virtually ensure that this ideal environment is not realized in the public switched network. GTE stated that if the commission decides to pursue this increase, these efforts should be transferred to the "Digital Divide" study currently being conducted under Project Number 21166, *Report to the 77th Legislature on the Availability of Advanced Services in Rural and High Cost Areas*. GTE indicated that industry workshops could be convened to further study the actual modem speeds realized

on the public switched telephone network specific to Texas and the actual network configuration standard that would be necessary to achieve reasonably reliable 14.4 Kbps data speeds.

GTE explained its estimated upgrade costs in its supplemental comments. GTE stated that the first set of estimated costs reflects the removal of analog subscriber carrier equipment and conversion of the affected channels to a digital carrier solution. GTE stated that digital carrier channeling is necessary to achieve 14.4 Kbps because analog subscriber carrier is generally limited to 2.4 to 9.6 Kbps. The cost estimates were based on average channel replacement costs of $1,250 per channel. GTE added that there are approximately 2,200 analog channels currently in service, bringing the estimated total cost to approximately $2,750,000 (rounded to $3 million in the initial comments). GTE stated that these costs may be undertaken in the normal course of business as deemed necessary, but at a planned rate far below that which would be required under the proposed rule.

GTE stated that the second set of costs reflects shortening of loops over 18 Kft to minimize cable loading which inhibits the frequencies used by modems. The standard architecture employed establishes digital loop carrier (DLC) based serving areas. GTE estimated that there are approximately 150,000 customers served by loaded loops in excess of 18 Kft in Texas. Because of the distribution of these customers, GTE estimated that 3,000 additional DLCs would be required to accomplish the objective of reasonably assured 14.4 Kbps data transmission speed. GTE stated that the average labor and equipment cost for each DLC is $100,000 bringing the total requirement to $300 million with approximately half of these installations requiring new fiber for new host-remote links. At an average

cost of $60,000 per installation, GTE stated that the estimated 1,500 new fiber placements would cost approximately $90 million. Therefore, GTE estimated the total cost to upgrade loops currently in excess of 18 Kft is estimated to be $390 million (rounded to $400 million in the initial comments). Although DLC's are being installed to meet growth requirements, GTE stated that it is difficult to tell how much, if any, would overlap with a potential shortening of other loops. GTE opined that any such overlap would be immaterial given the areas of the state experiencing growth as compared to the areas which would require DLC conversions.

GTE stated that the third set of costs reflected the replacement of BETRS service with either a wireless or wireline solution. GTE stated it was currently testing a new wireless platform to serve these customers. There are currently about 1,400 customers served by BETRS and it is estimated that the radio technology currently being tested would cost approximately $15,000 per customer, or $21 million in total (rounded to $20 million in the initial comments). However, should this wireless solution not provide reasonably assured 14.4 Kbps, GTE would be required to implement a wireline alternative, which is estimated to be approximately $61 million (rounded to $60 million in the initial comments). GTE stated that the BETRS wireless solution is currently in the testing phase, and cost recovery has not been established.

In supplemental comments, TTA stated that for at least one ILEC to replace the BETRS system currently serving 68 of a total of 83 customers with DLC and copper distribution plant would cost the

company $3,774,000.00, or $55,000 per customer. TTA stated that it did not believe that this type of cost was justified as being in the public interest.

Sprint, in supplemental comments, stated that to upgrade all of its local loops to transmit 14.4 Kbps would cost approximately $8.3 million. Sprint stated that investing that amount of money for transmission capacity that only a portion of its customers may wish to use does not make economic sense.

SWBT continued to request that the proposed rule be modified so that existing BETRS systems be grandfathered. If the systems remained under the rule, SWBT estimated that it would cost $15.7 million to replace.

The commission notes that the commentors have stated varying distance limitation for 14.4 Kbps functionality. Based on industry testing, the commission believes that 14.4 Kbps modems work on lines up to the 20 to 25 mile range. To achieve this functionality however, the voice band modems require well-maintained loops. The commission understands that the currently deployed BETRS radios are not capable of handling 14.4 Kbps modems. The commission also notes that increasing the current standard of 2400 bps to 14.4 Kbps facsimile does not preclude a carrier from providing advanced digital services that operate at speeds an order of magnitude greater than the minimum required modem speed of 14.4 Kbps. The commission further notes that advanced digital services require additional equipment both at the customer premises and at the serving central office. Additionally, the commission

notes that the Office of Customer Protection has received a petition whereby customers of BETRS radio desire the ability to transmit or receive fax at reasonable speeds and receive the benefit from the advances of information technology.

The commission finds that the record is insufficient to conclude that 18 Kft is the threshold for reliable data transmission speeds of 14.4 Kbps. The commission notes that carriers can seek a time specific waiver to the requirements of the rule by meeting the requirements of subsection (b)(4). For instance, carriers that have deployed BETRS may seek a time specific waiver for replacing such radios with new generation equipment capable of handling 14.4 Kbps modems at a minimum.

Additionally, the commission finds that the cost estimate provided by GTE appears to be based on the assumption that the loop length should not exceed 18 Kft; therefore, the estimate does not appear well substantiated. In addition, the commission believes that sufficient evidence does not exist in the record to substantiate costs claimed by Sprint, SWBT, and smaller ILECs. The commission believes that filing a waiver with the commission is the appropriate remedy for any carrier who believes that the costs of upgrading under the timelines established in the rule are burdensome. The commission does not believe that specific classes of service or specific loop length criteria should automatically be excluded from the rule. Finally, the commission notes that in setting the USF amount, the commission approved a forward-looking cost model that included the costs of DLCs as required to limit the length of copper loops to 18 Kft. Insofar as the USF recipients are receiving compensation for such loops, the commission believes that the 14.4 Kbps standard at a minimum is appropriate.

Section 26.54 (c):

Several commenters stated their disapproval of increased service quality standards in the proposed rule. GTE stated that the commission should move to eliminate service quality rules in light of competition, and only adopt a minimum set of regulations that are designed to protect the customer from fraud and misrepresentation. In addition, GTE stated that historically some of the service quality standards are simply not important to customers. GTE stated that its commission complaint figures do not indicate that changes to the rules are needed. GTE proposed that the commission pursue minimum requirements with all other requirements dropped. GTE proposed that average due date interval, average clearing time of a repair, trouble reports per 100 lines, commitments met, and average speed of answer for business office, repair, operator services (OS) and directory assistance (DA) remain as the minimum standards but proposed different standards under these measures.

In supplemental comments, GTE stated that it conducted a customer survey with interviews from a random sample of 1,565 customers and provided results with a 95% statistical confidence level. In the regression analysis, answer speed had less than a 1.0% impact on overall quality ratings for the repair and directory assistance categories and an impact of only 15% on perception of overall quality for the order category. In all three categories, the quality of the representative and the successful completion of the request were by far the most important issues for customers. GTE stated that this data supports its claim that speed of answer is not a significant concern to customers. GTE stated that it would not

oppose exchange level reporting on an exception basis for the reporting indices proposed in its initial comments. However, GTE stated that the average speed of answer metric would be the only measurement that does not have an exception reporting requirement, as the service which is being measured is provided at consolidated call centers and not at the exchange level.

TXU commented that the increased performance standards for installations, business office answer time, repair answer time, and directory assistance will require additional expenses to be incurred by companies and are unjustified. TXU estimated that it would incur an additional $200,000 in annual expenses to upgrade performance and $40,000 in order to comply with the proposed rule change. TSTCI commented generally that increased service quality standards are not needed. TSTCI stated that it was not aware of specific service quality issues that warrant a revision of the standards. In addition, TSTCI stated that increasing the standards for only ILECs is anti-competitive because of the increased cost of doing business, while CLECs would be exempt. The increase in installations is particularly troublesome for small companies that may not have a large supply of equipment on hand. Also, a single occurrence of noncompliance would effect the small companies disproportionately. TSTCI proposed that any increase in performance benchmarks and surveillance levels only apply to companies with 100,000 lines or greater.

Sprint indicated in supplemental comments that generally the increase in average answer times would result in a one-time expense of $25,000 for translation and system changes. In addition, Sprint estimated that it would be required to spend approximately $105,000 annually for every three additional

personnel to handle calls to meet these objectives. Sprint also stated that an internal study from 1998 showed that 82% of customers were satisfied with answer times within 60 seconds. The study also indicated that customers are more interested in a service representative being responsive than to fast answer times. Sprint argued that increased answer times would incent call handlers to spend less time with customers.

SWBT stated that the service quality rules should not be applied only to DCTUs. SWBT argued that ILECs are required to provide CLECs non-discriminatory interconnection to their networks that is equal in quality to that provided by ILECs themselves. Thus, CLECs are able to provide local exchange services to their customers that are equal in quality to that provided by ILECs. SWBT stated that it should be obvious to apply the same service quality standards to all providers because the rules are aimed at protecting the customers. SWBT stated that it makes no sense for the commission to proclaim the Texas market open for competition, yet continue to treat SWBT and other ILECs under the same standards, which existed under the old regulatory paradigm. SWBT stated that to the extent that the law and public interest can support different treatment between ILECs and CLECs, each proposed rule should be evaluated on its own merit. SWBT stated the commission should not assume that a rule that previously applied only to ILECs (DCTUs), should continue to apply only to ILECs.

SWBT also provided supplemental comments regarding the increased performance standards. For Operator Service Times, SWBT estimated that the proposed increases in answer times for DA would require 166 additional work tours per week. When training, benefits, and other factors are figured in,

SWBT estimated that the total expense for the first year would be $1.8 million. In addition, SWBT reurged its position that application of quicker answer times only to ILECs is contrary to the 1999 amendments to PURA and will result in a rule that is anti-competitive.

SWBT also commented that it believed that an average speed of answer time for the business office of 20 seconds for 100% of customers would be a better measure of providing customer service. SWBT stated that this measure would be more in line with customer expectations and more cost-effective for the companies. SWBT added that Texas already has more stringent answer times objectives than at least 31 states. As a compromise, SWBT stated that it was not opposed to a one-year trial to measure customer expectations on answer times.

SWBT and Sprint also questioned subsection (c)(1)(G) as it relates to times in which work shall be performed at a customer's premises. SWBT stated that their understanding of the rule was that an appointment needed to be set with the customer within a four-hour period. However, if the customer was willing to accept an all-day appointment, then the company could schedule an appointment to that effect.

MCIW stated that unlike the ILECs, CLECs do not have in place the foundations for meeting and reporting specific benchmarks. Thus, MCIW added, imposing these requirements on CLECs would give the ILECs an unfair advantage in the market place. AT&T commented that contrary to arguments of SWBT, TTA, and TSTCI, there is nothing in PURA or recent legislation that indicates that quality of

service standards must be uniformly imposed upon all carriers. AT&T stated that PURA §54.251(b) clearly distinguishes between ILECs and CLECs by providing that ILECs retain the carrier of last resort obligations. By requiring the ILECs to meet the quality of service standards established in the rules, the commission can assure customers of the availability of at least one carrier in each exchange that meets that level of service.

The commission finds that the service quality standards established in this rule set the floor level for the quality of basic telecommunications service. The commission finds that the service quality standards are important to customers, specifically in resolving complaints as related to voice quality. Although GTE reported its survey showed that answer speed had less than a 1.0% impact on overall quality ratings for repair and directory assistance, a survey conducted by the Office of Customer Protection in August, specifically in GTE serving areas, indicated that more than 66% of the residential customers surveyed had to make two or more calls to reach a customer service representative. Almost 40% of the GTE residential customers of East Texas and 32% of West Texas who responded to the survey had to wait for longer than one hour for an answer. Although the statistics may be in conflict, the commission believes that the service quality standards as related to Business Office and Repair Service answer times are critical to ensuring customer satisfaction. Therefore, the commission believes that the standards are reasonable in light of the impacts that these metrics have on service to customers.

In addition, the commission notes that according to the 20 states that have a service quality standard for Business Office Answer time, the following states have equal or stricter than Texas requirements for

business office answer time; Alabama, Georgia, Iowa, Maryland, Massachusetts, Minnesota, Nebraska, New York, North Carolina, and Ohio.

The commission finds that SWBT's proposal of an average answer time of 20 seconds for 100% of the customers may result in 50% of the customers receiving business office response after ten rings or greater, which is problematic. The commission notes that under the rule, 90% of the calls to the business office must be answered in less than 20 seconds or an average wait of 5.9 seconds. The commission believes that this is a reasonable standard for customers to expect service from the business office. In addition, the trigger for corrective action, non-compliant performance for five consecutive days in a month, eliminates the possibility that substandard performance on any given day, through unforeseen circumstance, will be unnecessarily penalized. Therefore, the commission believes that the standard and corrective action procedures are reasonable.

The commission finds it reasonable that for directory assistance answer time, 85% of directory assistance calls shall be answered within ten seconds or the average answer time shall not exceed 5.9 seconds. The commission believes that subsection (c)(2)(C), should not be adopted as proposed, which would have increased the average answer time to 3.3 seconds, consistent with the current equivalent answer time for toll and operator services that has the same percentile metric. The commission believes that for directory assistance there is not sufficient justification at this time to increase the average answer time, though the commission is concerned with the floor level of service that is provided to customers. Accordingly, the commission believes that the current level for average

answer time is appropriate and adopts this section with the average answer time of 5.9 seconds. Additionally, the commission clarifies that the DCTU is required to comply with either the percentile metric or the equivalent average answer time, but not both.

The commission clarifies SWBT's and Sprint's concerns regarding subsection (c)(1)(G). The commission believes that generally, the appointment must be scheduled within the four-hour time period. The commission does not interpret this requirement to mean that the work must be completed within that time period. Additionally, the commission agrees with SWBT and Sprint that if the customer agrees to a longer appointment period, the companies would not be forced to set the appointment within the four-hour window. However, the ultimate choice of appointment times should rest with the customer.

The commission does not concur with TSTCI that the increase in installations is particularly troublesome for small companies that may not have a large supply of equipment on hand. The commission notes that the current standard of 95% primary service order completions within five days remains the same. However, this standard does not establish any time limits for the remaining 5.0% of the service orders. The commission believes that a 30-day limit is a reasonable timeframe for a carrier to capture 4.0% of the remaining service orders. In addition, the outer limit, requiring all service orders to be completed within 90 days, affords a reasonable opportunity for a DCTU to procure and install equipment, while giving the customer a date certain by which the order must be completed. The commission feels that this is a balanced approach, taking into consideration all of the factors that go into service order completion. The commission also notes that a DCTU can provide reasonable assurances, such as

increasing the inventory of spares for anticipated growth, for any misses greater than 90 days, as a part of the corrective action plan.

The commission finds that TSTCI's proposal that any increase in performance benchmarks and surveillance levels only apply to companies with 100,000 lines or greater, would be discriminatory in that the customers in urban and rural areas would have different service quality standards.

The commission believes that the trigger for corrective action, three consecutive months of company-wide average or percentile metric performance in an exchange below the required benchmark, is reasonable. The commission finds that this trigger for corrective action prevents continuous substandard performance and establishes a reasonable non-discriminatory standard of quality throughout the state of Texas, regardless of the size of the market. In addition, by limiting the corrective action trigger to three consecutive months of substandard performance, the commission has eliminated the possibility that non-compliant performance in any one month, through unforeseen circumstance, will be unnecessarily penalized.

All comments, including any not specifically referenced herein, were fully considered by the commission. In adopting this section, the commission makes other minor modifications for the purpose of clarifying its intent.

These sections are adopted under the Public Utility Regulatory Act, Texas Utilities Code Annotated §14.002 (Vernon 1998) (PURA) which provides the commission with the authority to make and enforce rules reasonably required in the exercise of its powers and jurisdiction, and specifically, PURA §55.001, relating to general standards in the provision of service by a public utility; §55.002, relating to commission authority concerning standards in the regulation of telecommunications services; and §55.008, relating to improvements in service by a public utility.

Cross Reference to Statutes: Public Utility Regulatory Act §§14.002, 55.001, 55.002, and 55.008

§26.52. Emergency Operations.

(a) Each dominant certificated telecommunications utility's (DCTU) central office not equipped with permanently installed standby generators shall contain as a minimum four hours of battery reserve without voltage falling below the level required for proper operation of all equipment. It is also essential that all central offices have adequate provisions for emergency power. In offices without installed emergency power facilities, there shall be a mobile power unit available which can be delivered and connected on short notice.

(b) In exchanges exceeding 5,000 lines, a permanent auxiliary power unit shall be installed.

§26.53. Inspections and Tests.

(a) Each dominant certificated telecommunications utility (DCTU) shall adopt a program of periodic tests, inspections, and preventive maintenance aimed at achieving efficient operation of its system and rendition of safe, adequate, and continuous service.

(b) Each DCTU shall maintain or have access to test facilities enabling it to determine the operating and transmission capabilities of all equipment and facilities. The actual transmission performance of the network shall be monitored to determine if the service objectives in this chapter are met.

This monitoring function shall include, but not be limited to, circuit order tests prior to placing trunks in service, routine periodic trunk maintenance tests, tests of actual switched trunk connections, periodic noise tests of a sample of customer loops in each exchange, and special transmission surveys of the network.

(c) Each central office serving more than 300 customer access lines shall be equipped with a 1,000 +/- 20 hertz, one milliwatt test signal generator and a 900 Ohm balanced termination device wired to telephone numbers so that they may be accessed for dial test purposes. Each DCTU shall advise the commission of the numbers assigned for these test terminations.

§26.54. Service Objectives and Performance Benchmarks.

(a) This section establishes service objectives that should be provided by a dominant certificated telecommunications utility (DCTU), as applicable. The section outlines performance benchmark levels for each exchange. If service quality falls below the applicable performance benchmark for an exchange, that indicates a need for the utility to investigate, take appropriate corrective action, and provide a report of such activities to the commission. The objective service levels are based on monthly averages, except for dial service and transmission requirements, which are based on specific samples. DCTUs shall make measurements to determine the level of service quality for each item included in this section. Each DCTU shall provide the commission with the measurements and summaries for any of the items included herein on request of the commission.

Records of these measurements and summaries shall be retained by the DCTU as specified by the commission.

(b) **One-party line service and voice band data.**

(1) One-party line service will be made available to all subscribers of local exchange service upon request.

(2) All open wire transmission media shall be replaced with more reliable and better quality transmission media by the end of 1998, unless otherwise exempted by the commission. Any utility that obtained an exemption from this requirement shall file a report with the commission on the status of its open wire replacement program by June 1, 2000, and if all open wire replacement is not complete by that date, every three months thereafter until the replacement program is complete.

(3) All switched voice circuits shall be adequately designed and maintained to allow transmission of at least 14,400 bits of data per second when connected through an industry standard modem (ITU-T V.32bis or equivalent) or a facsimile machine (ITU-T V.17 or equivalent), by the end of 2002. This upgrade will be made at no charge to the individual customer.

(4) Within 180 days of the effective date of this section, a DCTU may request a waiver from the requirements of paragraph (3) of this subsection. The waiver request may be granted only if the commission determines that all of the following requirements have been met.

(A) The cost to the DCTU of implementing the provisions of paragraph (3) of this subsection exceeds the public benefit.

(B) The DCTU has submitted by June 30, 2000, a reasonable implementation plan stating for each exchange when all switched voice circuits within that exchange shall be adequately designed and maintained to allow transmission of at least 14,400 bits of data per second when connected through an industry standard modem (ITU-T V.32bis or equivalent) or a facsimile machine (ITU-T V.17 or equivalent).

(C) The DCTU has submitted proposed tariff sheets which provide that:

(i) upon request by a customer, the DCTU will upgrade the customer's switched voice circuits to allow transmission of at least 14,400 bits of data per second when connected through an industry standard modem (ITU-T V.32bis or equivalent) or a facsimile machine (ITU-T V.17 or equivalent);

(ii) the upgrade will be made at no charge to the individual customer; and

(iii) the upgrade request will be completed within the time period allowed for a service order for regular service installation pursuant to subsection (c)(1)(B) of this section.

(D) The DCTU has agreed to provide an on-going customer education program, acceptable to the commission, which assures that the DCTU's customers are aware of the availability of the service quality upgrade.

(c) The DCTU shall comply with the service quality objectives established below in providing the basic telecommunications service to its end-use customers. The DCTU shall file its service quality performance report on a quarterly basis. The report shall include its monthly performance for each category of performance objective and a summary of its corrective action plan for each exchange in which the performance falls below the benchmark. Additionally, the corrective action plan shall include, at a minimum, details outlining how the needed improvements will be implemented within three months and result in performance at or above the applicable benchmark.

(1) **Installation of service.** Unless otherwise provided by the commission:

(A) Ninety-five percent of the DCTU's service orders for installing primary service shall be completed within five working days, excluding those orders where a later date was specifically requested by the customer. Performance Benchmark Applicable for Corrective Action: If the performance is below 95% in any exchange area for a period of three consecutive months, the DCTU shall provide a detailed corrective action plan for such exchanges or wirecenters.

(B) Ninety percent of the DCTU's service orders for regular service installations shall be completed within five working days, excluding those orders where a later date was specifically requested by the customer. This includes orders for primary and other services, installations, moves, or changes, but not complex services. Performance Benchmark for Corrective Action: If the performance is

below 90% in any exchange area for a period of three consecutive months the DCTU shall provide a detailed corrective action plan for such exchanges or wirecenters.

(C) Ninety-nine percent of the DCTU's service orders for service installations shall be completed within 30 days. Performance Benchmark for Corrective Action: If the performance is below 99% in any exchange area for a period of three consecutive months, the DCTU shall provide a detailed corrective action plan for such exchange or wirecenter.

(D) One-hundred percent of the DCTU's service orders for service installations shall be completed within 90 days.

(E) Each DCTU shall establish and maintain installation time commitment guidelines for the various complex services contained in its tariff. Those guidelines should be available for public review and should be applied in a nondiscriminatory manner.

(F) The installation interval measurements outlined in subparagraphs (A) – (D) and (H) of this paragraph shall commence with either the date of application or the date on which the applicant qualifies for service, whichever is later.

(G) The DCTU shall provide to the customer a due date on which the requested installation or change shall be made. If a customer requests that the work be done on a regular working day later than that offered by the DCTU, then the customer's requested date shall be the commitment date. If a premises visit is

required, the DCTU shall schedule an appointment period with the customer for morning or afternoon, not to exceed a four-hour time period, on the due date. If the DCTU is unable to keep the appointment, the DCTU shall attempt to notify the customer by a telephone call and schedule a new appointment. If unable to gain access to the customer's premises during the scheduled appointment period, the DCTU carrier representative shall leave a notice at the premises advising the customer how to reschedule the work.

(H) Ninety percent of the DCTU's commitments to customers for the date of installation of service orders shall be met, excepting customer-caused delays. Performance Benchmark Applicable for Corrective Action: If the performance is below 90% in any exchange area for a period of three consecutive months, the DCTU shall submit a list of missed commitments to the commission and provide a detailed corrective action plan for such exchange or wirecenter.

(I) The installation interval and commitment requirements of subparagraphs (A) - (D) and (H) of this paragraph do not include service orders either to disconnect service or to make only record changes on a customer's account.

(J) A held regrade order is one not filled within 30 days after the customer has made application for a different grade of service except where the customer requests a later date. In the event of the DCTU's inability to so fill such an order, the customer should be advised and told when the DCTU can fulfill the

order. The number of held regrade orders shall not exceed 1.0% of the total number of customer access lines served.

(2) **Operator-handled calls.** DCTUs shall maintain adequate personnel to provide an average operator answering performance as follows for each exchange on a monthly basis:

(A) Eighty-five percent of toll and assistance operator calls answered within ten seconds, or average answer time shall not exceed 3.3 seconds. Benchmark for Corrective Action: If the performance is below 85% within ten seconds (or if the average exceeds 3.3 seconds) at any answering location for a period of four days within any given month, the DCTU shall provide a detailed corrective action plan for such exchange or wirecenter.

(B) Ninety percent of repair service calls, calls to the business office, and other calls shall be answered within 20 seconds or average answer time shall not exceed 5.9 seconds. Benchmark for Corrective Action: If the performance is below 90% within 20 seconds or the average answer time exceeds 5.9 seconds at any answering location for a period of five days within any given month, the DCTU shall provide a detailed corrective action plan for such exchange or wirecenter.

(C) Eighty-five percent of directory assistance calls shall be answered within ten seconds or the average answer time shall not exceed 5.9 seconds. Benchmark for Corrective Action: If the performance is below 85% within ten seconds or if the average answer time exceeds 5.9 seconds at any answering location for a

period of four days within any given month, the DCTU shall provide a detailed corrective action plan for such exchange or wirecenter.

(D) An "answer" shall mean that the operator, interactive voice system, or representative, is ready to render assistance and/or ready to accept information necessary to process the call. An acknowledgment that the customer is waiting on the line shall not constitute an "answer."

(E) DCTUs may measure answer time on a toll center or operating unit basis in lieu of measuring answer time in each exchange unless specifically requested by the commission.

(3) **Local dial service.** Sufficient central office capacity and equipment shall be provided to meet the following requirements.

(A) dial tone within three seconds on 98% of calls. For record-keeping and reporting purposes, 96% in three seconds during average busy season and/or busy hour shall be acceptable as complying with this requirement;

(B) completion of 98% of intraoffice calls (those calls originating and terminating within the same central office building) without encountering an equipment busy condition (blockage) or equipment failure;

(C) for every switch that serves customers, the availability factor for stored program controlled digital and analog switching facilities shall be 99.99%, or the total unscheduled outage for each switch shall not exceed 53 minutes per year.

(D) A report detailing the cause and proposed corrective action for the local dial service measures, for any exchange that falls below the established performance objective level, must be submitted to the commission.

(4) **Local interoffice dial service.**

(A) Each DCTU shall provide and maintain interoffice trunks on its portion of the local exchange service network so that 97% of the interoffice local calls excluding calls between central offices in the same building are completed without encountering equipment busy conditions or equipment failures. For DCTUs' testing, record-keeping, and reporting purposes, DCTUs are not required to separate local dial service results from local interoffice dial service results unless specifically requested by the commission.

(B) The availability factor for stored program controlled digital and analog switching and interoffice transmission facilities for end-to-end transmission shall be 99.93%, or the total unscheduled outage shall not exceed 365 minutes per year.

(C) A report detailing the cause and proposed corrective action for the local dial service measures, for any exchange that falls below the established performance objective level, must be submitted to the commission.

(5) **Direct distance dial service.** Engineering and maintenance of the trunk and related switching components in the toll network shall permit 97% completion on properly dialed calls, without encountering failure because of blockages or equipment irregularities. A report detailing the cause and proposed corrective action for the direct

distance dial service measure, for any exchange that falls below the established performance objective level, must be submitted to the commission.

(6) **Customer trouble reports.**

(A) The DCTU shall maintain its network service in a manner that it receives no more than three customer trouble reports, excluding customer premises equipment (CPE) reports, per 100 customer access lines per month (on average). Performance Benchmark Applicable for Corrective Action: If the customer trouble report exceeds three per 100 access lines per month per exchange for a period of three consecutive months, the DCTU shall provide a detailed corrective action plan for such exchange or wirecenter.

(B) The DCTU shall provide to the customer a commitment time by which the trouble will be cleared. If a premises visit is required, the DCTU shall schedule an appointment period with the customer for the morning or afternoon, not to exceed a four-hour time period. When the DCTU cannot keep an appointment, the DCTU shall attempt to notify the customer by a telephone call and schedule a new appointment. If unable to gain access to the customer's premises during the scheduled appointment period, the DCTU representative shall leave a notice at the premises advising the customer how to reschedule the work.

(C) At least 90% of out-of-service trouble reports on service provided by a DCTU shall be cleared within eight working hours, except where access to the

customer's premises is required but not available or where interruptions are caused by unavoidable casualties and acts of God affecting large groups of customers. Performance Benchmark Applicable for Corrective Action: If the performance is below 90% in any exchange area for a period of three consecutive months, the DCTU shall provide a detailed corrective action plan for such exchange or wirecenter.

(D) Each DCTU shall establish procedures to insure the prompt investigation and correction of trouble reports so that the percentage of repeated trouble reports on residence and single line business lines does not exceed 22% of the total customer trouble reports on those lines. Performance Benchmark applicable for Corrective Action: If repeat reports exceed 22% of the total customer trouble report in any exchange for three consecutive months, the DCTU shall provide a detailed corrective action plan for such exchange or wirecenter.

(7) **Transmission requirements.** All voice-grade trunk facilities shall conform to accepted transmission design factors and shall be maintained to meet the following objectives when measured from line terminals of the originating central office to the line terminals of the terminating central office. A periodic report for central offices or exchanges as requested by the commission staff shall be provided by the DCTU, in order to demonstrate compliance with the following objectives.

(A) Interoffice local exchange service calls. Excluding calls between central offices in the same building, 95% of the measurements on the network of a DCTU

should have from two to ten decibels loss at 1000+20 hertz and no more than 30 decibels above reference noise level ("C" message weighting).

(B) Direct distance dialing. Ninety-five percent of the transmission measurements should have from three to 12 decibels loss at 1000+20 hertz and no more than 33 decibels above reference noise level ("C" message weighting).

(C) Subscriber lines. All newly constructed and rebuilt subscriber lines shall be designed for a transmission loss of no more than eight decibels from the serving central office to the customer premises network interface. All subscriber lines shall be maintained so that transmission loss does not exceed ten decibels. Subscriber lines shall in addition be constructed and maintained so that metallic noise does not exceed 30 decibels above reference noise level ("C" message weighting) on 90% of the lines. Metallic noise shall not exceed 35 decibels above reference noise level ("C" message weighting) on any subscriber line.

(D) PBX, key, and multiline trunk circuits. PBX, key, and multiline trunk circuits shall be designed and maintained so that transmission loss at the subscriber station does not exceed eight decibels. If the PBX or other terminating equipment is customer-owned and if transmission loss exceeds eight decibels the DCTU's responsibility shall be limited to providing a trunk circuit with no more than five decibels loss from the central office to the point of connection with customer facilities.

(E) Impulse Noise Limits. The requirements for impulse noise limits shall be as follows:

(i) For switching offices, the noise level count shall not exceed five pulses above the threshold in any continuous five minute period on 50% of test calls. The reference noise level threshold shall be less than: 54 dBrnC for Crossbar switch, 59 dBrnC for step-by-step switch, and 47 dBrnC for electronic or digital switch.

(ii) For trunks, the noise level count shall not exceed five pulses above the threshold in any continuous five minute period on 50% of trunks in a group. The reference noise level threshold shall be less than 54 dBrnCO for voice frequency trunks, and 62 dBrnCO for digital trunks.

(iii) For loop facilities, the noise level count shall not exceed 15 pulses above the threshold in any continuous 15 minute period on any loop. The reference noise level threshold shall be less than 59 dBrnC when measured at central office (CO), or referred to CO through 1004 Hz loss.

§26.55. Monitoring of Service.

Before any business telephone customer uses service observing equipment to monitor calls originated by or received at the business telephones for any reason, the customer must agree in writing to inform all employees that calls over the business telephones may be monitored.

This agency hereby certifies that the rules, as adopted, have been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority. It is therefore ordered by the Public Utility Commission of Texas that new §26.52 relating to Emergency Operations, §26.53 relating to Inspections and Tests, §26.54 relating to Service Objectives and Performance Benchmarks, and §26.55 relating to Monitoring of Service are hereby adopted with changes to the text as proposed.

ISSUED IN AUSTIN, TEXAS ON THE 24th DAY OF APRIL 2000.

PUBLIC UTILITY COMMISSION OF TEXAS

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Chairman Pat Wood, III

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Commissioner Judy Walsh

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Commissioner Brett A. Perlman