COMMONWEALTH TELEPHONE COMPANY + EP-SB-1 thru SB-20
STATEMENT NO. 1
I-00920020
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IN THE COMMONWEALTH OF PENNSYLVANIA
BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
v.	:	DOCKET NO. I-00920020
COMMONWEALTH TELEPHONE COMPANY	:	

DIRECT TESTIMONY OF
SCOTT BURNSIDE
ON BEHALF OF
COMMONWEALTH TELEPHONE COMPANY

CONCERNING:

COMPANY POLICY, SERVICE STANDARDS AND OTHER MATTERS

Dated: May 3, 1993

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Q **PLEASE STATE YOUR FULL NAME, TITLE AND BUSINESS ADDRESS.**

A My name is Scott Burnside. I am Vice President-Regulatory and Public Affairs for Commonwealth Telephone Company. My business address is 100 Lake Street, Dallas, Pennsylvania 18612.

Q **COULD YOU PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND?**

A I was awarded a Bachelor of Science Degree in Economics from Wilkes University in 1967 and, since that time, have pursued graduate credits in Business Studies at Lehigh University and have undertaken an executive development program at the Darden School University of Virginia (1979).

Q **PLEASE DESCRIBE YOUR EMPLOYMENT BACKGROUND.**

A I have held my current position at Commonwealth Telephone Company ("CTCO") for the last three years. My principle responsibilities include management of governmental relations, community relations and relations with other telephone carriers (both local and interexchange). From 1984 to 1989, I was Vice President of Revenue and Public Affairs. Prior to that time (1980-1983) I was Vice President and General Manager of Commonwealth Communications where I was responsible for the start-up and continuation of this company, whose primary

business is sales and service of business systems. I joined CTCO in 1978 as a sales manager of business and residential customer systems and services. Prior to that time, I was affiliated with a family business and the United States Military.

Q **WITH WHAT ORGANIZATIONS ARE YOU AFFILIATED?**

A I have chaired various committees and task forces of the Pennsylvania Telephone Association and was previously committee member with the United States Telephone Association.

Q **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A To provide a general review of CTCO service territory and the company's corporate philosophy. I will also focus upon the company's delivery of service, both from a quality and cost-efficiency viewpoint.

Q **ARE YOU SPONSORING ANY EXHIBITS?**

A Yes. I am sponsoring numerous exhibits, which are attached to my testimony.

Q **PLEASE DESCRIBE CHARACTERISTICS OF CTCO'S SERVICE TERRITORY.**

A CTCO provides service to the entire counties of Sullivan and

Wyoming and portions of Berks, Bradford, Bucks, Chester, Columbia, Dauphin, Lackawanna, Lancaster, Lehigh, Luzerne, Lycoming, Monroe, Northampton, Schuylkill, Susquehanna, Tioga and York. Exh. SB-1.

Within this territory, CTCO serves 203,844 main access lines (as of December 31, 1992). Of these, 163,305 lines are residential and 38,584 are business (including company lines). The remainder (1,955 lines) serve pay stations, both public and semi-public. Exh. SB-2.

There are 79 exchanges within our territory. Seventy-one of these are digitally equipped, with the remaining eight offices to be converted in 1993. Therefore, by year-end 1993, CTCO will be 100% digitized. We are actively pursuing fiber deployment and have targeted 2002 as the date upon which the feeder portion of our network will be 100% fiber.

Ninety-eight percent (159,377 subscribers) of CTCO's residential subscribers receive single-party service. Two hundred ninety-eight (298) residential subscribers have one-party local measured service. The remainder are two, three or four-party service customers. Exh. SB-3.

The business community is made up predominately (65.9%) of service and retail establishments with approximately 9% engaged in manufacturing. See Exh. SB-4. Seventy-nine

percent (79%) of our business customers operate one-telephone-line businesses. There are only 8 customers who have more than 100 lines. Exhs. SB-5 and SB-6.

By every possible description, demographic or topographical, CTCO's operating territory is rural. There are no political subdivisions that exceed 10,000 population. The company's 79 central offices average 2,500 lines and cover an average of over 65 square miles. The entire service encompasses 5,067 square miles. Topographical features such as mountains and rivers dissect CTCO's service territory at numerous junctures. There are at least 60 exchanges divided by mountains and the 5 major rivers located in CTCO's service territory divide exchanges 38 times.

CTCO's service territory contains only 38.8 access lines per square mile, whereas Pennsylvania, overall, has 151.05 access lines per square mile. Even within the contiguous United States and the vast expanses out west, the average number of access lines per square mile is 46.9.

Q PLEASE DESCRIBE CTCO'S LEVEL OF CUSTOMER SERVICE.

A CTCO's service levels are excellent as measured against any standard. In all significant categories of measurement, CTCO can consistently be found at or near the top of the industry.

As stated by the Commission's Bureau of Consumer Services ("BCS") in its most recent Chapter 64 Report: "Of all the major companies, Commonwealth was the most effective company at handling complaints in 1991. Commonwealth's justified complaint rate was one of the best in the industry for a third year in a row." Exh. SB-7 and SB-8. In fact, in the last 5 years, for which such statistics have been compiled, CTCO has been consistently below the average justified complaint rate and residential complaint rate. Exh. SB-9 through SB-13.

Q **WHAT ABOUT CTCO'S SERVICE QUALITY?**

A The Company provides excellent service and is continuing to improve upon its already exceptional performance.

For example, the Company had a total of 93,398 trouble reports in 1986 and, 7 years later, although we had 11.4% more access lines (182,932 compared to 203,844), we received only 55,769 trouble reports in 1992 or 40.3% less. Exh. SB-14.

Chapter 63 of the Commission's regulations set forth the Commission's requirements relative to service quality. Statistics for the last 3 years (1990-1992) by month, are set

forth at Exhibits SB-15 through SB-17 and may be summarized as follows:

	PUC Mandate	CTCO Average 1990	1991	1992
Trouble Per 100 MAL	5.5	2.9	2.3	1.9
Orders Filled	90.0%	96.8%	97.3%	97.6%
Business Office/Repair Center Answer Within 20 Seconds	85.0%	98.0%	82/90%	87/72%
Dialtone Within 3 Seconds	98.0%	99.0%	99.6%	99.9%
Outgoing/Incoming Complete To Link Group	97.0%	98.4%	98.8%	99.6%

CTCO has an outstanding record over a long period of time in the area of service quality by which it totally exceeds Commission's standards and most, if not all, of the local exchange companies in Pennsylvania. CTCO is exceedingly proud of its successes in this area.

Q **IN ACHIEVING THIS EXTRAORDINARY SERVICE QUALITY, HAS THE COMPANY SACRIFICED EFFICIENCY?**

A No. Our achievement of the highest service standards is even more significant when related to our efficiency levels, most often measured in the industry as a ratio of access lines per company.

Of the 33 Pennsylvania telephone companies listed in the 1991 PTA Report, Bell had the most access lines (5,334,836) in

Pennsylvania. CTCO had the fourth greatest number following Bell, GTE and United.

However, despite a highly rural territory with topographically difficult features and a dispersed population base, CTCO rated fourth in the measurement of access lines per employee, as follows:

Company	Access Lines/Employee
Commonwealth	312
Bell	329
Conestoga	343
Brookville	356

GTE, with 410,797 access lines, had 236 lines per employee and United, with 308,111 access lines, had 235 lines per employee. Overall in the study, the range of access lines per employee was 356 to 92 with a mean of 237 access lines per employee. Therefore, CTCO, as compared to its fellow local exchange carriers in Pennsylvania, is operating a very efficient and lean organization.

During 1993, we are forecasting approximate 25 fewer positions, which have been incorporated in the 1993 test year results by Mr. Cawley.

Historically, CTCO has made great strides in productivity, as follows:

Year	AL/E	% Change
1986	222	100%
1987	231	96.1%
1988	232	95.7%
1989	242	91.7%
1990	296	75.0%
1991	315	70.5%
1992	336	66.1%

Main access lines grew from 163,060 to 203,844, or 25%, during this seven year period, while employees declined from 734 to 607, or 17.3%.

Q BASED UPON THE CHARACTERISTICS OF THE SERVICE TERRITORY, ONE WOULD EXPECT CTCO'S RATES TO BE RELATIVELY HIGHER. PLEASE COMPARE CTCO'S MONTHLY SERVICE RATES WITH THE OTHER LOCAL EXCHANGE CARRIERS IN PENNSYLVANIA.

A CTCO's monthly service rates are the fourth lowest among the local exchange carriers doing business in Pennsylvania. Exh. SB-18. CTCO's average one-party residential rates are 30% below the industry state-wide average. Exh. SB-18. This is even more significant, when one considers that the average rates in Pennsylvania are about one-half of the national

average. In comparison to the larger Pennsylvania companies, CTCO compares very favorably:

Company	Percentage CTCO Lower Than
GTE	52%
Bell	44%
United	37%
AllTel	28%

Exh. SB-19. We have not changed our basic rates since 1978. Every other major carrier in Pennsylvania has had one or two rate increases awarded since 1978. With the exception of AllTel (who had a rate increase in 1985), no other major local exchange carrier has decreased rates overall during that time. Exhibits SB-19 and 20, excerpts from the PA PUC's Telecommunications Infrastructure Study (March 1993), show the progression of the major Pennsylvania LECs' rates for the last 25 years.

Q WHAT HAS BEEN CTCO'S RECORD RELATIVE TO IMPLEMENTATION OF EXTENDED AREA SERVICE ("EAS") AND OPTIONAL CALLING PLANS ("OCP")?

A CTCO has led the industry in implementing EAS and OCP. CTCO was the first company in Pennsylvania to develop, file and implement an OCP (1980). Since the effectiveness in the

Commission's regulations regarding EAS/OCP, CTCO has implemented OCP on 36 routes, with two of those progressing to full EAS. An additional 60 routes are expected to have OCP treatment in the near term future.

CTCO has implemented EAS on 13 routes which are identified in the 1989 and 1991 biennial traffic studies. Expanding local calling area for these exchanges has increased the Company's capital costs by $106,987 and reduced toll revenue by $503,365 annually, while local revenues grew by only $123,777. Access costs increase also under intercompany EAS, but are not quantified. Five of the thirteen are intercompany. Moreover, the Company is in the process of implementing EAS on 11 additional routes with a projected net negative toll revenue impact of approximately $445,495 (exclusive of capital improvements and access charge increases). Overall, CTCO will or has lost toll revenues of $1,275,234, while gaining local increases of only $450,152.

In summary, CTCO is and continues to be an industry leader in implementation of EAS. In fact, I chaired the PTA Committee that worked with the OCA and the PUC to develop the standards and criteria for EAS that form the foundation of the Commission's current regulations. The development of calling criteria, bi-annual traffic studies and the creation of OCPs

were the result of this joint effort.

Q **ARE BILLING AND COLLECTION SERVICES COMPETITIVE?**

A Yes. Billing and collection services are highly competitive. CTCO believes that this service, in recognition of its competitiveness and the ease of entry, should be deregulated and any costs and revenues carried below the line.

Billing and collection is no more than a data processing service. Billing and collection services do not employ the telephone company network and do not convey or transmit messages or communications. The functions of billing and collection services are as follows:

- Recording and aggregation of billing data
- Rating of the calls according to the IXC's tariffed rates
- Billing the customer (i.e., mailing)
- Collection and remittance of the revenues

Billing and collection is a financial and administrative service, much the same as credit card companies, collection agencies, and service bureaus provide.

This Commission has detariffed the intrastate billing and collection services of Bell Telephone, CTCO, GTE North, Continental Telephone, Lackawaxon Telephone, United Telephone, Hickory Telephone and Bell Telephone, among others. This has

occurred expressly for the reason that services are competitive and price flexibility is necessary. Pa. PUC v. Hickory Telephone, 68 Pa. P.U.C. 617 (1988) at Footnote 1; Pa. PUC v. Breezewood Telephone Company, Docket No. R-901666, Mimeo at 128.

The FCC has undertaken the next logical step and not only detariffed, but deregulated those billing and collection services provided in the interstate jurisdiction.

The interexchange carriers, such as AT&T, MCI and Sprint, need to record the call, rate the traffic (i.e., apply the call data to the rate schedules), bill customers and collect the revenue. For any of these functions, there are numerous competitive alternatives, including self-provisioning. For example, only AT&T currently purchases full billing and collection services from CTCO. MCI rates, generates, sends out, and collects all of its own billings, except a very, very small portion known as "casual" billing. Moreover, AT&T has taken WATS and large customer MTS billing and collection in-house, doing its own billing and collection.

In Pennsylvania alone, there are at least three entities that are able to bill and collect telephone services. There are many nationally. None of the alternative sources of billing and collection are regulated by this Commission.

The cost of entering the billing and collection business is very small. The capital start-up costs are relatively low and no great technical ability is required. The expenses are principally driven by the volume of business received.

Competitors should have no problem offering billing and collection services at competitive prices, terms and conditions.

Billing and collection services are unrelated to the provision of telephone service. Anyone with only a basic understanding of telephone rate structures and access to a computer and postage meter can provide the service. There is no potential for monopoly control or discrimination in the provision of billing and collection services.

Based upon these considerations, CTCO believes that its billing and collection services should be deregulated. The associated expenses and revenues have been removed below the regulatory line in the accounting exhibits of Messrs. Cawley and Laffey.

Q **DOES THIS CONCLUDE YOUR TESTIMONY?**

A Yes, thank you.

COMMONWEALTH TELEPHONE COMPANY

COUNTIES SERVED

- BERKS
- BRADFORD
- BUCKS
- CHESTER
- COLUMBIA
- DAUPHIN
- LACKAWANNA
- LANCASTER
- LEHIGH
- LUZERNE
- LYCOMING
- MONROE
- NORTHAMPTON
- SCHUYLKILL
- SULLIVAN *
- SUSQUEHANNA
- TIOGA
- WYOMING *
- YORK

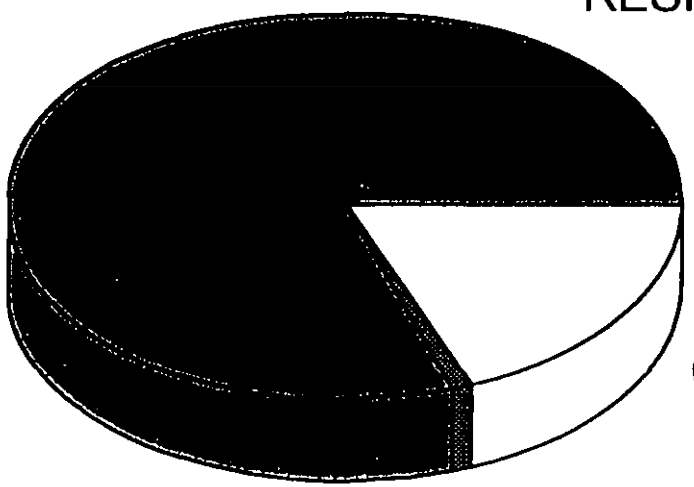
*ENTIRE COUNTY

COMMONWEALTH TELEPHONE COMPANY

03/18/93

NUMBER OF MAIN ACCESS LINES

AS OF DECEMBER 1992



RESIDENTIAL 163,305

BUSINESS 38,584
(INCLUDES COMPANY LINES)

PAYSTATION 1,955
(PUBLIC AND SEMI-PUBLIC)

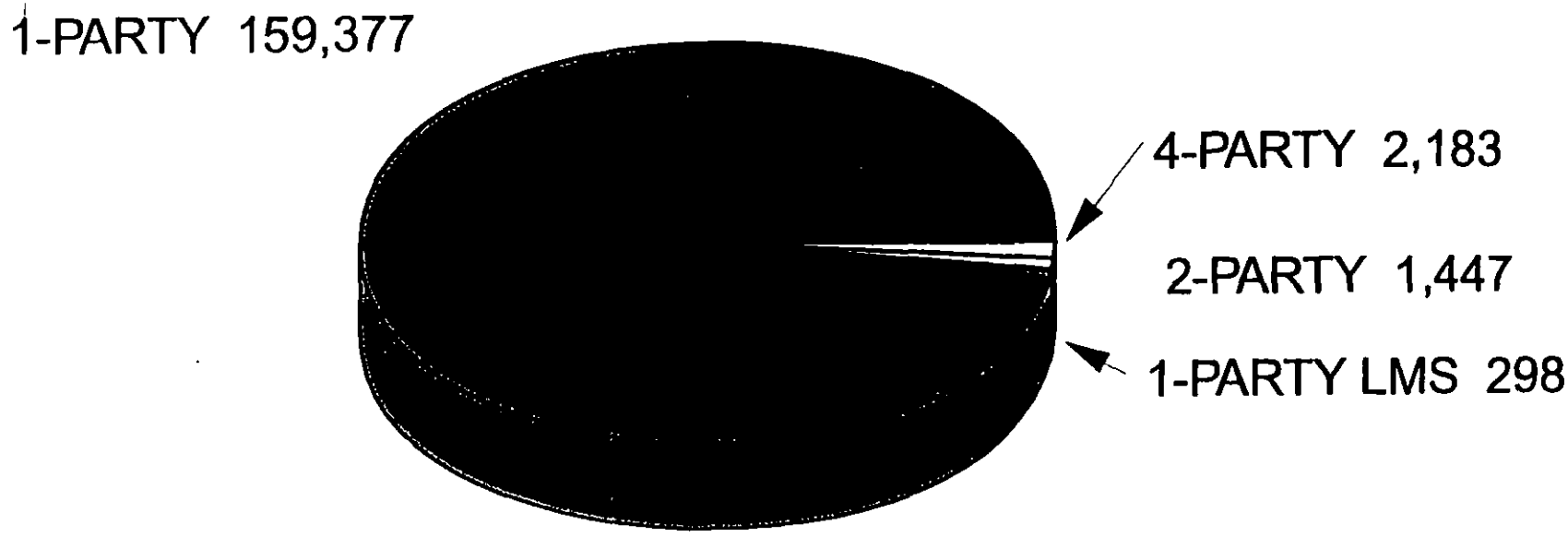
TOTAL = 203,844

COMMONWEALTH TELEPHONE COMPANY

03/18/93

RESIDENTIAL MAIN ACCESS LINES

AS OF DECEMBER 1992



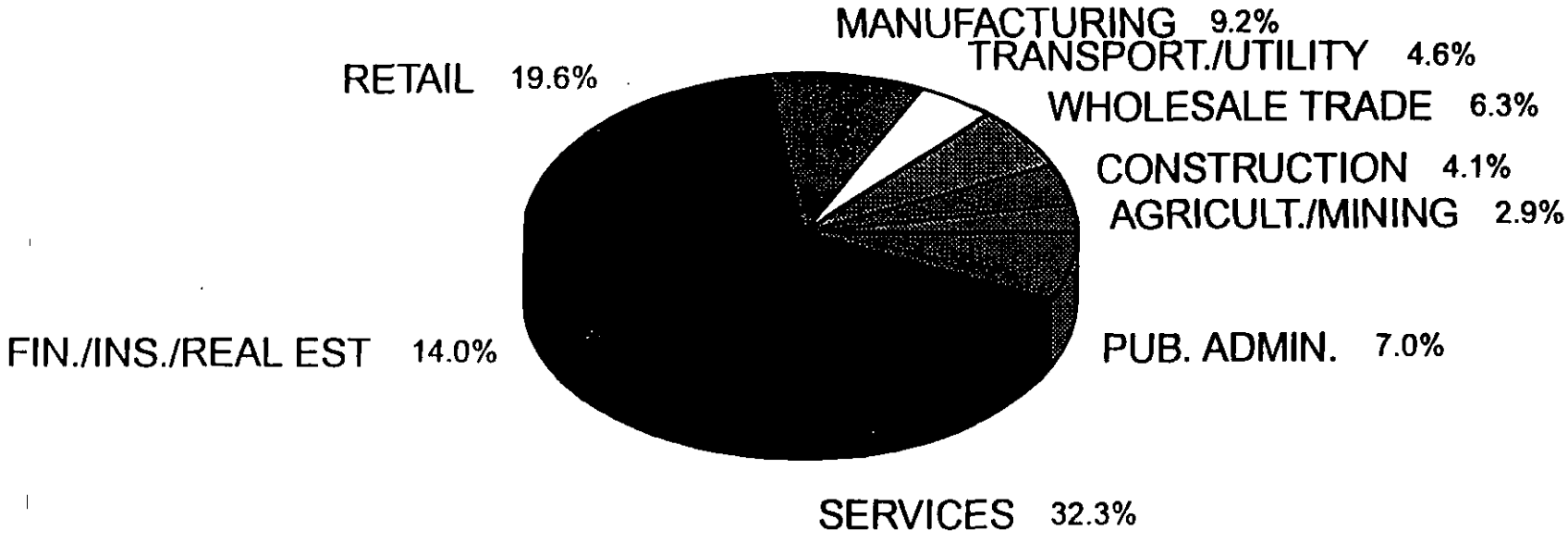
TOTAL = 163,305

COMMONWEALTH TELEPHONE COMPANY

03/18/93

BUSINESS ESTABLISHMENTS BY TYPE

(DECEMBER 1992 DATA)



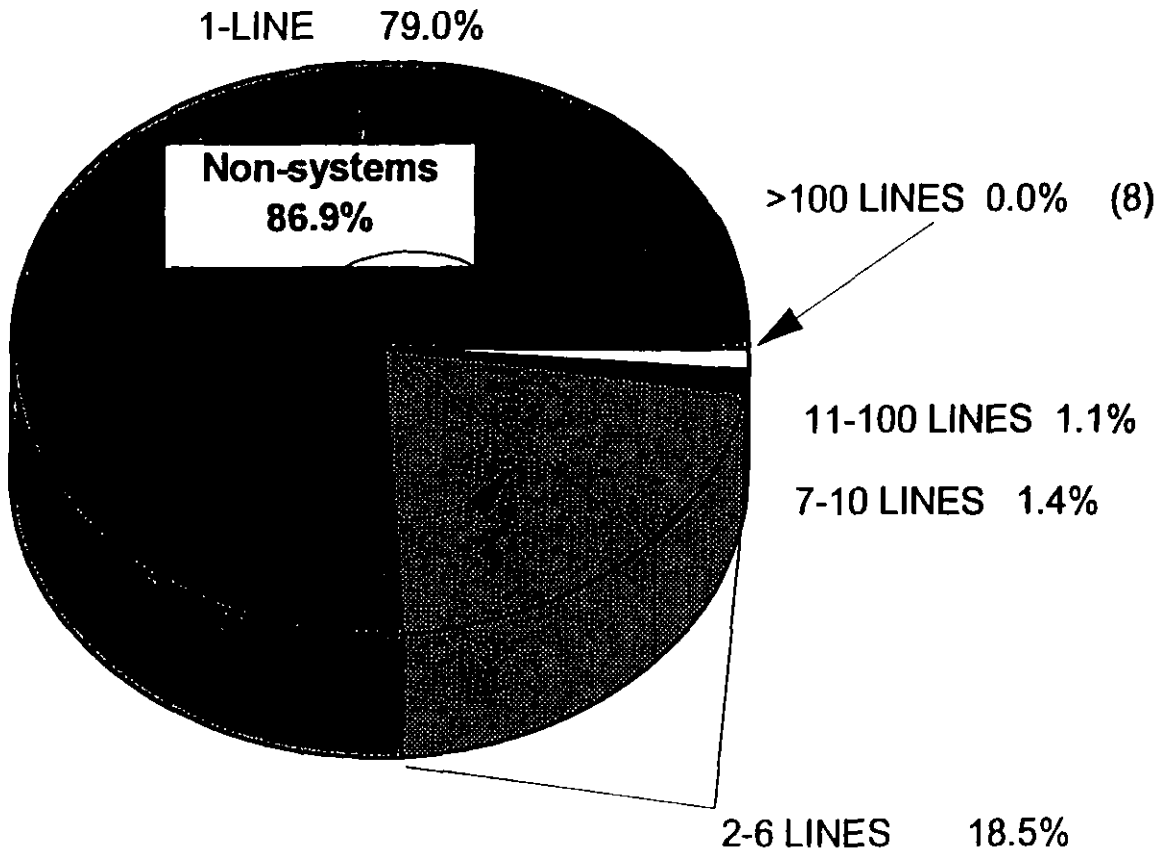
COMMONWEALTH TELEPHONE COMPANY

03/18/93

DISTRIBUTION OF CUSTOMERS

DATA AS OF DECEMBER 1992

BUSINESS CUSTOMERS



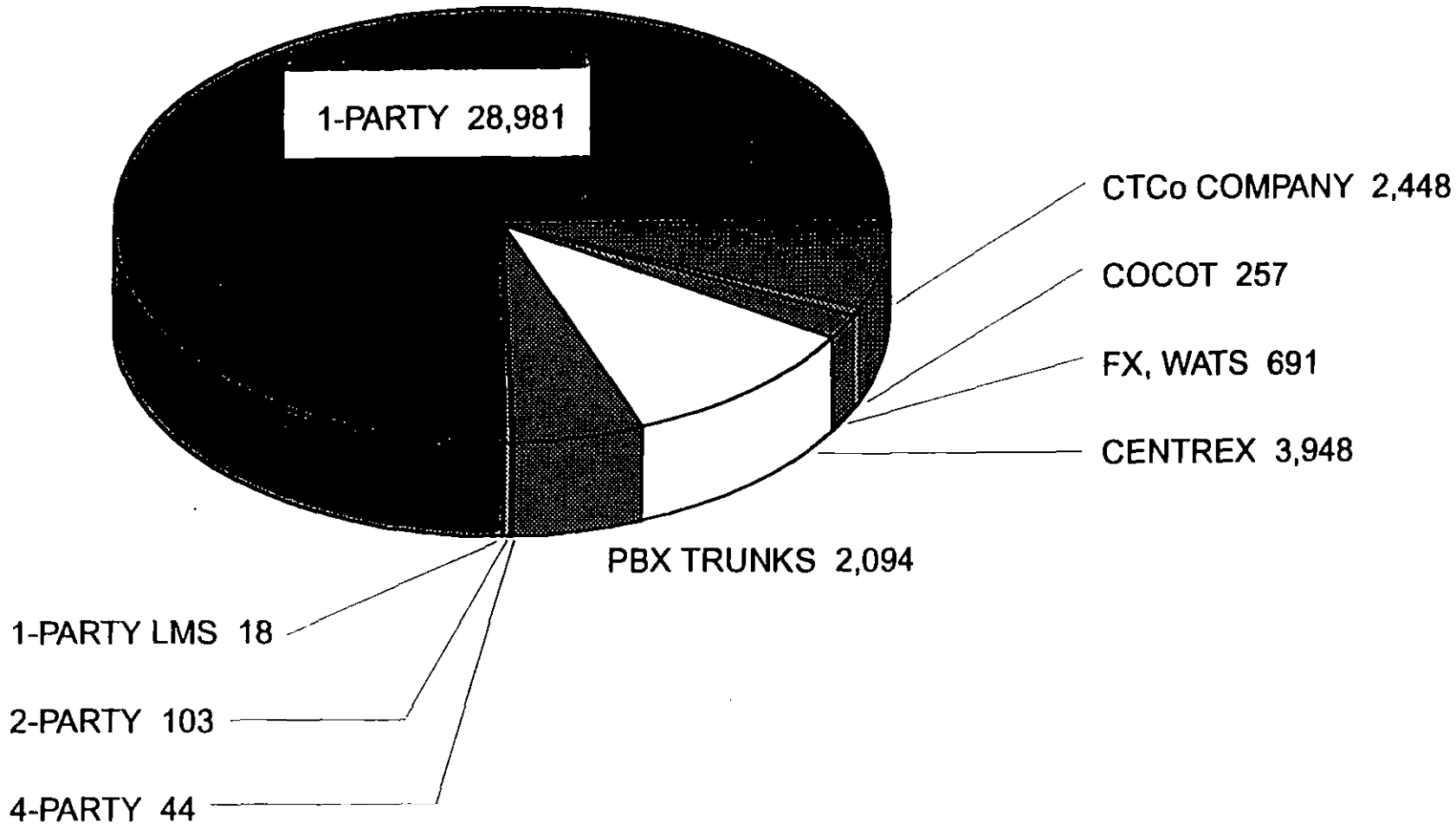
Total = 22,639

COMMONWEALTH TELEPHONE COMPANY

03/18/93

BUSINESS MAIN ACCESS LINES

AS OF DECEMBER 1992



TOTAL = 38,584

COMMONWEALTH TELEPHONE COMPANY

03/18/93

Commonwealth

The following profile highlights several noteworthy findings regarding Commonwealth's 1991 customer service performance:

Of all the major companies, Commonwealth was the most effective company at handling complaints in 1991. Commonwealth's justified complaint rate was one of the best in the industry for a third year in a row.

Commonwealth's consumer complaint response time was three days faster in 1991 than in 1990.

Commonwealth's weighted arrearage score increased slightly from 1990 to 1991, but indicates that on average Commonwealth's arrearages are not exceedingly large.

Measure	*1990*	*1991*	*Industry Average 1991*
Justified Complaint Rate	*.24*	*.15*	*.26*
Response Time	*15*	*12*	*10*
Weighted Arrearage	*1.84*	*1.88*	*2.19*

Commonwealth reduced the number of verified violations from 1990 to 1991 by more than one-third.

JUSTIFIED COMPLAINT RATE

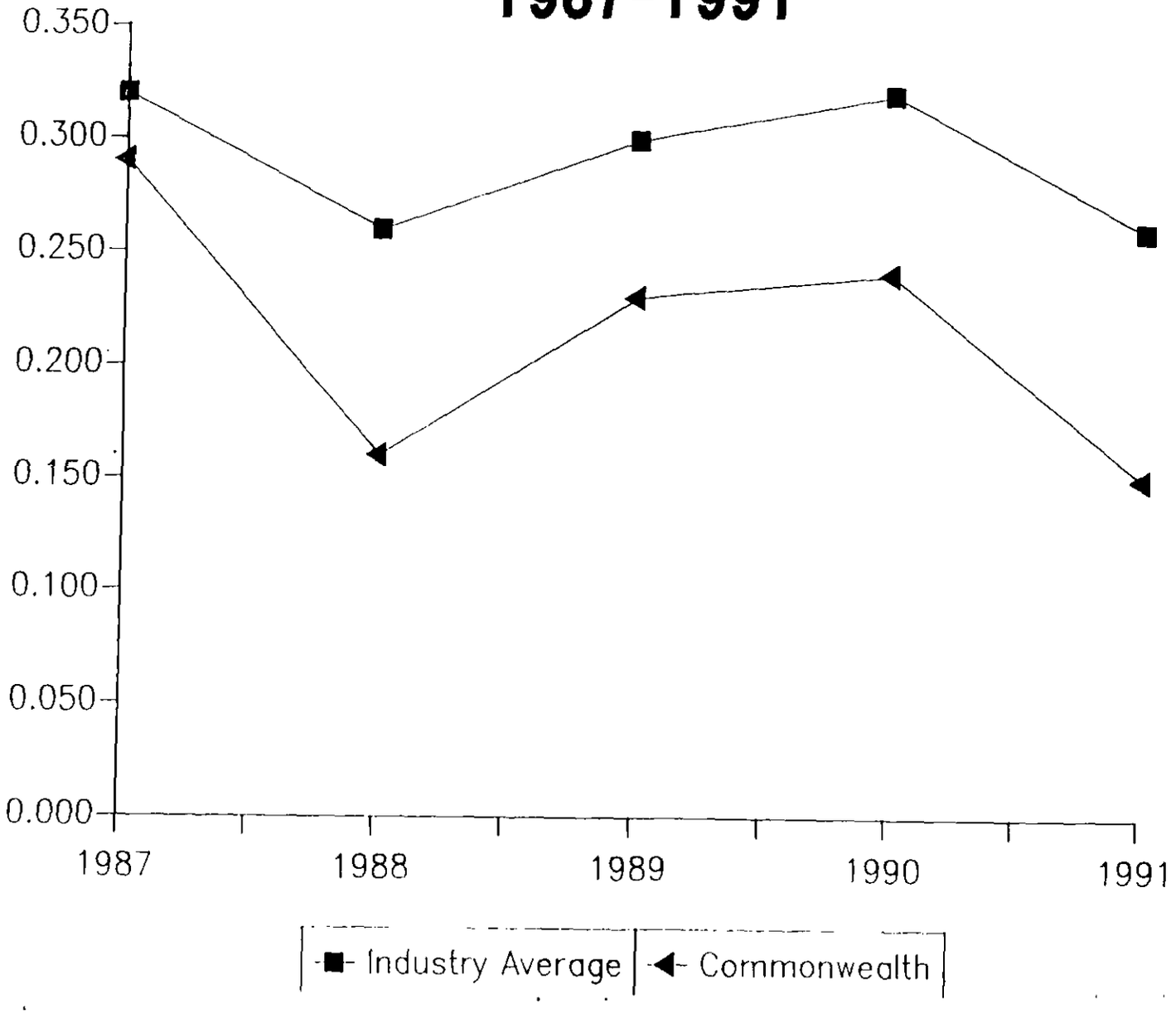
This index combines volume of customer complaints and volume of justified cases. The resulting justified complaint rate reflects a performance measurement incorporating both volume and effectiveness.

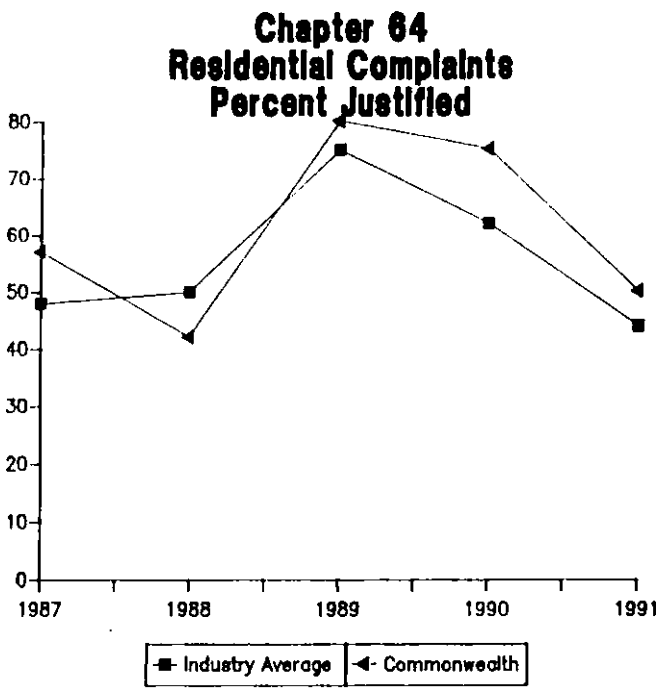
Justified Complaint Rate =
Residential Consumer Complaint Rate* X Justified Percent*

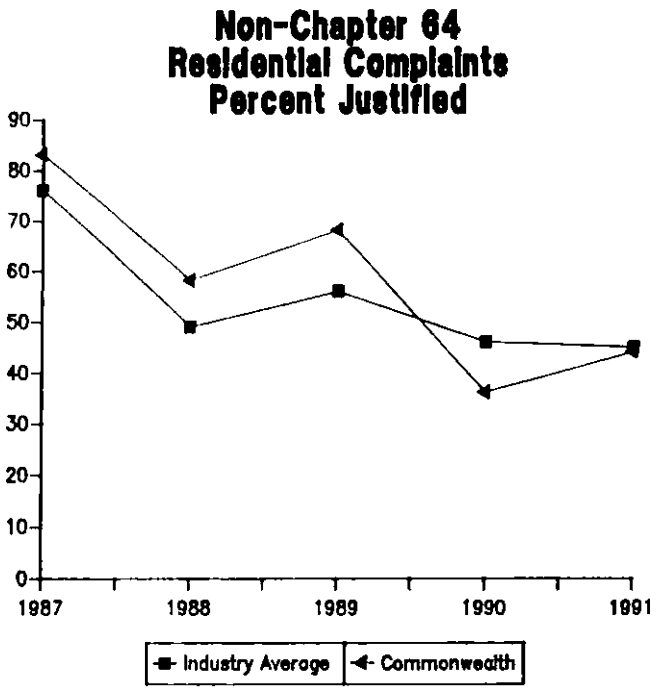
*Both Found on Accompanying Charts

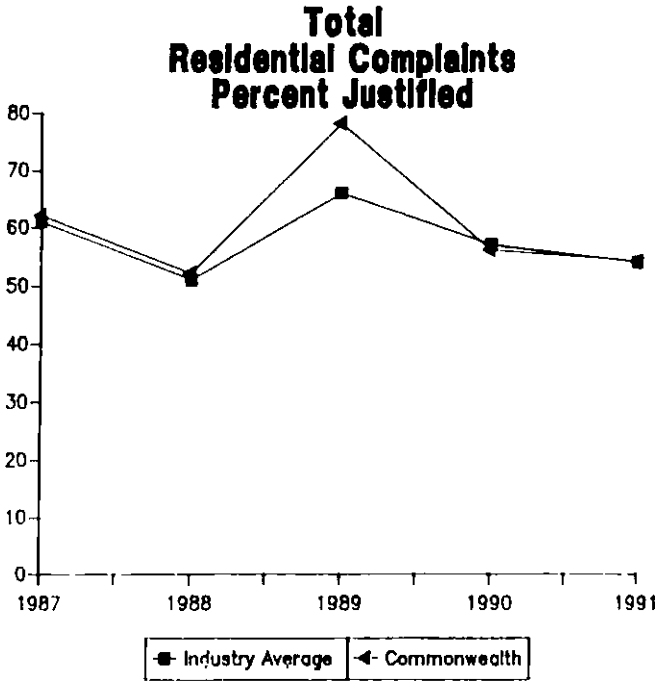
Pg.25 of 1991 PUC Consumer Services Activity Report
"Of all the major companies, Commonwealth was the most effective company in 1991. Commonwealth's justified complaint rate was one of the best in the industry for a third year in a row."

Justified Complaint Rate
Major Telephone Companies
1987-1991




Chapter 64
Residential Complaints
Percent Justified
80
70
60
50
40
30
20
10
0
1987
1988
1989
1990
1991
Industry Average
Commonwealth


Non-Chapter 64
Residential Complaints
Percent Justified
90
80
70
60
50
40
30
20
10
0
1987
1988
1989
1990
1991
Industry Average
Commonwealth

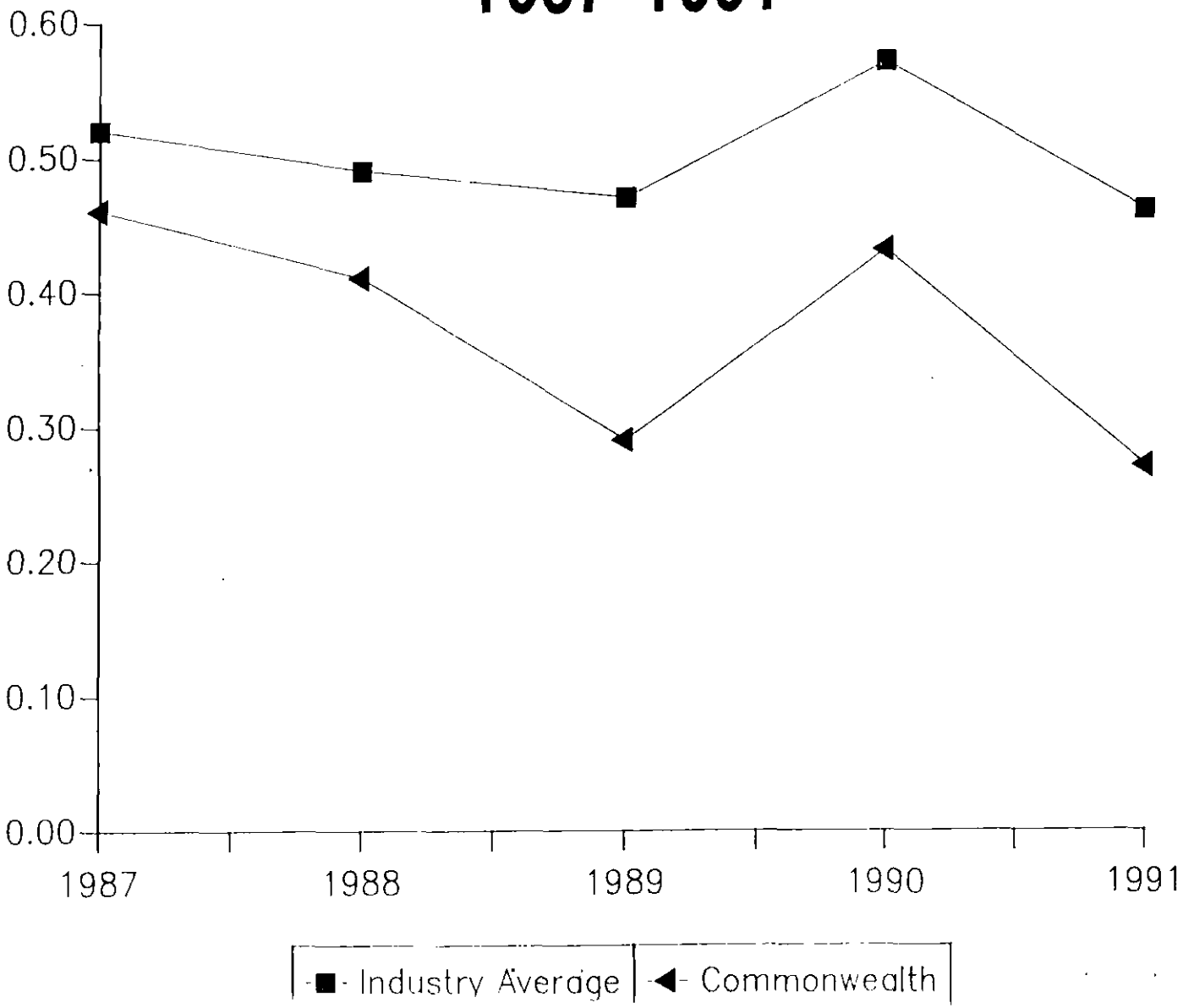

Total
Residential Complaints
Percent Justified
80
70
60
50
40
30
20
10
0
1987
1988
1989
1990
1991
Industry Average
Commonwealth

RESIDENTIAL CUSTOMER COMPLAINT RATE

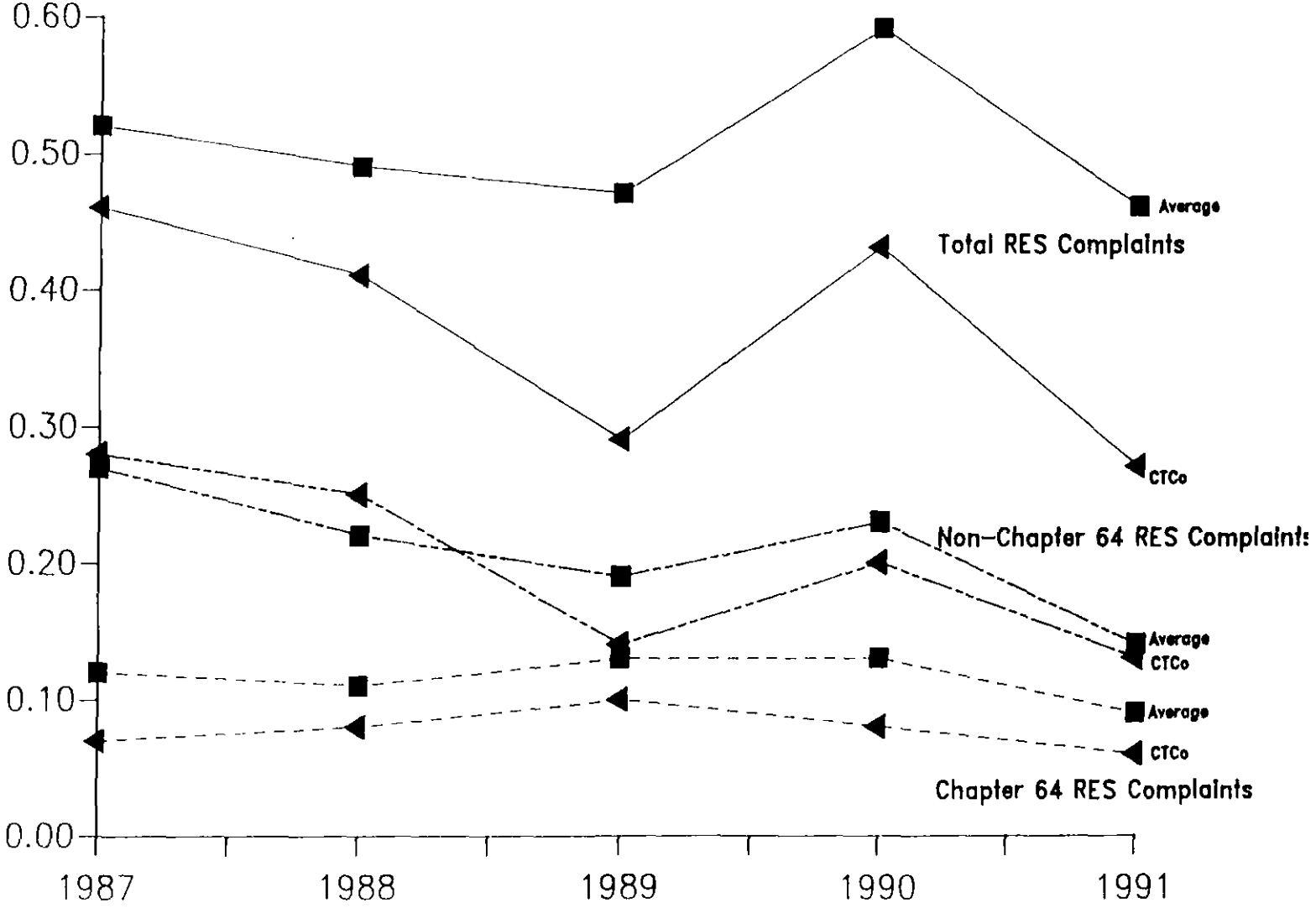
The number of complaints per thousand residential customers. This information is derived from the number of residential consumer complaints opened by the BCS against companies.

(Residential Complaints / (Residential Customers / 1000)) = RES Customer Complaint Rate

Complaint Rate
Major Telephone Companies
1987-1991



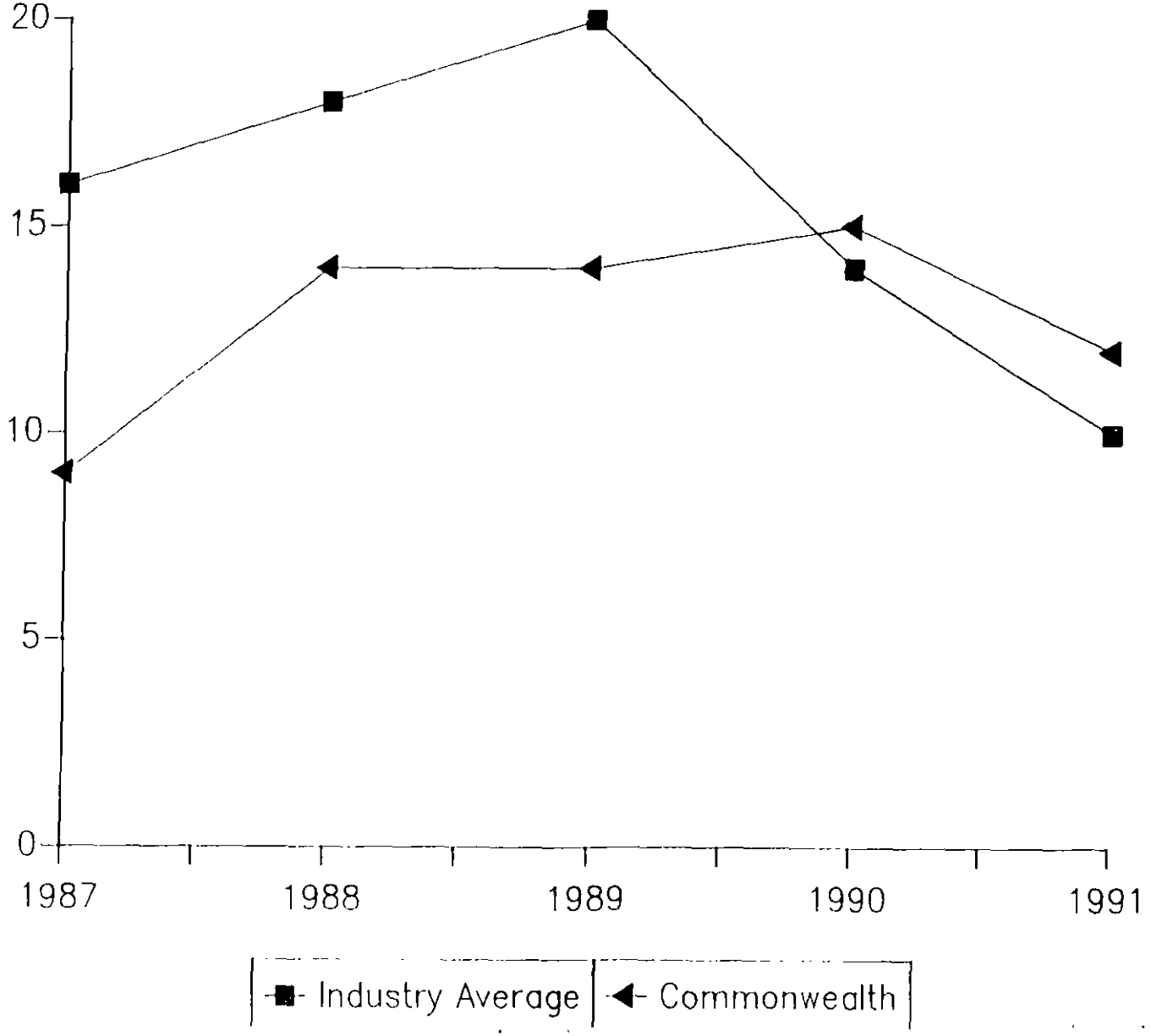
Residential Customer Complaint Rate
1987-1991



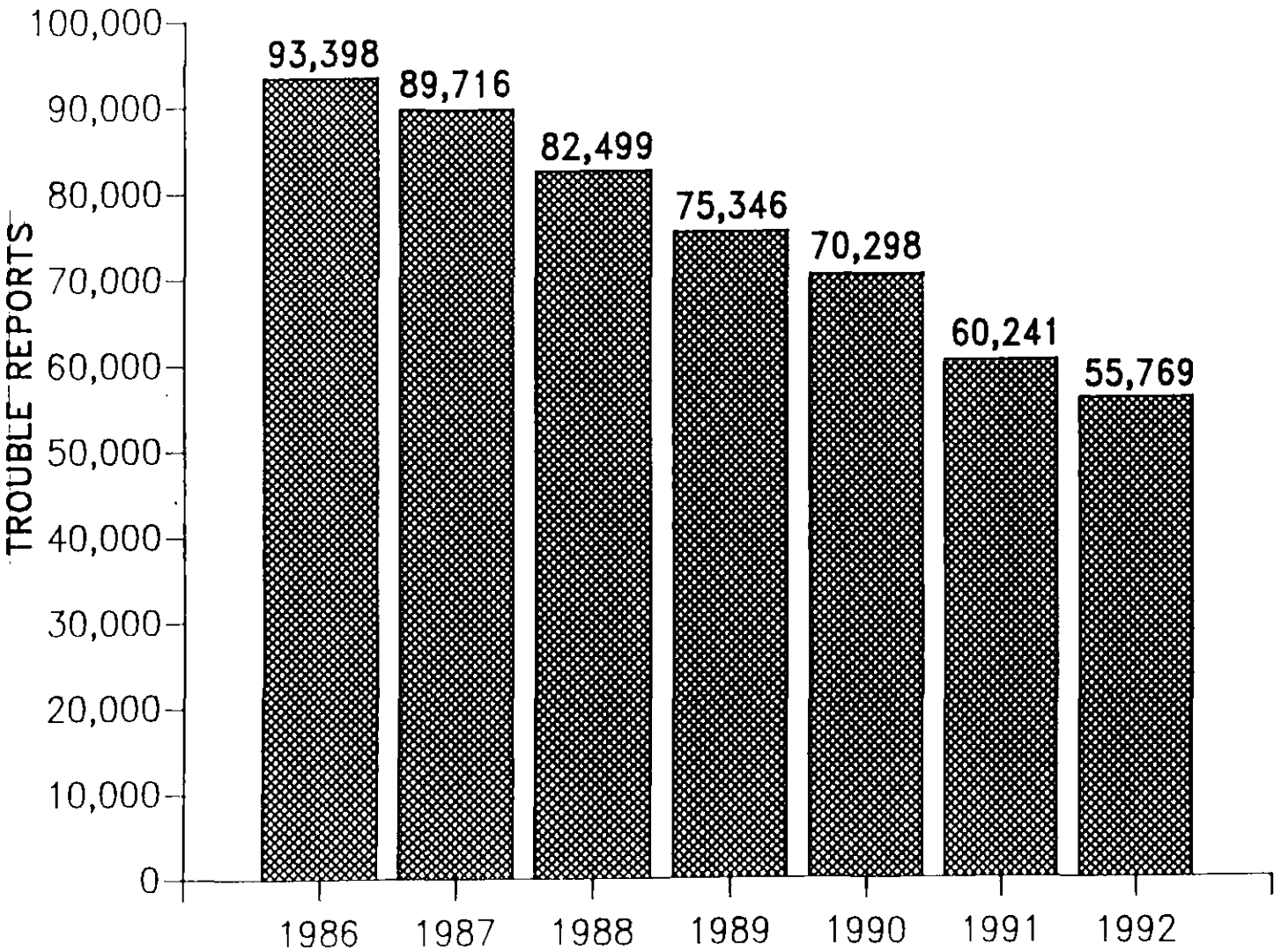
RESPONSE TIME

Time span in days from the Bureau's first contact with a company to the date a company provides the Bureau with all information needed to resolve the complaint. Response time quantifies the speed of a utility's response in resolving BCS complaints. It is presented as a mean number of days.

Average Residential Response Time (Days)



COMMONWEALTH TELEPHONE COMPANY
TOTAL TROUBLE REPORTS



CTCO EXHIBIT SB-15

COMMONWEALTH TELEPHONE COMPANY

1990 CHAPTER 63 REPORTING STATISTICS

SERVICE MEASUREMENT	PUC MANDATE	JAN 1990	FEB 1990	MAR 1990	APR 1990	MAY 1990	JUN 1990	JUL 1990	AUG 1990	SEP 1990	OCT 1990	NOV 1990	DEC 1990	AVERAGE 1990
ADJUSTED TROUBLE REPORTS PER 100 MAL	<=5.50	2.92	2.26	2.43	2.60	2.98	3.21	3.91	4.00	2.74	3.14	2.41	2.16	**2.90**
INSTALLATION														
PRIMARY SERVICE ORDERS WITHIN 5 DAYS	=>95.00%	99.12%	98.59%	98.72%	97.33%	97.83%	94.73%	94.49%	98.26%	98.30%	98.93%	98.57%	94.29%	**97.43%**
NON-PRIMARY ORDERS WITHIN 20 DAYS	=>90.00%	99.69%	99.78%	99.91%	99.70%	99.65%	99.66%	99.28%	99.00%	99.00%	99.89%	99.49%	99.71%	**99.56%**
ALL ORDERS	=>90.00%	96.51%	96.59%	96.80%	97.10%	97.28%	96.55%	96.54%	96.34%	97.03%	96.78%	97.25%	97.86%	**96.89%**
CUSTOMER CALLS														
REPAIR CENTER:														
PERCENT ANSWERED WITHIN 20 SECONDS	=>85.00%	99%	97%	98%	98%	98%	98%	97%	99%	98%	98%	98%	99%	**98%**
SPEED OF ANSWER	<=20 SECS	15	11	11	12	12	14	17	12	12	12	11	11	**13**
BUSINESS OFFICE:														
PERCENT ANSWERED WITHIN 20 SECONDS	=>85.00%	99%	99%	98%	99%	98%	97%	96%	97%	99%	99%	99%	99%	**98%**
SPEED OF ANSWER	<=20 SECS	11	11	18	11	14	19	24	21	10	11	10	13	**14**
LOCAL DIAL SERVICE														
DIAL TONE WITHIN 3 SECONDS	=>98.00%	99.95%	99.97%	99.99%	99.99%	99.73%	98.02%	97.81%	99.98%	99.99%	99.81%	99.98%	94.40%	**99.14%**
INTRA-OFFICE COMPLETE	=>97.00%	99.98%	99.98%	99.96%	99.98%	99.95%	99.92%	99.87%	99.94%	99.93%	99.91%	99.94%	99.91%	**99.94%**
INTER-OFFICE COMPLETE	=>96.00%	98.07%	99.05%	99.61%	99.72%	99.53%	99.11%	99.85%	99.31%	99.75%	99.64%	99.76%	99.14%	**99.38%**
DIRECT DISTRIBUTION DIAL SERVICE														
OUTGOING COMPLETE TO TRUNK GROUP	=>97.00%	98.74%	98.77%	98.85%	97.94%	97.77%	98.24%	98.56%	98.18%	98.23%	98.86%	98.79%	98.87%	**98.48%**
INCOMING COMPLETE TO TRUNK GROUP	=>98.00%	98.48%	98.39%	98.57%	97.80%	97.57%	98.44%	98.62%	98.59%	98.63%	98.61%	98.84%	98.53%	**98.42%**

CTCO EXHIBIT SB-16

COMMONWEALTH TELEPHONE COMPANY

1991 CHAPTER 63 REPORTING STATISTICS

SERVICE MEASUREMENT	PUC MANDATE	JAN 1991	FEB 1991	MAR 1991	APR 1991	MAY 1991	JUN 1991	JUL 1991	AUG 1991	SEP 1991	OCT 1991	NOV 1991	DEC 1991	AVERAGE 1991
ADJUSTED TROUBLE REPORTS PER 100 MAL	<=5.50	2.10	1.61	1.85	2.61	2.63	2.63	3.15	2.60	2.42	2.11	1.93	1.93	**2.30**
INSTALLATION														
PRIMARY SERVICE ORDERS WITHIN 5 DAYS	=>95.00%	98.95%	99.09%	99.95%	99.73%	99.75%	98.80%	98.54%	98.78%	94.83%	96.80%	98.75%	94.86%	**98.24%**
NON-PRIMARY ORDERS WITHIN 20 DAYS	=>90.00%	99.71%	99.90%	99.83%	99.35%	99.76%	99.90%	99.70%	99.75%	99.45%	99.84%	99.82%	99.79%	**99.73%**
ALL ORDERS	=>90.00%	96.89%	96.49%	97.49%	97.80%	97.62%	97.53%	97.37%	97.24%	97.33%	97.67%	97.57%	97.42%	**97.37%**
CUSTOMER CALLS														
REPAIR CENTER:														
PERCENT ANSWERED WITHIN 20 SECONDS	=>85.00%	93%	94%	93%	91%	92%	90%	90%	89%	89%	89%	89%	81%	**90%**
SPEED OF ANSWER	<=20 SECS	10	9	9	10	10	11	11	12	12	12	12	17	**11**
BUSINESS OFFICE:														
PERCENT ANSWERED WITHIN 20 SECONDS	=>85.00%	87%	87%	83%	90%	87%	82%	88%	80%	86%	85%	81%	53%	**82%**
SPEED OF ANSWER	<=20 SECS	10	11	13	11	10	12	9	13	11	11	13	33	**13**
LOCAL DIAL SERVICE														
DIAL TONE WITHIN 3 SECONDS	=>98.00%	99.94%	99.99%	99.41%	99.99%	99.99%	99.93%	99.74%	98.03%	99.99%	99.51%	99.37%	99.96%	**99.65%**
INTRA-OFFICE COMPLETE	=>97.00%	99.43%	99.93%	99.90%	99.91%	99.97%	99.95%	98.43%	99.76%	99.84%	99.36%	99.76%	99.58%	**99.65%**
INTER-OFFICE COMPLETE	=>96.00%	98.82%	99.21%	99.64%	99.64%	99.87%	99.98%	99.96%	99.87%	99.58%	99.78%	99.87%	99.67%	**99.66%**
DIRECT DISTRIBUTION DIAL SERVICE														
OUTGOING COMPLETE TO TRUNK GROUP	=>97.00%	98.79%	98.68%	98.99%	98.75%	98.93%	99.36%	99.26%	98.07%	98.58%	99.12%	99.17%	98.45%	**98.85%**
INCOMING COMPLETE TO TRUNK GROUP	=>98.00%	98.44%	98.22%	98.55%	98.12%	98.73%	98.77%	98.84%	98.59%	98.74%	98.88%	98.94%	99.03%	**98.65%**

COMMONWEALTH TELEPHONE COMPANY

1992 CHAPTER 63 REPORTING STATISTICS

SERVICE MEASUREMENT	PUC MANDATE	JAN 1992	FEB 1992	MAR 1992	APR 1992	MAY 1992	JUN 1992	JUL 1992	AUG 1992	SEP 1992	OCT 1992	NOV 1992	DEC 1992	AVERAGE 1992
ADJUSTED TROUBLE REPORTS PER 100 MAL	<=5.50	1.71	1.59	1.87	1.92	1.99	2.20	2.34	2.07	2.02	1.87	1.76	2.14	**1.96**
INSTALLATION														
PRIMARY SERVICE ORDERS WITHIN 5 DAYS	=>95.00%	97.83%	99.36%	99.03%	98.70%	99.17%	98.32%	98.25%	98.33%	94.80%	96.71%	98.54%	98.30%	**98.11%**
NON-PRIMARY ORDERS WITHIN 20 DAYS	=>90.00%	99.65%	99.73%	99.00%	99.73%	99.30%	99.30%	99.76%	99.91%	99.57%	99.82%	99.90%	99.66%	**99.61%**
ALL ORDERS	=>90.00%	97.66%	97.97%	97.98%	97.34%	97.47%	97.42%	97.05%	97.21%	97.78%	97.21%	98.54%	98.47%	**97.68%**
CUSTOMER CALLS														
REPAIR CENTER:														
PERCENT ANSWERED WITHIN 20 SECONDS	=>85.00%	87%	89%	87%	91%	86%	81%	84%	86%	86%	86%	89%	89%	**87%**
SPEED OF ANSWER	<=20 SECS	13	12	13	12	14	19	17	15	16	16	15	14	**15**
BUSINESS OFFICE:														
PERCENT ANSWERED WITHIN 20 SECONDS	=>85.00%	88%	82%	85%	82%	73%	56%	43%	86%	35%	54%	89%	87%	**72%**
SPEED OF ANSWER	<=20 SECS	10	12	12	12	18	37	59	14	81	57	12	12	**28**
LOCAL DIAL SERVICE														
DIAL TONE WITHIN 3 SECONDS	=>98.00%	99.98%	99.95%	99.99%	99.99%	99.71%	99.98%	99.73%	99.97%	99.67%	99.98%	99.99%	99.99%	**99.91%**
INTRA-OFFICE COMPLETE	=>97.00%	99.56%	99.45%	99.61%	99.43%	99.68%	99.76%	99.85%	99.79%	99.81%	99.85%	99.92%	99.82%	**99.71%**
INTER-OFFICE COMPLETE	=>96.00%	99.45%	99.53%	99.41%	99.60%	99.79%	99.81%	99.89%	99.83%	99.87%	99.88%	99.89%	99.06%	**99.67%**
DIRECT DISTRIBUTION DIAL SERVICE														
OUTGOING COMPLETE TO TRUNK GROUP	=>97.00%	99.44%	99.37%	99.59%	98.83%	99.42%	99.40%	99.52%	99.70%	99.85%	99.86%	97.89%	98.93%	**99.32%**
INCOMING COMPLETE TO TRUNK GROUP	=>98.00%	99.74%	99.56%	99.73%	99.45%	99.20%	99.55%	99.53%	99.75%	99.85%	99.86%	99.84%	99.53%	**99.63%**

Of 33 Pennsylvania Telephone Companies listed on a 1991 PTA Report, Bell had the most access lines (A/L) at 5,334,836. CTCo was fourth following Bell, GTE, and United.

CTCo, despite rural and dispersed territory, rated fourth with 312 A/L per employee; following Brookville (356), Conestoga (343) and Bell (329).

GTE, with 410,797 A/L, had 236 A/L per empl. and United, with 308,111 A/L, had 235 A/L per empl.

Access lines per empl. ranged from 356 to 92 with a mean of 237 A/L per empl.

TELEPHONE ACCESS LINE and GEOGRAPHIC LAND AREA PROFILE

	LAND AREA * (sq mile)	12/1/91 ACCESS LINES **	ACCESS LINES / SQ MILE
USA	3,548,974	140,196,551	39.50
U.S. (Contiguous)	2,971,494	139,293,009	46.88
PA	45,007	6,798,090	151.05
CTCo	5,067	196,622	38.80

* Random House Dictionary Atlas

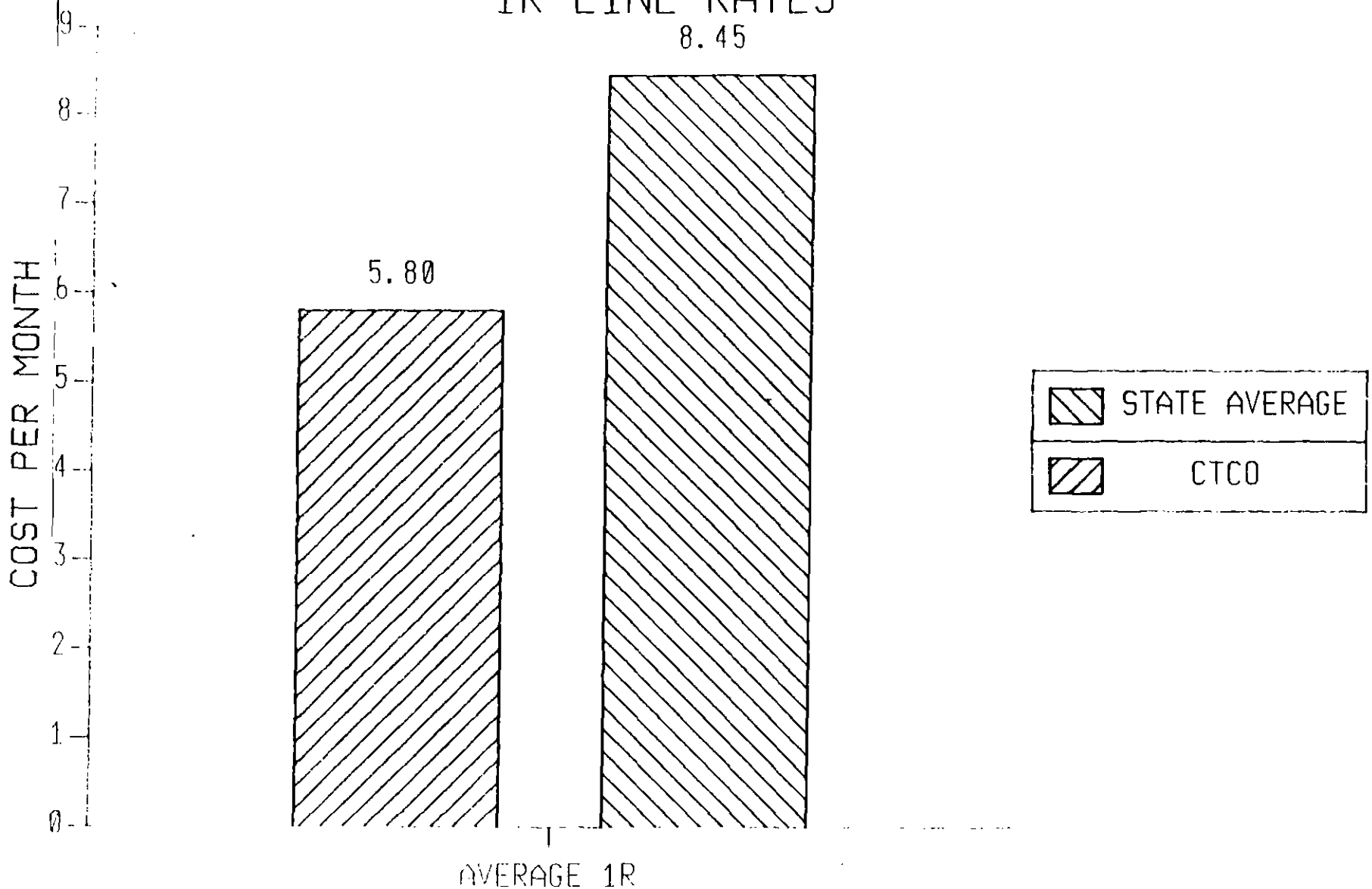
** USTA Phone Facts 1992

PA LOCAL EXCHANGE CARRIERS
LOWEST QUOTED
ONE-PARTY RESIDENCE RATES

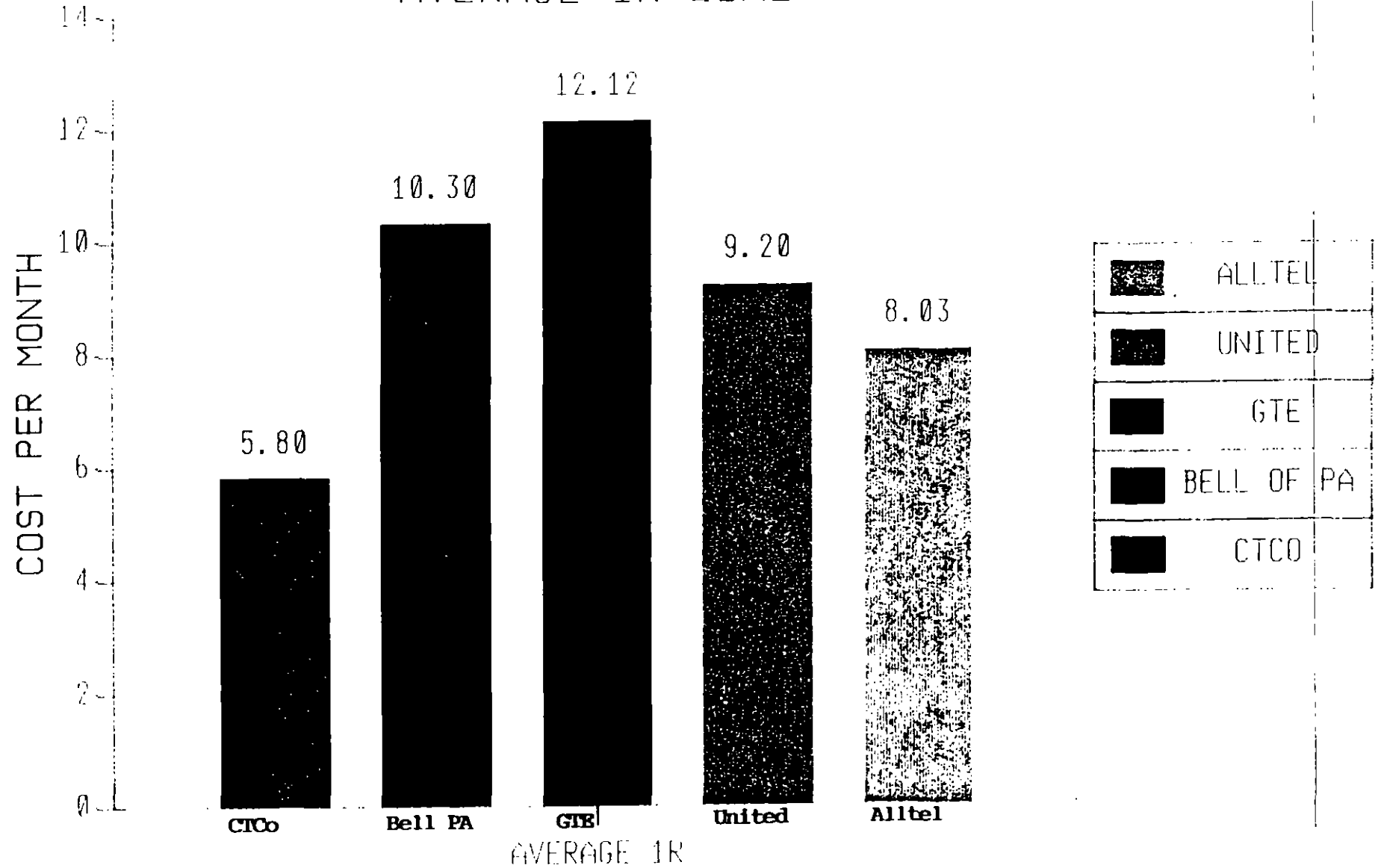
KEY	TELEPHONE COMPANY	LOW 1R
001	BUFFALO VALLEY	3.10
002	ALLTEL PA	3.79
003	LAUREL HIGHLANDS	3.80
004	CTCO	4.52
005	ENTERPRISE	4.60
006	PALMERTON	4.88
007	CONESTOGA	4.95
008	YUKON WALTZ	5.00
009	DENVER + EPHRATA	5.20
010	ARMSTRONG	5.69
011	BENTLEYVILLE	5.85
012	NORTH PITTSBURGH	5.95
013	BREEZEWOOD	7.00
014	BELL OF PA	7.30
015	NORTHEASTERN PA TEL	7.35
016	UNITED	7.65
017	LACKAWAXEN	7.70
018	NORTH PENN TEL	8.21
019	HANCOCK	8.30
020	IRONTON	8.30
021	LAKEWOOD	8.45
022	HICKORY	8.65
023	SOUTH CANAAN	8.65
024	CITIZENS KECKBURG	9.30
025	MAHANOY + MAHANTANGO	9.65
026	GENERAL	9.69
027	PENNSYLVANIA TEL	9.80
028	VENUS	9.90
029	CANTON	11.00
030	OSWAYO RIVER	11.40
031	MARIANA + SCENERY HL	11.98
032	SUGAR VALLEY	12.51
033	PYMATUNING INDEP	12.79
034	CITIZENS UTILITIES	13.12
035	DEPOSIT	13.88

- FLAT RATE SERVICE QUOTED ONLY
- ALLTEL PROPERTIES CONSOLIDATED
- GTE PROPERTIES CONSOLIDATED

CTCO VERSUS STATE AVERAGE 1R LINE RATES



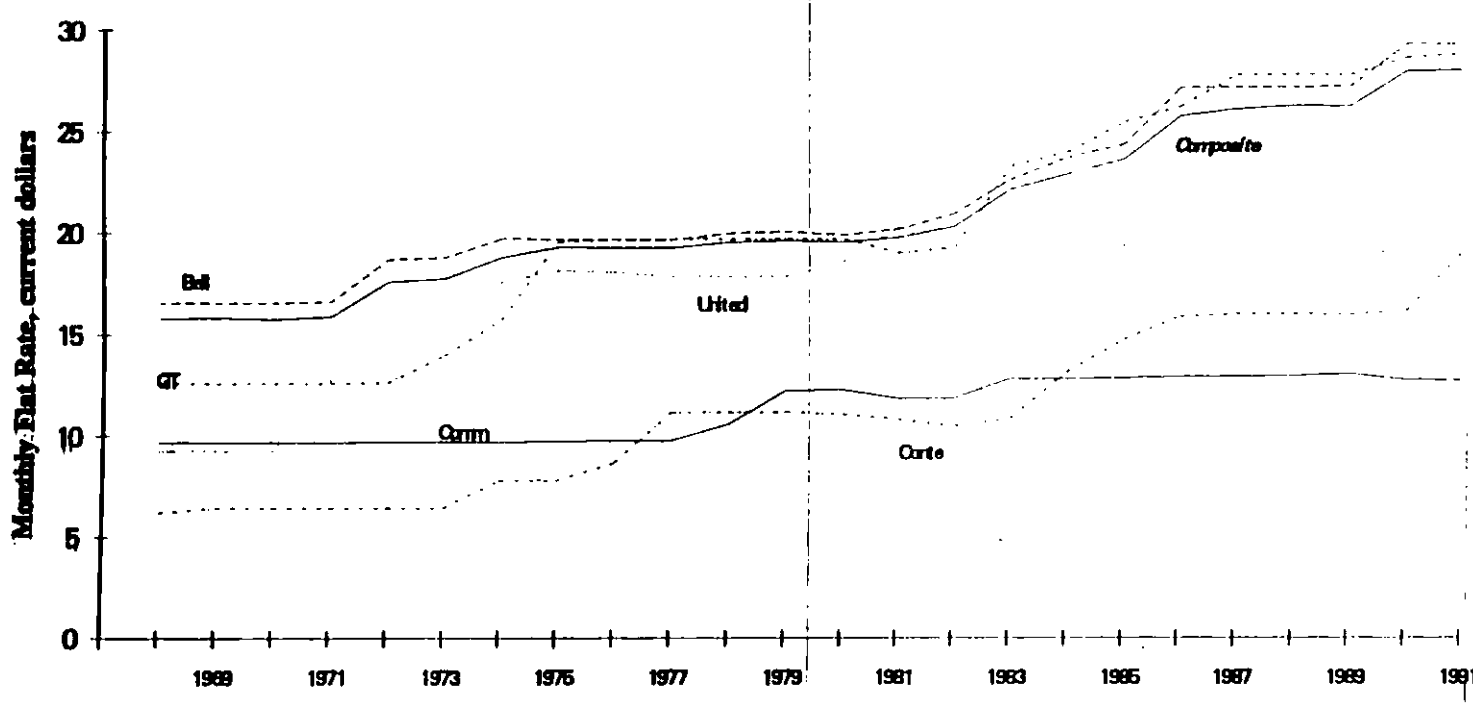
TOP 5 LECS
AVERAGE 1R LINE RATES



SOURCE: PA PUC May 1991 Comparison

Exhibit 1

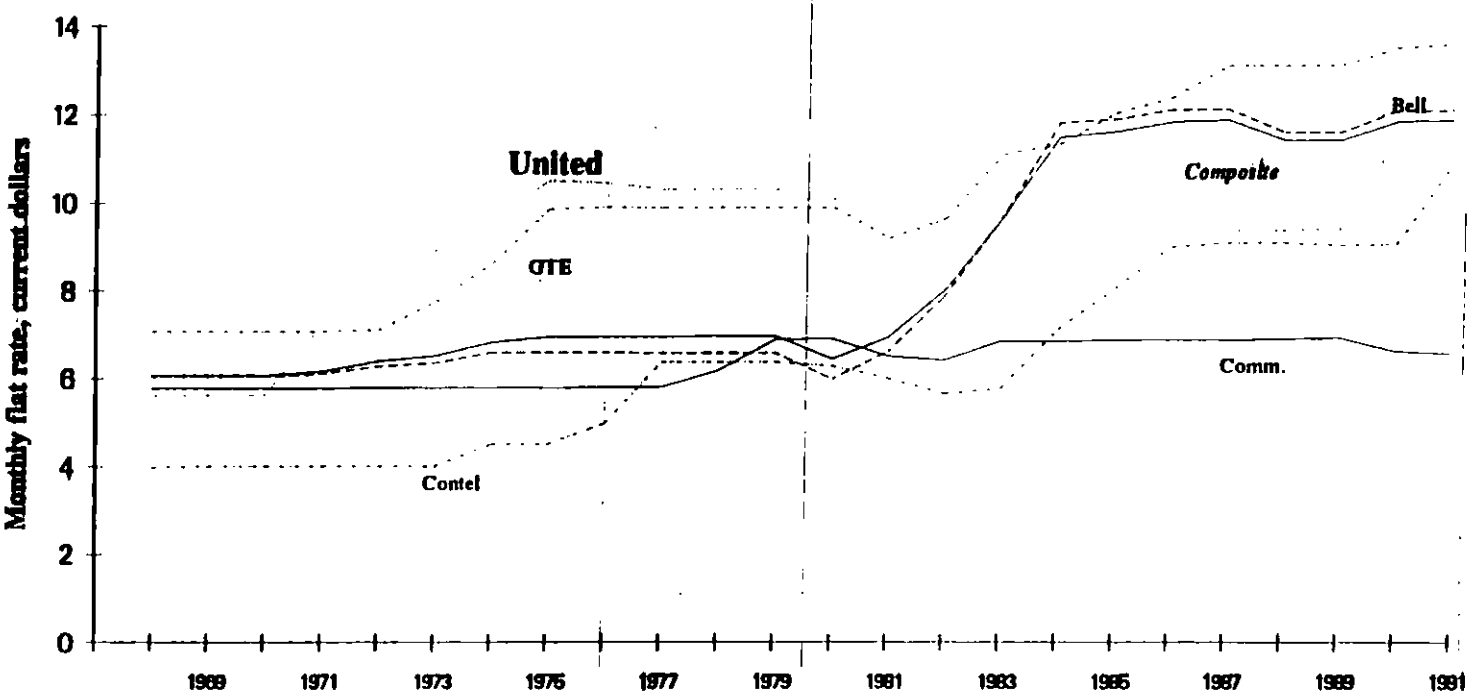
PA Local Business Rates



Timelines for local business service rates aggregated across access line bands.
Source: Rates compiled by DRI/McGraw-Hill from tariffs posted with the Pennsylvania Public Utility Commission.

Exhibit 2

PA Local Residential Rates



Timelines for local residential service rates aggregated across access line bands.
Source: Rates compiled by DRI/McGraw-Hill from tariffs posted with the Pennsylvania Public Utility Commission.

CTCO Statement No. 5
I-00920[illegible]0
Witness: E.M. Robinson
Date Submitted: ~~May 5, 1993~~
7/1/93 1Hog jaw

COMMONWEALTH TELEPHONE COMPANY

DIRECT TESTIMONY
OF
EARL M. ROBINSON
PRESIDENT

WEBER FICK & WILSON DIVISION
AUS CONSULTANTS

Plant in Service Measures of Value
Annual Depreciation Expense
and
Depreciation Rates

Q. STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Earl M. Robinson. I am President of Weber Fick & Wilson Division (WFW) of AUS Consultants - Utility Services Group. WFW is a public utility consulting firm specializing in the performance of various financial studies including depreciation, valuation, cost of service and other analysis for the utility industry and regulatory agencies. AUS Consultants provides a wide spectrum of consulting services through its various affiliated groups which include the Utility Services Group, the Valuation Services Group, the ICR Survey Research Group, the Industry Analysis Group, the Marketing Systems Group, the Software Group, and the C.A. Turner Utility Reports. Weber Fick & Wilson Division is located at 1000 North Front Street, Suite 200, Wormleysburg, Pennsylvania 17043.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I am a graduate of Harrisburg Area Community College with an Associate of Arts Degree in Accounting and have completed additional courses at University Center of Harrisburg. I have also successfully completed various programs related to service life and salvage estimation, forecasting, and evaluation sponsored by Depreciation Programs, Inc. at Calvin College Campus, Grand Rapids,

Michigan. In addition, I have completed cost of service seminars sponsored by the American Water Works Association.

Q. PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS.

A. I have been employed by Weber Fick & Wilson as a public utility consultant from 1971 to 1975 and 1977 to date. During these periods, my responsibilities have included the supervision of analyses and completion of studies related to depreciation, valuation, original cost, trended original cost, cost of service and bill analysis, as well as the analysis of expenses, revenues, accounting adjustments for various municipal and investor-owned utilities. Studies prepared have required the review of company records, inspection of property, the preparation of property inventories and original costs, preparation and review of mortality studies, selection of proper service lives and life characteristics, analysis of salvage, and analysis of the capital recovery impact of changing depreciation methods. Other areas of responsibility have included the preparation and selection of indices, development of rate base elements, development of data for cost of service studies, and testing of consumption and revenue data in the preparation of bill analyses.

From 1975 to 1977, I was employed by Gannett, Fleming, Cordry & Carpenter, Inc., as a valuation analyst. My responsibilities included the classification, analysis and coordination of data in the development of depreciation rates for various companies including telephone, gas, water, and electric utilities. During the years 1966 to 1971, I was a staff member of the Plant Accounting Department of United Telephone Company of Pennsylvania. My responsibilities included the preparation of various plant accounting ledgers, unitization of property accounts, as well as special studies related to insurance and tax valuations.

Q. ARE YOU A MEMBER OF ANY PROFESSIONAL SOCIETIES?

A. Yes, I am a member of the American Gas Association, the American Water Works Association, the Pennsylvania Gas Association, the AGA/EEI Depreciation Committee (Chairman of Statistics, Bibliography, Court and Regulatory Sub-Committee), and a founding member of the Society of Depreciation Professionals (Chairman of Membership Committee).

Q. MR. ROBINSON, HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE A REGULATORY BODY?

A. Yes. I have testified in numerous proceedings before the Pennsylvania Public Utility Commission concerning

telephone, gas, water and electric utilities. Likewise, I have presented testimony to the Arizona Corporation Commission, the Connecticut Department of Public Utility Control, the Delaware Public Service Commission, the Public Service Commission of the District of Columbia, the Illinois Commerce Commission, the Massachusetts Department of Public Utilities, the North Carolina Utilities Commission, the New Hampshire Public Utilities Commission, the New Jersey Board of Public Utilities, the New York Public Service Commission, the State of Rhode Island Public Utilities Commission, the Public Service Commission of South Carolina, the Virgin Islands Public Services Commission, and the California State Board of Equalization. A list of those prior appearances is set forth in Appendix A to my prepared statement.

Q. WHAT WAS YOUR ASSIGNMENT IN THIS RATE PROCEEDING?

A. My assignment was to assist Commonwealth Telephone Company's (the "Company") staff by preparing an exhibit containing net telephone plant in service and the annual depreciation expense related to Commonwealth Telephone Company's plant in service as of December 31, 1992 (historic) test year and December 31, 1993 (future) test years and to provide testimony in support of the exhibits included in this rate proceeding.

Q. ARE YOU FAMILIAR WITH THE COMPANY'S PROPERTY?

A. Yes. During earlier years, our firm was engaged to prepare depreciation studies relative to the Company's utility plant in service. I assisted and/or was responsible for preparing such studies. During the course of providing these services, I have met with Company personnel to discuss various factors affecting the Company's property. Furthermore, on occasions I have performed physical plant inspections of a representative portion of the Company's property. Also, my study involved a complete review of the fixed capital historical accounting data obtained from the Company's continuing property records.

In completing our review and study, my task included an investigation and analysis of the Company's historical together with an interpretation of past experience and future expectancies to determine the remaining lives of the Company's property. The study utilized the resulting remaining lives, utility plant in service, and depreciation reserve to develop recommended average remaining life based depreciation expense and rates for the Company's plant in service.

Q. DO YOU HAVE AN EXHIBIT WHICH SUMMARIZES THE RESULTS OF YOUR DEPRECIATION SERVICE LIFE STUDY?

A. Yes, the results are included in a separately bound volume (Exhibit EMR-1) entitled "Commonwealth Telephone Company Depreciation Study as of December 31, 1992 and December 31, 1993" which summarizes the results of my service life and salvage analysis and develops plant in service measures of value as of December 31, 1992 and December 31, 1993.

Q. COULD YOU PLEASE BRIEFLY DESCRIBE EXHIBIT EMR-1?

A. The report is segregated into seven (7) sections which contains summary tables as well as data related to methods, procedures, and results, etc. used in preparing the service life study for the Company's property investments. A detailed table of contents following the letter of transmittal lists the complete contents of the report. Section 2 includes the summary schedules which lists the proposed depreciation rates for each depreciable property group, while Section 4 contains a narrative of factors considered in selecting service lives parameters for the Company's property. Sections 5, 6, and 7 contain service life analysis information and detailed calculations supporting the summary schedules contained in Section 2 of Exhibit EMR-1.

Q. WHAT WAS THE SOURCE OF THE DATA WHICH YOU UTILIZED AS A BASIS FOR THE DEPRECIATION RATES YOU ARE RECOMMENDING PER

YOUR STUDY?

A. All data utilized in the course of the study were obtained from the Company's books and records. The historical data reviewed (additions, retirements, adjustments, and balances) were obtained for each depreciable property group.

Q. ARE THERE VARIOUS DEPRECIATION METHODS, PROCEDURES, AND TECHNIQUES WHICH CAN BE UTILIZED TO RECOVER THE COST OF A COMPANY'S PROPERTY INVESTMENT?

A. Yes. There are numerous methods, procedures, and techniques utilized to recover property investment. For example, accelerated methods such as double declining balance and sum of years digits are methods used in tax accounting to motivate additional investments. By comparison, the Straight Line depreciation method is commonly utilized for capital recovery and rate making. The Broad Group Average Service Life (ASL), and Equal Life Group (ELG) are grouping procedures. The Whole Life (WL) and Average Remaining Life (ARL) are two techniques that can be utilized with the Straight Line depreciation procedures and are recognized and utilized by various regulatory jurisdictions depending upon the policy of the specific agency.

Q. WHAT METHOD, PROCEDURE, AND TECHNIQUE DID YOU UTILIZE TO

DEVELOP THE DEPRECIATION RATES FOR THE COMPANY'S PROPERTY RECOMMENDED IN YOUR STUDY?

A. The basis utilized in developing depreciation rates, per my exhibit, are consistent with the Company's current approach and the telecommunications industry in general. The depreciation rates set forth in Exhibit EMR-1 are based upon the Straight Line Method, a composite of the Board Group (BG) and Equal Life Group (ELG) Procedure, and the Remaining Life Technique. The composite BG/ELG procedure is based upon the application of Broad Group for vintages through 1986 and the use of ELG recovery for vintages 1987 and subsequent.

Q. WOULD YOU PLEASE PROVIDE AN EXPLANATION OF THE BOARD GROUP AND EQUAL LIFE GROUP PROCEDURE APPLICATIONS?

A. Group depreciation procedures are utilized to depreciate property when more than one item of property is being depreciated. Such a procedure is appropriate because all of the items within a specific group typically do not have identical service lives, but have lives which are dispersed over a range of time. Utilizing a group depreciation procedure allows for a condensed application of depreciation rates to groups of similar property in lieu of extensive depreciation calculations on an item by item basis. The two more common group depreciation

procedures are the Broad Group (BG) and Equal Life Group (ELG) approach.

In developing depreciation rates using the Broad Group procedure, the annual depreciation rate is based on the average of the overall group, which is then applied to the group's surviving original cost investment. A characteristic of this procedure is that retirements of individual units occurring prior to average service life will be under depreciated, while individual units retired after average service life will be over depreciated when removed from service, but overall, the group investment will achieve full recovery by the end of the life of the total property group. That is, the under recovery occurring early in the life of the account is balanced by the over recovery occurring subsequent to average service life. In summary, the cost of the investment is complete at the end of the property's life cycle, but the rate of recovery does not match the consumption pattern which was used to provide service to the company's customers.

In the Equal Life Group, the property group is subdivided, through the use of plant life tables, into equal life groups. In each equal life group, portions of the overall property group includes that portion which experiences the life of the specific sub-group. The

relative size of each sub-group is determined from the overall group life characteristic (property dispersion curve). This procedure both overcomes the disadvantage of voluminous record requirements of unit depreciation, as well as eliminates the need to base depreciation on overall lives as required under the Broad Group procedure. The application of this procedure results in each sub-group of the property having a single life. In this procedure, the full cost of short-lived units is accrued during their lives leaving no under-accruals to be recovered by over-accruals on long lived plant. The annual depreciation for the group is the summation of the depreciation accruals based on the service life of each Equal Life Group.

The ELG Procedure is superior to the BG Procedure because it allocates the capital cost of a group property to annual expense in accordance with the consumption of the property group providing service to customers. In this regard, the company's customers are more appropriately charged with the cost of the property consumed in providing them service during the applicable service period. The more timely return of plant cost is accomplished by fully accruing each unit's cost during its service life, thereby, not only reducing the risk of

incomplete cost recovery, but also the procedure results in less return on rate base over the life of a depreciable group. The total depreciation expense is the same for all procedures which allocate the full capital cost to expense, but at any specific point in time, the depreciated original cost is less under the ELG procedure than under the BG procedure. This circumstance exists because under the ELG procedure, the rate base is not maintained at a level of greater than the future service value of the surviving plant as is the case when using the average service life procedure. Consequently, the total return required from the ratepayers is less under the ELG procedure.

Q. WHY DID YOU USE THE REMAINING LIFE TECHNIQUE?

A. I recommend the continued utilization of the Remaining Life technique because it better assures full recovery of the Company's plant investment than afforded by the Whole Life technique. This was also the technique utilized in developing the current depreciation rates. The difference between the two (2) techniques (Whole Life and Remaining Life) is the fact that the Remaining Life technique gives consideration to the level of depreciation which has been accrued to date in developing the proposed depreciation rate. By comparison, the Whole

Life depreciation technique gives no consideration to past depreciation accruals in developing depreciation rates thereby exposing the utility to a far greater risk of under-recovery of plant investment either due to the early retirement of property prior to the end of the estimated useful service life, or as a result of the declining average service lives. The Average Remaining Life technique is commonly used by regulated companies and regulatory agencies because it allows full recovery by the end of the property's useful life -- no more and no less. The Average Remaining Life technique is widely used by the telecommunications, gas, water, and electric industries throughout the nation as a basis for developing annual depreciation rates principally because it better incorporates into the depreciation rate all the factors affecting the recovery of the Company's investment in plant than the Whole Life technique.

Q. WHAT FACTORS INFLUENCE THE DETERMINATION OF THE RECOMMENDED ANNUAL DEPRECIATION RATES WHEN UTILIZING AVERAGE REMAINING LIFE DEPRECIATION?

A. Average Remaining Life Depreciation Rates reflect four (4) principal factors, namely the plant in service by vintage, the book depreciation reserve, the future net salvage, and the composite remaining life from the

property group.

However, within the Commonwealth of Pennsylvania, consistent with Commission policy and practice, prospective net salvage factors are not included as an integral part of the annual depreciation rate or expense for rate-making purposes. The standard practice is to include an amount for net salvage based upon the actual experienced five year rolling average.

Related factors to be considered in arriving at the service life are the average age, realized life and future life expectancy. The net salvage estimate is normally influenced by both past experience and future estimates of cost of removal and gross salvage amounts.

Q. WOULD YOU PLEASE EXPLAIN THE PRINCIPAL ASSUMPTIONS CONSIDERED WHEN UTILIZING AVERAGE REMAINING LIFE DEPRECIATION?

A. Through the utilization of Remaining Life depreciation, the Company will recover the undepreciated fixed capital investment as equal amounts of annual depreciation expense in each year throughout the remaining life of the property. The Remaining Life Technique incorporates the future life expectancy of the property, the vintaged surviving plant in service, together with the book depreciation reserve balance in developing the

depreciation accrual and rate for each property account. Accordingly, Average Remaining Life depreciation meets the objective of providing a Straight Line recovery of the undepreciated fixed capital property investment.

As indicated, the use of the Average Remaining Life depreciation results in charging equal annual depreciation amounts over the life of the property. That does not mean that once an Average Remaining Life is estimated it cannot be changed at any point throughout the service life, but that the annual expense is calculated on a Straight Line Method.

Q. IS THE AVERAGE REMAINING LIFE TECHNIQUE A UNIT OR GROUP DEPRECIATION METHOD?

A. The Average Remaining Life Technique is a group method. The "group" refers to the method of calculating annual depreciation on the summation of the investment in any one plant group rather than calculating depreciation for each individual unit. Under this method, using the broad group procedure, some units may be over-depreciated and other units may be under-depreciated at the time when they are retired from service, but overall, the account is fully depreciated when average service life is attained. By comparison, the Equal Life Group depreciation rates are designed to fully accrue the cost

of the asset by the time of the retirement resulting in a far superior matching of recovery of the company's assets to their consumption in providing customer service. As with average service life, in theory, each unit achieves average service life by the time of retirement. For both the Board Group and Equal Life Group procedures, the full cost of the investment is credited to plant in service when the retirement occurs and, likewise, the depreciation reserve is debited with an equal retirement cost. No gain or loss is recognized at the time of property retirement because of the assumption that the retired property was at average service life.

Q. WOULD YOU PLEASE EXPLAIN HOW YOU CALCULATED THE PROPOSED REMAINING LIFE DEPRECIATION RATES?

A. In utilizing Average Remaining Life depreciation, the annual accrual is calculated according to the following formula where, (A) the annual depreciation for each group equals, (D) the depreciable cost of plant, less (U) the accumulated provision for depreciation, divided by (R) the composite remaining life of the group, plus (5 YR) the experienced five year average net salvage:

$$A = \frac{D - U}{R} + 5\ YR$$

The annual accrual rate (a) is expressed as a percentage

of the depreciable plant balance by dividing the equation by (D) the depreciable cost of plant:

$$(a) = \frac{D - U}{R} + 5\ YR + \frac{1}{D} \times 100$$

As indicated by the equation, the accumulated provision for depreciation by vintage is required in order to calculate the remaining life depreciation rate for each property group. In practice, depreciation reserves are not vintaged; therefore, composite remaining lives are determined for each depreciable group.

The remaining life for a depreciable group is calculated by first determining the remaining life for each vintage year in which there is surviving investment. This is accomplished by solving the area under the survivor curve selected to represent the average life and life characteristic of the property group. The remaining life for each vintage is composited by dividing (D) the depreciable cost of each vintage, by (L) its average service life, and multiplying this ratio by its average remaining life (E). The composite remaining life of the group (R) equals the sums of products divided by the sum of the quotients:

$$R\ Group = \frac{\Sigma\ (D/L \times E)}{\Sigma\ (D/L)}$$

The accumulated provision for depreciation, which is required in order to develop the composite average remaining accrual and annual depreciation rate for each property account, is maintained on the Company's books and records on an individual account-level basis.

Q. SHOULD PROSPECTIVE NET SALVAGE FACTORS BE INCLUDED IN THE DETERMINATION OF DEPRECIATION RATES AND HOW ARE THEY DETERMINED?

A. Yes. Net salvage is the difference between gross salvage, or what is received when an asset is disposed of, and the cost of removing it from service. This experience is included with the depreciation rate so that current accounting periods reflect a proportional share of the ultimate abandonment and removal cost or salvage received at the end of the property service life. Net salvage is said to be positive if gross salvage exceeds the cost of removal, but if cost of removal exceeds gross salvage the result is then negative salvage.

The cost of removal includes such costs as demolishing, dismantling, tearing down, disconnecting or otherwise removing plant and related transportation, handling and overheads incurred in connection with the work. Salvage includes proceeds received for the sale of plant and materials or the return of equipment to stores

for reuse.

Net salvage experience is usually studied for a period of years to determine the trends which have occurred in the past. These trends are considered together with any changes that are anticipated in the future to determine the future net salvage factor for remaining life depreciation purposes. The net salvage percentage is determined by relating the total net positive or negative salvage to the book cost of the property investment.

However, within the Commonwealth of Pennsylvania, prospective net salvage factors are not included as an integral part of the annual depreciation rate or expense either for rate-making or accounting purposes. Utilizing a prior Superior Court case as a basis, the policy and practice of the Pennsylvania Public Utility Commission dictates that the salvage components included with the annual depreciation expense for rate-making treatment shall be limited to include an amount for net salvage based on the actual experienced five (5) year rolling average. While this practice is considered totally inappropriate because it defers the recovery of a portion of cost of service (net salvage) to the end of the property's useful service life, only the five (5)

year average amortization of experienced net salvage should be booked. To do otherwise results in accruing depreciation expense to the Company's books which it has not had an opportunity to recover via customer rates. Accordingly, depreciation expense per this report incorporates only an amortization of experienced five (5) year average net salvage.

Because of the Commission's policy and practice in the rate-making process, the Company's book depreciation reserve is being adjusted to eliminate prospective net salvage accrued during the years 1980 to 1992.

Table 8 of Exhibit EMR-1 develops the Company's adjusted book depreciation reserve as of December 31, 1992. This schedule recognized the fact that under Pennsylvania Public Utility Commission rate-making principles and practices, prospective net salvage is not incorporated into depreciation rates when developing the annual depreciation rates. The standard procedure, utilized by this Commission since the early 1970's, has been to utilize only the five-year amortization of experienced net salvage in developing applicable depreciation expense. Since the Company has been accruing prospective net salvage per books over the past thirteen (13) years (1980 to 1992), those amounts have

been identified and eliminated from the Company's book depreciation reserve in developing the depreciation expense and rates, per this study. Conversely, an amount applicable to the rolling five-year average net salvage amortization has been added in developing the adjusted book depreciation reserve as of December 31, 1992.

Q. PLEASE EXPLAIN WHAT FACTORS AFFECT THE LENGTH OF THE AVERAGE SERVICE LIFE THAT THE COMPANY'S PROPERTY MAY ACHIEVE.

A. Several factors contribute to the length of time or average service life which the property achieves. The three major categories under which these factors fall are: (1) physical; (2) functional, and; (3) contingent casualties.

The physical category includes such things as deterioration, wear and tear and the action of the natural elements. The functional category includes inadequacy, obsolescence and requirements of governmental authorities. Obsolescence occurs when it is no longer economically feasible to use the property to provide service to customers or when technological advances have provided a substitute of superior performance. The remaining factor of contingent casualties relates to retirements caused by accidental damage or construction

activity of one type or another.

In performing the life analysis for any property being studied, both past experience and future expectations must be considered in order to fully evaluate the circumstances which may have a bearing on the remaining life of the property. This ensures the selection of an average service life which best represents the expected life of each property investment.

Q. WHAT STUDY PROCEDURES WERE UTILIZED TO DETERMINE DEPRECIATION RATES FOR THE COMPANY'S PROPERTY?

A. Several study procedures were used to determine the prospective service lives recommended for Commonwealth Telephone's Company's plant in service. These include the review and analysis of historical, as well as anticipated retirements, current and future construction technology.

Service lives are affected by many different factors, some of which can be obtained from studying past experience, others may rely heavily on future expectations. When physical aspects are the controlling factor in determining the service life of property, historical experience is a useful tool in selecting service lives. In the cases where there are changes in technology, regulatory requirement, Company policy or a

less costly alternative develops, then historical experience is of lesser or little value. However, even in considering physical factors, the future lives of various properties may vary from that experienced in the recent past.

While various methods are available to study historical data, the principal methods utilized to determine average service lives for a Company's property are the Retirement Rate Method, the Simulated Plant Record Method, and the Life Span Method.

Q. PLEASE EXPLAIN THE USE OF THE RETIREMENT RATE METHOD.

A. In this method of analysis, the Company's actuarial service life data, which is identified by age, is used to develop a survivor curve (observed life table). This survivor curve is the basis upon which smooth curves are fitted to subsequently determine the average service life being experienced by the account under study. Computer processing provides the opportunity to review various experience bands throughout the life of the account to observe trends and changes. For each experience band analysis, an "observed life table" is constructed using the exposure and retirement experience within the selected band of years. In some cases, the total life cycle of the property has not been achieved and the

experienced life table, when plotted, results in a "stub curve." It is this "stub curve" or total life curve, if achieved, which is matched or fitted to the standard Iowa curves. The matching process is performed both by computer analysis, using a least squares technique, and by plotting the observed life tables to the selected smooth curves for visual reference. The fitted smooth curve provides the basis to determine the average service life of the property group under study.

Q. HOW IS THE SIMULATED PLANT RECORD METHOD UTILIZED TO DETERMINE THE AVERAGE SERVICE LIFE OF PROPERTY?

A. In this method of analysis, which is a semi-actuarial method, simulated surviving balances are determined for each year included in the test band by multiplying each preceding year's original gross additions installed by the Company by the appropriate factor of each Iowa Curve, summing the products, and comparing the results with the related year end plant balance to determine the "best fitting" curve and life within the test period. Various test bands are reviewed to determine trends or changes to indicated service lives in various bands of years. By definition, the curve with the "best fit" is the curve which produces simulated plant balances that most closely matches the actual plant balances as determined by the

sum of the "least squares." The sum of the "least squares" is arrived at by starting with the difference between the simulated balances and the actual balance for a given year, squaring the difference, and the curve which produces the smallest sum (of squared difference) is judged to be the "best fit."

Q. PLEASE EXPLAIN THE USE OF THE FORECAST METHOD.

A. The Forecast of Life-Span Method is an additional method used to study various accounts in which the expected retirement dates of specific property or locations can be reasonably estimated. In the Forecast Method, an estimated probable retirement year is determined for each location of the property group. An example of this would be the Company's Central Office Switching account investment in which the various segments of the account are "life-spanned" to a probable retirement date which is determined after considering a number of factors, such as management plans, industry standards, the original construction date, subsequent additions, resultant average age and the current as well as the overall expected service life of the property being studied. If in the past, the property has experienced interim retirements, these are analyzed and interim retirement life characteristics are estimated to represent the level

of interim retirements which are anticipated to occur between the study date and the date at which the property is anticipated to be retired from service. The selected Iowa curve, is then applied to the Company's vintage investment and probable retirement year for each property location to determine the average remaining life of the property group. The Forecast Method is used in the same manner for property which does not have interim retirements, except that an interim retirement curve is not used.

Q. HAVE YOU PROVIDED ANY CHARTS, ETC. IN EXHIBIT EMR-1 WHICH COMPARE THE ANALYSIS OF THE COMPANY'S ACTUAL HISTORICAL DATA TO THE SERVICE LIFE PARAMETERS YOU ARE PROPOSING AS A BASIS FOR YOUR RECOMMENDED ANNUAL DEPRECIATION RATES?

A. Yes, for accounts where actuarial data was available and the retirement rate method was used for analysis, plottings of the resulting observed life tables and the selected Iowa curves are included. Those comparisons are provided in Section 5 of Exhibit EMR-1.

Q. IN DESCRIBING THE RETIREMENT RATE METHOD, SIMULATED PLANT RECORD, AND THE FORECAST METHOD OF SERVICE LIFE ANALYSIS, YOU REFERRED TO THE USE OF THE IOWA OR SMOOTH SURVIVOR CURVES. COULD YOU GENERALLY DESCRIBE THE CURVES AND THE PURPOSE FOR THEIR USE?

A. The preparation of a depreciation study or theoretical depreciation reserve typically incorporates smooth curves to represent the experienced or estimated survival characteristics of the property. The "smoothed" or standard survivor curves generally used are the "Iowa" family of curves developed at Iowa State University which are widely used and accepted throughout the utility industry. The shape of the curves within the Iowa family are dependent upon whether the maximum rate of retirement occurs before, during or after the average service life. If the maximum retirement rate occurs earlier in life, it is a left (L) mode curve; if occurring at average life, it is a symmetrical (S) mode curve; if it occurs after average life, it is a right (R) mode curve. In addition, there is the origin (O) mode curve for plant which has heavy retirements at the beginning of life.

Many times, actual Company data have not completed their life cycle; therefore, the survivor table generated from the Company is not complete. This situation requires an estimate be made with regard to the incomplete segment of the property group's life experience. Further, actual Company experience is often erratic, making its utilization for average service estimation difficult. Accordingly, the Iowa curves are

used to both extend Company experience to zero percent surviving, as well as to smooth actual Company data.

Q. WOULD YOU PROVIDE AN EXPLANATION OF THE SUMMARY TABLES INCLUDED IN SECTION 2 OF YOUR EXHIBIT EMR-1?

A. Yes, Table 1 on pages 2-1 through 2-3 contains the Company's estimated plant in service and depreciation reserve at December 31, 1993. The schedule develops annual depreciation expense and rates at the future test year level based upon utilizing the recommended service life parameters (average service lives and Iowa curves) developed per this study. The annual depreciation expense is based upon the recovery of the undepreciated plant in service over the remaining productive life, together with the applicable net salvage amortization for each of the Company's asset groups. The depreciation expense for each individual asset is then summed to arrive at the total December 31, 1993 depreciation expense of $27,889,271 which results in a composite annual depreciation rate of 7.33 percent.

Table 2 on pages 2-4 through 2-6 develops the Company's account-level utility plant in service as of December 31, 1993, together with the estimated 1993 depreciation expense to be charged to the Company's books. The schedule includes the Company's December 31,

1992 utility plant in service obtained from the Company's books and records, and adds the 1993 budgeted additions and retirements to arrive at the December 31, 1993 balances. The schedule further develops the average 1993 plant in service for each property account which is multiplied by the December 31, 1992 annual depreciation rate to determine the estimated level of depreciation expense which will be accrued to the Company's books during 1993.

Table 3 on pages 2-7 through 2-9 develops corresponding estimated book depreciation reserve as of December 31, 1993. The December 31, 1993 estimated depreciation reserve is developed on an individual account-level basis by starting with the adjusted December 31, 1992 depreciation reserve, adding the proforma 1993 depreciation expense and the level of net salvage estimated to be experienced during 1993. Amounts deducted from the December 31, 1992 depreciation reserve include the projected 1993 retirements and the five-year average net salvage amortization amount. The December 31, 1993 depreciation reserve is representative of the level of capital recovery the Company is expected to achieve by that date.

Table 4 on page 2-10 and 2-11 is a comparative

summary which illustrates the effect of instituting the revised proposed depreciation rates. The schedule includes a comparison of the annual depreciation rates and annual depreciation expense under both present and proposed rates applied using the Straight Line Method for each depreciable property group of the Company's plant in service as of December 31, 1992. Both the present and proposed depreciation rates are based upon a composite of the Broad Group Procedure through vintages 1986 with a switch to the Equal Life Group Procedure for vintages 1987 and subsequent years using the Average Remaining Life (ARL) depreciation technique.

Table 5 on pages 2-12 through 2-14 provides a summary of the detailed life estimates and service life parameters (Iowa Curves) utilized in preparing the Average Remaining Life depreciation rates for each property group. That is, the schedule provides a summary of the detailed data and a narrative of the study results set forth in Section 4. The developed depreciation rates (Column L) were determined by studying the Company's historical investment data together with the interpretation of future life expectancies which will have a bearing on the overall service life of the Company's property. Included in Column L of Table 2 is a

calculation of the annual depreciation rates weighted to include the amortization of five (5) year average net salvage. The use of the salvage adjusted book depreciation rates will eliminate the need to book separate journal entries for the purpose of amortizing experienced net salvage.

Table 6 on page 2-15 through 2-17 reconciles the plant in service utilized per the depreciation study to the Company's plant in service per its books and records as of December 31, 1992. The original cost per the depreciation study totals to an amount of $354,127,996.

Table 7 on pages 2-18 to 2-19 summarizes the Company's experienced account-level net salvage (gross salvage less cost of removal) for the years 1986-1992. This schedule develops the five-year average net salvage amortization which is incorporated into the proposed depreciation rates on Tables 4 and 5. Furthermore, the schedule develops estimated 1993 net salvage along with the five year average net salvage during the period 1987-1993.

Table 8 on pages 2-20 and 2-21 of Exhibit EMR-1 develops the Company's adjusted book depreciation reserve as of December 31, 1992. This schedule recognized the fact that under Pennsylvania Public Utility Commission

rate making principles and practices, prospective net salvage is not incorporated into depreciation rates when developing the annual depreciation rates. The standard procedure, adopted by this Commission since the early 1970's, has been to utilize only the five-year amortization of experienced net salvage in developing applicable depreciation expense. Since the Company has been accruing prospective net salvage per books over the past thirteen (13) years (1980 to 1992), those amounts have been identified and eliminated from the Company's book depreciation reserve in developing the depreciation expense and rates, per this study. Conversely, an amount applicable to the rolling five-year average net salvage amortization has been added in developing the adjusted book depreciation reserve as of December 31, 1992.

Q. WHAT ARE THE MOST NOTABLE CHANGES IN ANNUAL DEPRECIATION EXPENSE AND RATES, AS SET FORTH IN YOUR EXHIBIT EMR-1?

A. The most notable changes in depreciation expense resulting from the study are related to six (6) individual accounts. Those changes include an increase in depreciation expense for Account 211200 - Motor Vehicles from 6.71 percent to 11.45 percent reflecting the current utilization of a ten (10) year service life for this property group; a decrease in Account 221210 -

Digital C O Equipment from 10.25 percent to 9.53 percent. The resulting rate for this account reflects the Company's current conversion plans and its recent experienced level of interim retirements. The Company depreciation rate for Account 221240 - Remote Equipment increased from 9.24 percent to 10.34 percent which reflects the Company's continued aggressive effort to provide the most current switching capability to its diverse and highly dispersed customer base. The proposed depreciation rate reflects prospective network plans along with estimates of interim retirements based upon recent experience.

The depreciation rate for Account 223123 - Analog Terrestrial Microwave increased to 17.51 percent to reflect the utilization of a 10 year average service life for this obsolete equipment category for which the unrecovered original cost as a percentage of original cost is relatively high.

The depreciation rate for Account 223252 - Digital Carrier - Subscriber increased from 11.33 percent to 29.08 percent in recognition of the fact that this class of property which is currently experiencing a six year average service life is principally utilized as a temporary construction media until cable facilities can

be constructed to serve customers.

The depreciation rate for Account 242151 - Aerial Cable - Metallic increased from 4.45 percent to 5.23 percent. The proposed depreciation rate is based upon the current life being experienced by the Company's property together with consideration of the fact that the overall life of the Company's copper based facilities will be dramatically impacted through the ongoing migration to fiber-based facilities.

Likewise, the Company's depreciation rate for Account 242351 - Buried Cable - Metallic increased from 4.16 percent to 4.89 percent in recognition of the current life being experienced by this property class. Similar to Aerial Metallic Cable the useful life of this property category will also be impacted in future years through the migration of services from copper-based to fiber-based facilities.

Q. WHAT IS THE BASIS OF THE COMPANY'S CURRENT DEPRECIATION?

A. The Company's current account level depreciation rates composite to an annual depreciation rate of 6.55 percent when applied to the December 31, 1992 account balances. The resulting total annualized depreciation expense under current depreciation rates aggregate $23,077,292.

Q. WHAT IS YOUR PROPOSED ANNUAL DEPRECIATION EXPENSE

COMPOSITE RATE OF DEPRECIATION?

A. The annual depreciation expense for the Company's (historic) December 31, 1992 plant in service as set forth on Table 5, page 2-14 totals $25,733,458, which results in a composite depreciation rate of 7.30 percent, while the projected annual depreciation expense for the Company's (future) December 31, 1993 plant in service as set forth on Table 1 on page 2-3 of Exhibit EMR-1 totals $27,889,271 which results in a composite depreciation rate of 7.33 percent.

Q. WHAT IS THE NET UTILITY PLANT IN SERVICE FOR THE DECEMBER 31, 1992 (HISTORIC) AND DECEMBER 31, 1993 (FUTURE) TEST YEARS?

A. The depreciated utility plant in service as of December 31, 1992, as set forth on Table 5 page 2-14 of Exhibit EMR-1, totals $225,179,097 while the December 31, 1993 depreciated plant in service, as set forth on Table 1 page 1-3, totals $240,292,816.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

APPENDIX "A"

AUS CONSULTANTS
WEBER FICK & WILSON DIVISION

PROFESSIONAL QUALIFICATIONS OF EARL M. ROBINSON

Has more than 25 years' experience in the public utility field. Has performed services in the areas of depreciation, original cost, valuation, cost of service and bill analysis for various regulatory jurisdictions throughout the Eastern, Midwestern, and Southwestern sections of the United States and the Caribbean.

EXPERIENCE

1977 to Date

AUS Consultants - Weber Fick & Wilson Division, Wormleysburg, Pennsylvania, President. Has prepared studies and coordinated analysis related to valuation, depreciation, original cost, trended original cost, cost of service, bill analysis, as well as analysis of expenses, revenues and income for various municipal and investor-owned utilities.

Studies prepared have required the review of company records, inspection of property, the preparation of property inventories and original costs, preparation and review of mortality studies, selection of proper service lives, life characteristics and analysis of salvage, and analysis of capital recovery impact of changing depreciation methods. In conjunction with depreciation and valuation projects, has testified before numerous regulatory agencies, plus has negotiated depreciation rates with various state regulatory agencies, the FCC Staff, and the FERC Staff. Mr. Robinson has also participated in several FCC, State, Company three-way depreciation represcription meetings.

Other areas of responsibilities have included the preparation and selection of indices, development of rate base elements, development of data for cost of service studies and the testing of consumption and revenue data in the preparation of bill analysis. Mr. Robinson is also responsible for the preparation of the C.A. Turner Telephone Plant Index.

1975 to 1977

Gannett, Fleming, Cordry & Carpenter, Inc. Valuation Analyst in the Valuation Division where his duties and responsibilities included the classifications, analysis and coordination of data in the development of depreciation rates for various companies including telephone, gas, water and electric utilities.

1971 to 1975

Weber, Fick & Wilson, Inc., Public Utility Analyst engaged in the unitization and subsequent application of costs in the pricing of inventories for original cost determination, depreciation and salvage studies to determine proper annual depreciation rates and trended original cost studies used in the determination of utility rate base.

1966 to 1971

United Telephone Company of Pennsylvania (a subsidiary of United Telephone Communications, Inc.). As a staff member of the Plant Accounting Department, his duties and responsibilities included various plant accounting ledgers, unitization of location and mass property accounts, as well as special studies related to insurance and tax valuations of utility plant in service.

TESTIMONY

Jurisdictions testified in include Arizona, California, Connecticut, Delaware, District of Columbia, Illinois, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, North Carolina, South Carolina, and Virgin Islands.

PERSONAL

Education:

Graduate of Harrisburg Area Community College with an Associate of Arts Degree in Accounting, and has undertaken further studies at University Center of Harrisburg. Successfully completed various programs related to service life and salvage estimation, forecasting, and evaluation sponsored by Depreciation Programs, Inc. at Calvin College Campus, Grand Rapids, Michigan. In addition, successfully completed cost of service seminars sponsored by the American Water Works Association.

List of Clients Served

CATV

Storer Broadcasting Company
(DE, MD, MN)

Cable Television Consortium

ELECTRIC

Borough of Butler - Electric Dept.
Consolidated Hydro, Inc.
Duquesne Light Company
Hershey Electric Company
Lockhart Power Company
Nantahala Power and Light Company
Pennsylvania Power Company
Potomac Electric Power Company

GAS

Atlanta Gas Light Company
Bay State Gas Company
Citizens Gas & Coke Utility
Columbia Gas of Pennsylvania, Inc.
East Ohio Gas
Elkton Gas Service
Granite State Gas Transmission, Inc.
National Fuel Gas Distr. Corp., NY
National Fuel Gas Supply
Northern Carolina Gas Service
North Penn Gas
Northern Utilities, Inc.-Maine
Northern Utilities, Inc.-New Hampshire
Pennsylvania Gas and Water Company
Pennsylvania and Southern Gas Company
  Valley Cities Division
  Waverly Division
Providence Gas Company
Saxonburg Heat & Light Company
Southern Connecticut Gas Company
T.W. Phillips Gas & Oil Company

REGULATORY AND GOVERNMENTAL

Arizona Corporation Commission
  Mountain States Telephone & Telegraph
  Southwest Gas Corporation
Delaware Public Service Commission
  Diamond State Telephone Company
Delaware River Port Authority
Kansas Corporation Commission
  Southwest Bell
Public Service Comm. of Nevada
  Nevada Bell
Washington, D.C. - PSC
  C&P Telephone Company
  Potomac Electric Power Company
City of New Orleans, LA

TELECOMMUNICATIONS

Ace Telephone Association - IA & MN
ALLTEL Pennsylvania, Inc.
Buffalo Valley Telephone Company
Chenango & Unadilla Telephone Company
Commonwealth Telephone Company
CTC of Michigan
CTC of Virginia
Denver & Ephrata Telephone and
  Telegraph Company
Empire Telephone Corporation
Illinois Consolidated Telephone Co.
Jamestown Telephone Corporation
Leesport Telephone Company
Lewisberry Telephone Company
MCI International, Inc.
MCI Telecommunications Corp.
Marianna & Scenery Hill Tel. Co.
Mid State Telephone Company
Motorola, Inc.
New Jersey Telephone Company
The North-Eastern Pennsylvania Tel. Co.
Quaker State Telephone Company
RCA Global Communications, Inc.
Standard Telephone Company
Telecommunications d'Haiti
Telephone Utilities of Pennsylvania
United Telephone Company of New Jersey
Virgin Islands Telephone Corporation

WATER

Artesian Water Company
City of Auburn
Bethlehem Authority - Water
Clinton Water Company
Commonwealth Water Company
Dauphin Consolidated Water Supply Co.
City of Fairfax
Garden State Water Company
Hackensack Water Company
Hershey Water Company
Keystone Water Company
Manufacturers Water Company
Masury Water Company
Middlesex Water Company
Monmouth Consolidated Water Company
New Haven Water Company
New Jersey Water Company
Newtown Artesian Water Company
New York-American Water Company
Palm Coast Utility Corporation
Pennichuck Water Works
Pennsylvania-American Water Company
Pennsylvania Gas and Water Company
Pennsylvania Water Company
Erie & Sayre Divisions
Philadelphia Suburban Water Company
Riverton Consolidated Water Company
Rock Springs Water Company
Shenango Valley Water
Spring Valley Water Company
The Elizabethville Water Company
The Roaring Creek Water Company
The York Water Company
Tidewater Utilities, Inc.
Western Pennsylvania Water Company
Rock Springs Water Company

WASTEWATER

New Jersey Water Company
Sewer Districts
Palm Coast Utility Corporation

PROFESSIONAL AFFILIATIONS

American Water Works Association
American Gas Association
Pennsylvania Gas Association
Pennsylvania Municipal Authorities Association
Member AGA Depreciation Committee (Chairman of Statistics, Bibliography, Court and Regulatory Sub-Committee)
Founding Member/Society of Depreciation Professionals (Chairman Membership Committee)

PUBLICATIONS

AGA/EEI Depreciation Accounting Committee, Contributing Author 1989, "An Introduction to Net Salvage of Public Utility Plant"

EARL M. ROBINSON
SUMMARY OF TESTIMONY

Jurisdiction	Client	Docket	Subject
Arizona	Corp. Comm./ Mtn. Bell	9981-E-1051	RCN/RCND *
	Arizona Corp. Comm./ Southwest Gas Corp.	U-1551-80-70	RCN/RCND *
California (State Board of Equalization)	MCI Telecommunications Corporation	274	Replacement Cost/ Depr. Repl. Cost
		SAU87-38	Replacement Cost/ Depr. Repl. Cost
		SAU91-101	Replacement Cost/ Depr. Repl. Cost
Connecticut	Southern Connecticut Gas Co.	89-09-06	P.I.S. Measures of Value and Depreciaton
Delaware	Artesian Water Company	82-20	Depreciation
		87-3	Depreciation
	Delaware Public Service Comm./ Diamond State Telephone Co.	81-8	P.I.S. Measures of Value and Depreciation
District of Columbia	Potomac Electric Power Co.	F.C. 869	Depreciation
	Washington, DC PC/ C&P Tel. Corp.	F.C. 777	Depreciation
	Washington, DC PC/ Potomac Electric Power Co.	F.C. 785	Capital Recovery/ Depreciation
		F.C. 813	
FERC	Granite State Gas Transmission, Inc.	RP91-164-000	Depreciation
Illinois	Consolidated Telephone Co.	81-0264	RCN/RCND *
		82-0623	RCN/RCND *
Massachusetts	Bay State Gas Company	92-111	Depreciation

EARL M. ROBINSON
SUMMARY OF TESTIMONY

Jurisdictions	Client	Docket	Subject
New Jersey	Borough of Butler/ Butler Elec. Dept.	792-84	Valuation of Plant in Service Customer Revenue and Purchase Power
	Commonwealth Water Co.	842-100	Depreciation
	Garden State Water Co.	WR91091483	Depreciation
	Hackensack Water Co.	8506-663 WR90080792J	Depreciation Depreciation
	Middlesex Water Company	WR8602-240 WR90080884J	Depreciation Depreciation
	Monmouth Consolidated Water Co.	8312-1113	Depreciation
	New Jersey Water Company	834-292	Depreciation
New Hampshire	Northern Utilities, Inc.	DR91-081	Depreciation
New York	New York-American Water Co.	28911	Depreciation
	Spring Valley Water Co., Inc.	89-W-1151 92-W-0645	Depreciation Depreciation
North Carolina	Nantahala Power and Light Co.	E-13, SUB157	Depreciation
Pennsylvania	Borough of Media Water Works	R-912150	Depreciation
	Columbia Gas of Penna.	R-80031129	Depreciation and Valuation
	Keystone Water Company	R-842755 R-842756 R-842759	Capital Recovery/Depreciation Capital Recovery/Depreciation Capital Recovery/Depreciation
	Mid Penn Tel. Corp.	R-80071264	Depreciation
	Penna.-American Water Co.	R-891208	Depreciation
	Penna. Gas & Water Co. - Gas Division	R-821961 R-832475	Depreciation Depreciation

EARL M. ROBINSON
SUMMARY OF TESTIMONY

Jurisdictions	Client	Docket	Subject
	Penna. Gas & Water Co. - Water Division	R-822102	Depreciation
		R-850178	Capital Recovery/Depreciation
		R-870853	Capital Recovery/Depreciation
	Penna. Gas & Water Co. - Scranton Division	R-901726	PIS Meas. of Value/Depreciation
	Penna. Gas & Water Co. - Spring Brook Division	R-911966	PIS Meas. of Value/Depreciation
	Nesbitt Service Area Crystal Lake Service Area	R-922404	PIS Meas. of Value/Depreciation
	Penna. Power Company	R-811510	PIS Meas. of Value/Depreciation
		R-821918	PIS Meas. of Value/Depreciation
		R-832409	PIS Meas. of Value/Depreciation
		R-842740	PIS Meas. of Value/Depreciation
		R-850267	PIS Meas. of Value/Depreciation
		R-870732	PIS Meas. of Value/Depreciation
	Pennsylvania & Southern Gas Company	R-870686	Depreciation
	Philadelphia Suburban Water Company	R-911892	Depreciation
	Riverton Consolidated Water Co.	R-842675	Capital Recovery/Depreciation
	Western Pennsylvania Water Company	R-842621	Capital Recovery/Depreciation
		R-842622	Capital Recovery/Depreciation
		R-842623	Capital Recovery/Depreciation
		R-842624	Capital Recovery/Depreciation
		R-842625	Capital Recovery/Depreciation
Rhode Island	Providence Gas Company	1914	Depreciation
South Carolina	Lockhart Power Company	87-435-E	Depreciation
Virgin Islands	Virgin Islands Tel. Corp.	264	Depreciation
		314	Depreciation
		316	Depreciation

* Reproduction Cost New/Reproduction Cost New Depreciated.

COMMONWEALTH TELEPHONE COMPANY

Exh EMR-1

Depreciation Study
as of
December 31, 1992
and
December 31, 1993

I-00920020 7/1/93 Hbg fax

Earl M. Robinson
President

AUS CONSULTANTS
Utility Services Group
Weber Fick & Wilson Division
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Wormleysburg, PA. 17043
(717) 763-9890
FAX (717) 763-9931

April 20, 1993

Mr. Donald P. Cawley, Controller
Commonwealth Telephone Company
P.O. Box 1000
100 Lake Street
Dallas, PA 18612

Dear Mr. Cawley:

In accordance with your authorization, we have reviewed Commonwealth Telephone Company's (the Company) depreciation data base and various engineering schedules as well as the Company's plant in service policies. Subsequent to the review and analysis and discussions with the Company's engineering staff, we have prepared the accompanying exhibits containing our recommended service lives and resulting depreciation rates relative to the Company's plant in service as of December 31, 1992. Furthermore, we have utilized the results of our study, together with the Company's 1993 projected capital budgets to develop plant in service, depreciation reserve balances, and resulting depreciation expense and rates at December 31, 1993. Our findings and recommendations, together with supporting schedules and exhibits, are set forth in the accompanying report.

Summary schedules have been prepared to illustrate the impact of instituting the recommended annual depreciation rates as a basis for the Company's annual depreciation expense as compared to the rates presently utilized. The application of the present depreciation rates to the depreciable plant in service as of December 31, 1992 results in an annual depreciation expense of $23,077,292 and a composite depreciation rate of 6.55 percent. By comparison, the application of the proposed depreciation rates to the depreciable plant in service at December 31, 1992 (per Table 5) results in an annual depreciation expense of $25,733,458 and a composite rate of 7.30 percent. Further, the application of the applicable service life parameters to the Company's December 31, 1993 (per Table 1) plant in service produces annual depreciation expense of $27,889,271 which composites to 7.33 percent.

Section 2 of our report contains the summary schedules showing the results of the service life study analysis, as well as various summaries which develop the related plant in service, depreciation reserve and depreciation expense amounts and rates. The subsequent sections of the report present a detailed outline of the methodology and procedures used in the study together with supporting calculations and analyses used in the development of the results. A detailed table of contents follows this letter.

Respectfully submitted,

EARL M. ROBINSON

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COMMONWEALTH TELEPHONE COMPANY

EXECUTIVE SUMMARY

The following schedules summarize the results of our depreciation study and the development of the net plant in service, depreciation expense and depreciation rates at the Company's December 31, 1992 (historic) and December 31, 1993 (future) test years.

Table 1 on pages 2-1 through 2-3 contains the Company's estimated plant in service and depreciation reserve at December 31, 1993. The schedule develops annual depreciation expense and rates at the future test year level based upon utilizing the recommended service life parameters (average service lives and Iowa curves) developed per this study. The annual depreciation expense is based upon the recovery of the undepreciated plant in service over the remaining productive life, together with the applicable net salvage amortization for each of the Company's asset groups. The depreciation expense for each individual asset is then summed to arrive at the total December 31, 1993 depreciation expense of $27,889,271 which results in a composite annual depreciation rate of 7.33 percent.

Table 2 on pages 2-4 through 2-6 develops the Company's account-level utility plant in service as of December 31, 1993, together with the estimated 1993 depreciation expense to be charged to the Company's books. The schedule includes the Company's December 31, 1992 utility plant in service obtained from the Company's books and records and adds the 1993 budgeted

additions and retirements to arrive at the December 31, 1993 balances. The schedule further develops the average 1993 plant in service for each property account which is multiplied by the December 31, 1992 annual depreciation rates to determine the estimated level of depreciation expense which will be accrued to the Company's books during 1993.

Table 3 on pages 2-7 through 2-9 develops corresponding estimated book depreciation reserve as of December 31, 1993. The December 31, 1993 estimated depreciation reserve is developed on an individual account-level basis by starting with the adjusted December 31, 1992 depreciation reserve, adding the proforma 1993 depreciation expense and the level of net salvage estimated to be experienced during 1993. Amounts deducted from the December 31, 1992 depreciation reserve include the projected 1993 retirements and the five-year average net salvage amortization amount. The December 31, 1993 depreciation reserve is representative of the level of capital recovery the Company is expected to achieve by that date.

Table 4 on page 2-10 and 2-11 is a comparative summary which illustrates the effect of instituting the revised proposed depreciation rates. The schedule includes a comparison of the annual depreciation rates and annual depreciation expense under both present and proposed rates applied using the Straight Line Method for each depreciable property group of the Company's plant in service as of December 31, 1992. Both the present and proposed depreciation rates are based upon a composite of the

Broad Group Procedure through vintages 1986 with a switch to the Equal Life Group Procedure for vintages 1987 and subsequent years using the Average Remaining Life (ARL) depreciation technique.

Table 5 on pages 2-12 through 2-14 provides a summary of the detailed life estimates and service life parameters (Iowa Curves) utilized in preparing the Average Remaining Life depreciation rates for each property group. That is, the schedule provides a summary of the detailed data and a narrative of the study results set forth in Section 4. The developed depreciation rates (Column L) were determined by studying the Company's historical investment data together with the interpretation of future life expectancies which will have a bearing on the overall service life of the Company's property. Included in Column L of Table 2 is a calculation of the annual depreciation rates weighted to include the amortization of five (5) year average net salvage. The use of the salvage adjusted book depreciation rates will eliminate the need to book separate journal entries for the purpose of amortizing experienced net salvage.

Table 6 on page 2-15 through 2-17 reconciles the plant in service utilized per the depreciation study to the Company's plant in service per its books and records as of December 31, 1992. The original cost per the depreciation study totals to an amount of $354,127,996.

Table 7 on pages 2-18 to 2-19 summarizes the Company's experienced account-level net salvage (gross salvage less cost of removal) for the years 1986-1992. This schedule develops the

five-year average net salvage amortization which is incorporated into the proposed depreciation rates on Tables 4 and 5. Furthermore, the schedule develops estimated 1993 net salvage along with the five year average net salvage during the period 1987-1993.

Table 8 of Exhibit EMR-1 on page 2-20 and 2-21 develops the Company's adjusted book depreciation reserve as of December 31, 1992. This schedule recognizes the fact that under Pennsylvania Public Utility Commission rate making principles and practices, prospective net salvage is not incorporated into depreciation rates when developing the annual depreciation rates. The standard procedure, adopted by this Commission since the early 1970's, has been to utilized only the five-year amortization of experienced net salvage in developing applicable depreciation expense. Since the Company has been accruing prospective net salvage per books over the past thirteen (13) years (1980 to 1992), those amounts have been identified and eliminated from the Company's book depreciation reserve in developing the depreciation expense and rates, per this study. Conversely, an amount applicable to the rolling five-year average net salvage amortization has been added in developing the adjusted book depreciation reserve as of December 31, 1992.

As indicated, both the historic (December 31, 1992) and future (December 31, 1993) depreciation expense and rates have been developed using Straight Line (Board Group/Equal Life Group), Average Remaining Life based depreciation. The

utilization of the recommended depreciation rates based upon the Straight Line Average Remaining Life approach results in the setting of depreciation rates which will continuously true up the Company's level of capital recovery over the life of each asset group. Application of this procedure, which is based upon the current best estimates of service lives together with the Company's plant in service and accrued depreciation, produces annual depreciation rates that will result in the Company recovering 100 percent of its investment -- no more no less.

It is recommended that the Company continue to apply depreciation rates and maintain its book depreciation reserve on an account level basis. This maintenance of the book reserve on an account basis requires both the development of annual depreciation expense and distribution of other reserve account charges to an individual account level. Continuing to maintain the Company's depreciation records in this detail will aid in completing the various rate studies and most importantly, clearly identifies the Company's level of capital recovery relative to each category of plant investment.

It is further recommended that detailed depreciation service life studies be completed on a regularly scheduled basis. The completion of studies at regular intervals will assure that the Company's capital recovery will reflect the Company's most current experience and prospective plans.

The results of this study produced a variety of changes in estimated account level service life parameters; however, a

number of changes were limited in scope resulting in fine tuning of the current service lives and life characteristics. The most significant changes in depreciation expense resulting from this study are related to six individual accounts.

Those changes include an increase in depreciation expense for Account 211200 - Motor Vehicles from 6.71 percent to 11.45 percent reflecting the current utilization of a ten (10) year service life for this property group; a decrease in Account 221210 - Digital C O Equipment from 10.25 percent to 9.53 percent. The resulting rate for this account reflects the Company's current conversion plans and its recent experienced level of interim retirements. The Company depreciation rate for Account 221240 - Remote Equipment increased from 9.24 percent to 10.34 percent which reflects the Company's continued aggressive effort to provide the most current switching capability to its diverse and highly dispersed customer base. The proposed depreciation rate reflects prospective network plans along with estimates of interim retirements based upon recent experience.

The depreciation rate for Account 223123 - Analog Terrestrial Microwave increased to 17.51 percent to reflect the utilization of a 10 year average service life for this obsolete equipment category for which the unrecovered original cost as a percentage of original cost is relatively high.

The depreciation rate for Account 223252 - Digital Carrier - Subscriber increased from 11.33 percent to 29.08 percent in recognition of the fact that this class of property which is

currently experiencing a six year average service life is principally utilized as a temporary construction media until cable facilities can be constructed to serve customers.

The depreciation rate for Account 242151 - Aerial Cable - Metallic increased from 4.45 percent to 5.23 percent. The proposed depreciation rate is based upon the current life being experienced by the Company's property together with consideration of the fact that the overall life of the Company's copper based facilities will be dramatically impacted through the ongoing migration to fiber based facilities.

Likewise, the Company's depreciation rate for Account 242351 - Buried Cable - Metallic increased from 4.16 percent to 4.89 percent in recognition of the current life being experienced by this property class. Similar to Aerial Metallic Cable the useful life of this property category will also be impacted in future years through the migration of services from copper based to fiber based facilities.

A variety of additional changes were incorporated into the service life study for other accounts, some of which increased depreciation expense while others decreased depreciation expense. The net change in annual depreciation expense over present rates is a proposed depreciation expense when applied to utility plant in service as of December 31, 1992, as per Table 4, is an increase of $2,655,540.

In summary, the Company's historical experience, etc., was studied in detail for each depreciable group in the process of

preparing this study. Thus, the resultant proposed depreciation rates should be applied on a similar basis. Accordingly, the following composite summary (per Table 4) is provided for illustrative purposes only as a means to compare the present and proposed composite depreciation rates.

Present Depreciation Rates

Net Depreciable Utility Plant in Service as of December 31, 1992.....	$352,523,177
Annual Depreciation Expense.....	23,077,292
Composite Depreciation Rate.....	6.55%

Proposed Depreciation Rates

Net Depreciable Utility Plant in Service as of December 31, 1992.....	$352,523,177
Annual Depreciation Expense.....	25,732,832
Composite Depreciation Rate.....	7.30%

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1993
AND RELATED ANNUAL DEPRECIATION EXPENSE UNDER PRESENT AND PROPOSED (ELG/ARL) DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/93	BOOK DEPR RESERVE	UNRECOVERED ORIGINAL COST	A.S.L./ SURVIVOR CURVE	AVERAGE REMAINING LIFE	ANNUAL DEPR ACCRUAL	ANNUAL DEPR RATE	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: FIVE YEAR AVERAGE NET SALVAGE	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: TOTAL ANNUAL DEPR ACCRUAL	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: ANNUAL DEPR RATE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
DEPRECIABLE PLANT											
	GENERAL SUPPORT ASSETS										
211200	MOTOR VEHICLES	$8,032,020	$2,451,851	$5,580,169	10-L3	5.40	$1,033,365	12.87%	$41,945	$991,420	12.34%
211500	GARAGE WORK EQUIPMENT	$129,154	$27,810	$101,344	15-S3	11.53	$8,790	6.81%	$0	$8,790	6.81%
211600	OTHER WORK EQUIPMENT	$2,471,882	$1,611,254	$860,628	20-L2	11.38	$75,626	3.06%	$563	$75,063	3.04%
212199	BUILDINGS & (212140)	$25,137,206	$5,439,854	$19,697,352	30-R0.5	17.64	$1,116,630	4.44%	$171,022	$945,608	3.76%
212200	FURNITURE	$1,043,122	$445,303	$597,819	20-R0.5	12.58	$47,521	4.56%	$19,540	$27,981	2.68%
	OFFICE EQUIPMENT										
212311	ELECTRONIC OFFICE EQUIPMENT	$909,482	$466,914	$442,568	7-L2	3.63	$121,920	13.41%	$21,864	$100,056	11.00%
212312	OTHER OFFICE EQUIPMENT	$92,098	$67,228	$24,870	10-R1	3.80	$6,545	7.11%	$2,304	$4,241	4.60%
212320	CO COMMUNICATION EQUIPMENT	$1,380,218	$821,788	$558,430	5-L2	2.92	$191,243	13.86%	$5,250	$185,993	13.48%
	TOTAL ACCT 2123	$2,381,798	$1,355,930	$1,025,868			$319,708	13.42%	$29,418	$290,290	12.19%
212400	GENERAL PURPOSE COMPUTERS	$2,601,004	($106,658)	$2,707,662	6-R5	4.04	$670,213	25.77%	$193,648	$476,565	18.32%
	TOTAL GENERAL SUPPORT ASSETS	$41,796,186	$11,225,344	$30,570,842			$3,271,853	7.83%	$456,136	$2,815,717	6.74%
	CENTRAL OFFICE ASSETS										
	SWITCHING EQUIPMENT										
221110	ANALOG ELECTRONIC SWITCHING - CO	$0	($152,846)	$152,846	**	**	$152,846	**	**	$152,846	**
	DIGITAL ELECTRONIC SWITCHING										
221210	DIGITAL CO EQUIPMENT	$42,899,201	$19,778,416	$23,120,785	*13-L2	5.57	$4,150,949	9.68%	$99,871	$4,051,078	9.44%
221220	SOFTWARE	$2,809,180	$1,705,062	$1,104,118	10-L4	5.36	$205,992	7.33%	($261)	$206,253	7.34%
221230	SPARES - REMOTE	$1,487,184	$523,400	$963,784	11-R3	6.83	$141,110	9.49%	($28)	$141,138	9.49%
221231	SPARES - HOST	$2,235,097	$689,064	$1,546,033	10-S1.5	5.50	$281,097	12.58%	($70)	$281,167	12.58%
221240	REMOTE EQUIPMENT	$56,005,087	$21,584,995	$34,420,092	*15-L2	6.15	$5,596,763	9.99%	$6,154	$5,590,609	9.98%
221250	CENTRALIZED TEST EQUIPMENT	$3,085,185	$1,430,750	$1,654,435	8-L2	4.55	$363,612	11.79%	($35)	$363,647	11.79%
	TOTAL ACCOUNT 2212	$108,520,934	$45,711,687	$62,809,247			$10,739,523	9.90%	$105,631	$10,633,892	9.80%
	ELECTRONIC MECHANICAL SWITCHING										
221510	STEP X STEP EQUIPMENT	$996,537	$978,698	$17,839	**	**	$17,839	**	**	$17,839	**
221520	CROSS BAR EQUIPMENT	$219,708	$201,819	$17,889	**	**	$17,889	**	**	$17,889	**
221530	OTHER MECHANICAL SWITCHING EQUIPMENT	$31,431	$23,900	$7,531	**	**	$7,531	**	**	$7,531	**
	TOTAL ACCOUNT 2215	$1,247,676	$1,204,417	$43,259			$43,259	**	**	$43,259	**
	TOTAL CENTRAL OFFICE SWITCHING	$109,768,610	$46,763,258	$63,005,352			$10,935,628	9.96%	$105,631	$10,829,997	9.87%

* INTERIM SURVIVOR CURVE. LIFSPAN METHOD UTILIZED. SERVICE LIVES VARY. ** TOTAL ANALOG SWITCHING PLANT SCHEDULED FOR RETIREMENT DURING 1993.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1993
AND RELATED ANNUAL DEPRECIATION EXPENSE UNDER PRESENT AND PROPOSED (ELG/ARL) DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/93	BOOK DEPR RESERVE	UNRECOVERED ORIGINAL COST	A.S.L./ SURVIVOR CURVE	AVERAGE REMAINING LIFE	ANNUAL DEPR ACCRUAL	ANNUAL DEPR RATE	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: FIVE YEAR AVERAGE NET SALVAGE	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: TOTAL ANNUAL DEPR ACCRUAL	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: ANNUAL DEPR RATE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	CENTRAL OFFICE TRANSMISSION										
	ANALOG TRANSMISSION EQUIPMENT										
223123	TERRESTRIAL MICROWAVE	$1,749,777	$1,471,754	$278,023	10-R2	1.55	$179,370	10.25%	$625	$178,745	10.22%
223212	ANALOG CARRIER - SUBSCRIBER	$1,707,802	$1,221,558	$486,244	8-L0	3.83	$126,957	7.43%	$4,662	$122,295	7.16%
223213	AML EQUIPMENT	$183,919	$39,953	$143,966	10-L0	4.88	$29,501	16.04%	($2,199)	$31,700	17.24%
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$1,185,408	$855,045	$330,363	9-L0	4.69	$70,440	5.94%	$11,573	$58,867	4.97%
223216	MODEMS IN CO	$460,387	$160,820	$299,567	10-S0.5	6.40	$46,807	10.17%	$571	$46,236	10.04%
	TOTAL ANALOG TRANSMISSION EQUIP	$5,287,293	$3,749,130	$1,538,163			$453,075	8.57%	$15,232	$437,843	8.28%
	DIGITAL TRANSMISSION EQUIPMENT										
223251	DIGITAL CARRIER - TRUNK	$10,732,031	$5,635,200	$5,096,831	9-L0	4.72	$1,079,837	10.06%	$45,635	$1,034,202	9.64%
223252	DIGITAL CARRIER - SUBSCRIBER	$3,780,966	$1,559,151	$2,221,815	6-L1	2.70	$822,894	21.76%	$4,097	$818,797	21.66%
223253	FIBER OBTIC - TRUNK	$10,600,444	$3,619,884	$6,980,560	9-L2	5.80	$1,203,545	11.35%	($595)	$1,204,140	11.36%
223255	DIGITAL TRK INTF-REMOTE	$2,086,020	$893,836	$1,192,184	9-S3	4.59	$259,735	12.45%	$1,742	$257,993	12.37%
223256	DIGITAL TRK INTF-HOST	$7,878,569	$3,664,425	$4,214,144	12-R4	6.70	$628,977	7.98%	($196)	$629,173	7.99%
	TOTAL DIGITAL TRANS EQUIPMENT	$35,078,030	$15,372,496	$19,705,534			$3,994,988	11.39%	$50,683	$3,944,305	11.24%
	TOTAL CO TRANSMISSION EQUIPMENT	$40,365,323	$19,121,626	$21,243,697			$4,448,063	11.02%	$65,915	$4,382,148	10.86%
	TOTAL CENTRAL OFFICE ASSETS	$150,133,933	$65,884,884	$84,249,049			$15,383,691	10.25%	$171,546	$15,212,145	10.13%
	INFORMATION ORIG/TERM ASSETS										
235100	PUBLIC TELEPHONE TERMINAL EQUIPMENT	$1,529,922	$1,254,498	$275,424	17-L3	8.53	$32,289	2.11%	$557	$31,732	2.07%
236202	OTHER TERMINAL EQUIPMENT	$1,288,138	$1,067,852	$220,286	5-R2	2.01	$109,595	8.51%	$16,433	$93,162	7.23%
	TOTAL INFORMATION ORIG/TERM ASSETS	$2,818,060	$2,322,350	$495,710			$141,884	5.03%	$16,990	$124,894	4.43%
	POLES, CABLE AND WIRE FACILITIES										
241100	POLES	$23,438,074	$6,523,477	$16,914,597	29-L0	17.07	$990,896	4.23%	($178,549)	$1,169,445	4.99%
	AERIAL CABLE										
242110	NONMETALLIC FIBER	$10,759,089	$1,645,078	$9,114,011	25-R2	17.61	$517,547	4.81%	($204)	$517,751	4.81%
242151	METALLIC CABLE	$106,575,206	$40,730,079	$65,845,127	28-R2	11.92	$5,523,920	5.18%	($258,234)	$5,782,154	5.43%
	TOTAL ACCOUNT 2421	$117,334,295	$42,375,157	$74,959,138			$6,041,467	5.15%	($258,438)	$6,299,905	5.37%
	UNDERGROUND CABLE										
242210	NONMETALLIC	$398,434	$50,842	$347,592	25-R2	17.42	$19,954	5.01%	($60)	$20,014	5.02%
242251	METALLIC	$2,526,320	$733,121	$1,793,199	33-R0.5	13.78	$130,131	5.15%	($3,428)	$133,559	5.29%
	TOTAL ACCOUNT 2422	$2,924,754	$783,963	$2,140,791			$150,085	5.13%	($3,488)	$153,573	5.25%

* INTERIM SURVIVOR CURVE. LIFSPAN METHOD UTILIZED. SERVICE LIVES VARY. ** TOTAL ANALOG SWITCHING PLANT SCHEDULED FOR RETIREMENT DURING 1993.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1993
AND RELATED ANNUAL DEPRECIATION EXPENSE UNDER PRESENT AND PROPOSED (ELG/ARL) DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/93	BOOK DEPR RESERVE	UNRECOVERED ORIGINAL COST	A.S.L./ SURVIVOR CURVE	AVERAGE REMAINING LIFE	ANNUAL DEPR ACCRUAL	ANNUAL DEPR RATE	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: FIVE YEAR AVERAGE NET SALVAGE	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: TOTAL ANNUAL DEPR ACCRUAL	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: ANNUAL DEPR RATE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	BURIED CABLE										
242310	NONMETALLIC	$365,470	$71,356	$294,114	25-R2	16.89	$17,413	4.76%	($269)	$17,682	4.84%
242351	METALLIC	$33,420,836	$10,632,619	$22,788,217	24-R3	13.56	$1,680,547	5.03%	($10,826)	$1,691,373	5.06%
	TOTAL ACCOUNT 2423	$33,786,306	$10,703,975	$23,082,331			$1,697,960	5.03%	($11,095)	$1,709,055	5.06%
242610	NONMETALLIC INTRABUILDING CABLE	$44,905	$5,012	$39,893	25-R2	17.12	$2,330	5.19%	($48)	$2,378	5.30%
242651	METALLIC INTRABUILDING CABLE	$3,044	($802)	$3,846	25-R2	18.02	$213	7.00%	($39)	$252	8.28%
243100	AERIAL WIRE	$5,222,061	$1,158,461	$4,063,600	25-L0	15.08	$269,469	5.16%	($70,254)	$339,723	6.51%
244100	CONDUIT SYSTEMS	$2,882,901	$714,701	$2,168,200	50-R4	36.55	$59,321	2.06%	($2,863)	$62,184	2.16%
	TOTAL POLES, CABLE AND WIRE FACILITI	$185,636,340	$62,263,944	$123,372,396			$9,211,741	4.96%	($524,774)	$9,736,515	5.24%
	TOTAL DEPRECIABLE PLANT IN SERVICE	$380,384,519	$141,696,522	$238,687,997			$28,009,169	7.36%	$119,898	$27,889,271	7.33%
	NON-DEPRECIABLE PLANT										
211100	LAND - GENERAL SUPPORT	$1,604,819	$0	$1,604,819							
	TOTAL UTILITY PLANT IN SERVICE	$381,989,338	$141,696,522	$240,292,816							

* INTERIM SURVIVOR CURVE. LIFSPAN METHOD UTILIZED. SERVICE LIVES VARY. ** TOTAL ANALOG SWITCHING PLANT SCHEDULED FOR RETIREMENT DURING 1993.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
1993 ACCOUNT ACTIVITY, ORIGINAL COST AS OF DECEMBER 31, 1993,
AVERAGE PLANT IN SERVICE AND CALCULATION OF ESTIMATED 1993 BOOK DEPRECIATION EXPENSE

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	ADDITIONS 1993	RETIREMENTS 1993	ORIGINAL COST 12/31/93	AVERAGE 1993 ORIGINAL COST	1992 DEPR RATE %	1993 ESTIMATED DEPRECIATION EXPENSE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
DEPRECIABLE PLANT								
	GENERAL SUPPORT ASSETS							
211200	MOTOR VEHICLES	$7,749,020	$1,245,000	$962,000	$8,032,020	$7,890,520	11.45%	$903,465
211500	GARAGE WORK EQUIPMENT	$39,154	$90,000		$129,154	$84,154	3.26%	$2,743
211600	OTHER WORK EQUIPMENT	$2,471,882			$2,471,882	$2,471,882	3.13%	$77,370
212199	BUILDINGS & (212140)	$22,281,206	$2,912,000	$56,000	$25,137,206	$23,709,206	3.54%	$839,306
212200	FURNITURE	$1,018,122	$30,000	$5,000	$1,043,122	$1,030,622	2.91%	$29,991
	OFFICE EQUIPMENT							
212311	ELECTRONIC OFFICE EQUIPMENT	$879,482	$30,000		$909,482	$894,482	11.01%	$98,482
212312	OTHER OFFICE EQUIPMENT	$92,098			$92,098	$92,098	4.25%	$3,914
212320	CO COMMUNICATION EQUIPMENT	$1,035,218	$345,000		$1,380,218	$1,207,718	8.84%	$106,762
	TOTAL ACCT 2123	$2,006,798	$375,000	$0	$2,381,798	$2,194,298	9.53%	$209,158
212400	GENERAL PURPOSE COMPUTERS	$1,301,004	$1,300,000		$2,601,004	$1,951,004	10.44%	$203,685
	TOTAL GENERAL SUPPORT ASSETS	$36,867,186	$5,952,000	$1,023,000	$41,796,186	$39,331,686	5.76%	$2,265,718
	CENTRAL OFFICE ASSETS							
	SWITCHING EQUIPMENT							
221110	ANALOG ELECTRONIC SWITCHING - CO	$57,746		$57,746	$0	$28,873	418.40%	$120,805
	DIGITAL ELECTRONIC SWITCHING							
221210	DIGITAL CO EQUIPMENT	$40,382,053	$4,684,351	$2,167,203	$42,899,201	$41,640,627	9.53%	$3,968,352
221220	SOFTWARE	$1,794,180	$1,015,000		$2,809,180	$2,301,680	1.29%	$29,692
221230	SPARES - REMOTE	$1,487,184			$1,487,184	$1,487,184	9.84%	$146,339
221231	SPARES - HOST	$2,235,097			$2,235,097	$2,235,097	13.46%	$300,844
221240	REMOTE EQUIPMENT	$49,862,282	$8,954,649	$2,811,844	$56,005,087	$52,933,685	10.34%	$5,473,343
221250	CENTRALIZED TEST EQUIPMENT	$2,074,185	$1,011,000		$3,085,185	$2,579,685	9.05%	$233,461
	TOTAL ACCOUNT 2212	$97,834,981	$15,665,000	$4,979,047	$108,520,934	$103,177,958	9.84%	$10,152,031
	ELECTRONIC MECHANICAL SWITCHING							
221510	STEP X STEP EQUIPMENT	$2,268,537		$1,272,000	$996,537	$1,632,537	3.93%	$64,159
221520	CROSS BAR EQUIPMENT	$853,358		$633,650	$219,708	$536,533	10.17%	$54,565
221530	OTHER MECHANICAL SWITCHING EQUIPMENT	$44,431		$13,000	$31,431	$37,931	109.89%	$41,682
	TOTAL ACCOUNT 2215	$3,166,326	$0	$1,918,650	$1,247,676	$2,207,001	7.27%	$160,406
	TOTAL CENTRAL OFFICE SWITCHING	$101,059,053	$15,665,000	$6,955,443	$109,768,610	$105,413,832	9.90%	$10,433,242

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
1993 ACCOUNT ACTIVITY, ORIGINAL COST AS OF DECEMBER 31, 1993,
AVERAGE PLANT IN SERVICE AND CALCULATION OF ESTIMATED 1993 BOOK DEPRECIATION EXPENSE

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	ADDITIONS 1993	RETIREMENTS 1993	ORIGINAL COST 12/31/93	AVERAGE 1993 ORIGINAL COST	1992 DEPR RATE %	1993 ESTIMATED DEPRECIATION EXPENSE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
	CENTRAL OFFICE TRANSMISSION							
	ANALOG TRANSMISSION EQUIPMENT							
223123	TERRESTRIAL MICROWAVE	$1,749,777			$1,749,777	$1,749,777	17.51%	$306,386
223212	ANALOG CARRIER - SUBSCRIBER	$1,791,802	$11,000	$95,000	$1,707,802	$1,749,802	7.29%	$127,561
223213	AML EQUIPMENT	$95,919	$100,000	$12,000	$183,919	$139,919	11.29%	$15,797
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$1,185,408			$1,185,408	$1,185,408	5.91%	$70,058
223216	MODEMS IN CO	$368,387	$100,000	$8,000	$460,387	$414,387	9.69%	$40,154
	TOTAL ANALOG TRANSMISSION EQUIP	$5,191,293	$211,000	$115,000	$5,287,293	$5,239,293	10.69%	$559,956
	DIGITAL TRANSMISSION EQUIPMENT							
223251	DIGITAL CARRIER - TRUNK	$10,523,031	$959,000	$750,000	$10,732,031	$10,627,531	9.92%	$1,054,251
223252	DIGITAL CARRIER - SUBSCRIBER	$3,575,966	$260,000	$55,000	$3,780,966	$3,678,466	29.08%	$1,069,698
223253	FIBER OPTIC - TRUNK	$8,830,944	$1,769,500		$10,600,444	$9,715,694	11.23%	$1,091,072
223255	DIGITAL TRK INTF-REMOTE	$1,976,020	$150,000	$40,000	$2,086,020	$2,031,020	12.68%	$257,533
223256	DIGITAL TRK INTF-HOST	$7,268,569	$625,000	$15,000	$7,878,569	$7,573,569	7.83%	$593,010
	TOTAL DIGITAL TRANS EQUIPMENT	$32,174,530	$3,763,500	$860,000	$35,078,030	$33,626,280	12.09%	$4,065,564
	TOTAL CO TRANSMISSION EQUIPMENT	$37,365,823	$3,974,500	$975,000	$40,365,323	$38,865,573	11.90%	$4,625,520
	TOTAL CENTRAL OFFICE ASSETS	$138,424,876	$19,639,500	$7,930,443	$150,133,933	$144,279,405	10.44%	$15,058,762
	INFORMATION ORIG/TERM ASSETS							
235100	PUBLIC TELEPHONE TERMINAL EQUIPMENT	$1,445,422	$100,000	$15,500	$1,529,922	$1,487,672	1.54%	$22,910
236202	OTHER TERMINAL EQUIPMENT	$1,503,138	$50,000	$265,000	$1,288,138	$1,395,638	8.70%	$121,421
	TOTAL INFORMATION ORIG/TERM ASSETS	$2,948,560	$150,000	$280,500	$2,818,060	$2,883,310	5.01%	$144,331
	POLES, CABLE AND WIRE FACILITIES							
241100	POLES	$21,830,107	$2,290,967	$683,000	$23,438,074	$22,634,091	4.95%	$1,120,388
	AERIAL CABLE							
242110	NONMETALLIC FIBER	$9,294,340	$1,464,749		$10,759,089	$10,026,715	4.94%	$495,320
242151	METALLIC CABLE	$100,895,606	$7,914,797	$2,235,197	$106,575,206	$103,735,406	5.23%	$5,425,362
	TOTAL ACCOUNT 2421	$110,189,946	$9,379,546	$2,235,197	$117,334,295	$113,762,121	5.20%	$5,920,682
	UNDERGROUND CABLE							
242210	NONMETALLIC	$382,373	$16,061		$398,434	$390,404	5.20%	$20,301
242251	METALLIC	$2,336,608	$273,011	$83,299	$2,526,320	$2,431,464	5.14%	$124,977
	TOTAL ACCOUNT 2422	$2,718,981	$289,072	$83,299	$2,924,754	$2,821,868	5.15%	$145,278

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
1993 ACCOUNT ACTIVITY, ORIGINAL COST AS OF DECEMBER 31, 1993,
AVERAGE PLANT IN SERVICE AND CALCULATION OF ESTIMATED 1993 BOOK DEPRECIATION EXPENSE

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	ADDITIONS 1993	RETIREMENTS 1993	ORIGINAL COST 12/31/93	AVERAGE 1993 ORIGINAL COST	1992 DEPR RATE %	1993 ESTIMATED DEPRECIATION EXPENSE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
	BURIED CABLE							
242310	NONMETALLIC	$344,280	$21,190		$365,470	$354,875	4.94%	$17,531
242351	METALLIC	$31,282,237	$2,793,319	$654,720	$33,420,836	$32,351,537	4.89%	$1,581,990
	TOTAL ACCOUNT 2423	$31,626,517	$2,814,509	$654,720	$33,786,306	$32,706,412	4.89%	$1,599,521
242610	NONMETALLIC INTRABUILDING CABLE	$23,715	$21,190		$44,905	$34,310	5.29%	$1,815
242651	METALLIC INTRABUILDING CABLE	$1,708	$2,336	$1,000	$3,044	$2,376	6.97%	$166
243100	AERIAL WIRE	$5,031,029	$447,032	$256,000	$5,222,061	$5,126,545	6.45%	$330,662
244100	CONDUIT SYSTEMS	$2,860,552	$25,849	$3,500	$2,882,901	$2,871,727	2.13%	$61,168
	TOTAL POLES, CABLE AND WIRE FACILITIES	$174,282,555	$15,270,501	$3,916,716	$185,636,340	$179,959,450	5.10%	$9,179,680
	TOTAL DEPRECIABLE PLANT IN SERVICE	$352,523,177	$41,012,001	$13,150,659	$380,384,519	$366,453,851	7.27%	$26,648,491
NON-DEPRECIABLE PLANT								
211100	LAND - GENERAL SUPPORT	$1,604,819	$0	$0	$1,604,819	$1,604,819	0.00%	$0
	TOTAL UTILITY PLANT IN SERVICE	$354,127,996	$0	$0	$381,989,338	$368,058,670	7.24%	$26,648,491

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1992, (ANNUAL
DEPRECIATION EXPENSE, RETIREMENTS, NET SALVAGE CHARGES AND AMORTIZATIONS DURING 1993)
AND BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1993

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	BOOK DEPR RESERVE 12-31-92	1993 ANNUAL DEPRECIATION EXPENSE	1993 RETIREMENTS	1993 ESTIMATED NET SALVAGE	1993 NET SALVAGE AMORTIZATION	BOOK DEPR RESERVE 12-31-93
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H) *
DEPRECIABLE PLANT							
	GENERAL SUPPORT ASSETS						
211200	MOTOR VEHICLES	$2,511,671	$903,465	$962,000	$44,973	$46,258	$2,451,851
211500	GARAGE WORK EQUIPMENT	$25,067	$2,743	$0	$0	$0	$27,810
211600	OTHER WORK EQUIPMENT	$1,534,095	$77,370	$0	$593	$804	$1,611,254
212199	BUILDINGS & (212140)	$5,022,775	$839,306	$56,000	($162,767)	$203,460	$5,439,854
212200	FURNITURE	$423,143	$29,991	$5,000	$13,990	$16,821	$445,303
	OFFICE EQUIPMENT						
212311	ELECTRONIC OFFICE EQUIPMENT	$390,286	$98,482	$0	$25	$21,879	$466,914
212312	OTHER OFFICE EQUIPMENT	$65,618	$3,914	$0	$0	$2,304	$67,228
212320	CO COMMUNICATION EQUIPMENT	$717,402	$106,762	$0	$2,395	$4,771	$821,788
	TOTAL ACCT 2123	$1,173,306	$209,158	$0	$2,420	$28,954	$1,355,930
212400	GENERAL PURPOSE COMPUTERS	($112,695)	$203,685	$0	$0	$197,648	($106,658)
	TOTAL GENERAL SUPPORT ASSETS	$10,577,362	$2,265,718	$1,023,000	($100,791)	$493,945	$11,225,344
	CENTRAL OFFICE ASSETS						
	SWITCHING EQUIPMENT						
221110	ANALOG ELECTRONIC SWITCHING - CO	($197,264)	$120,805	$57,746	($5,240)	$13,401	($152,846)
	DIGITAL ELECTRONIC SWITCHING						
221210	DIGITAL CO EQUIPMENT	$17,996,587	$3,968,352	$2,167,203	$66,081	$85,401	$19,778,416
221220	SOFTWARE	$1,675,449	$29,692	$0	($282)	($203)	$1,705,062
221230	SPARES - REMOTE	$377,054	$146,339	$0	($17)	($24)	$523,400
221231	SPARES - HOST	$388,269	$300,844	$0	($103)	($54)	$689,064
221240	REMOTE EQUIPMENT	$18,908,803	$5,473,343	$2,811,844	$16,660	$1,967	$21,584,995
221250	CENTRALIZED TEST EQUIPMENT	$1,197,326	$233,461	$0	($59)	($22)	$1,430,750
	TOTAL ACCOUNT 2212	$40,543,488	$10,152,031	$4,979,047	$82,280	$87,065	$45,711,687
	ELECTRONIC MECHANICAL SWITCHING						
221510	STEP X STEP EQUIPMENT	$2,199,222	$64,159	$1,272,000	($32,409)	($19,726)	$978,698
221520	CROSS BAR EQUIPMENT	$770,626	$54,565	$633,650	$6,181	($4,097)	$201,819
221530	OTHER MECHANICAL SWITCHING EQUIPMENT	($4,589)	$41,682	$13,000	$0	$193	$23,900
	TOTAL ACCOUNT 2215	$2,965,259	$160,406	$1,918,650	($26,228)	($23,630)	$1,204,417
	TOTAL CENTRAL OFFICE SWITCHING	$43,311,483	$10,433,242	$6,955,443	$50,812	$76,836	$46,763,258

* COLUMN (H) = (C) + (D) - (E) + (F) - (G)

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1992, (ANNUAL
DEPRECIATION EXPENSE, RETIREMENTS, NET SALVAGE CHARGES AND AMORTIZATIONS DURING 1993)
AND BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1993

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	BOOK DEPR RESERVE 12-31-92	1993 ANNUAL DEPRECIATION EXPENSE	1993 RETIREMENTS	1993 ESTIMATED NET SALVAGE	1993 NET SALVAGE AMORTIZATION	BOOK DEPR RESERVE 12-31-93
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H) *
	CENTRAL OFFICE TRANSMISSION						
	ANALOG TRANSMISSION EQUIPMENT						
223123	TERRESTRIAL MICROWAVE	$1,166,233	$306,386	$0	($200)	$665	$1,471,754
223212	ANALOG CARRIER - SUBSCRIBER	$1,201,880	$127,561	$95,000	$2,820	$15,703	$1,221,558
223213	AML EQUIPMENT	$42,673	$15,797	$12,000	($5,384)	$1,133	$39,953
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$786,867	$70,058	$0	$10,540	$12,420	$855,045
223216	MODEMS IN CO	$128,082	$40,154	$8,000	$963	$379	$160,820
	TOTAL ANALOG TRANSMISSION EQUIP	$3,325,735	$559,956	$115,000	$8,739	$30,300	$3,749,130
	DIGITAL TRANSMISSION EQUIPMENT						
223251	DIGITAL CARRIER - TRUNK	$5,317,954	$1,054,251	$750,000	$51,149	$38,154	$5,635,200
223252	DIGITAL CARRIER - SUBSCRIBER	$541,257	$1,069,698	$55,000	$6,034	$2,838	$1,559,151
223253	FIBER OPTIC - TRUNK	$2,528,021	$1,091,072	$0	($12)	($803)	$3,619,884
223255	DIGITAL TRK INTF-REMOTE	$674,561	$257,533	$40,000	$2,904	$1,162	$893,836
223256	DIGITAL TRK INTF-HOST	$3,086,370	$593,010	$15,000	($152)	($197)	$3,664,425
	TOTAL DIGITAL TRANS EQUIPMENT	$12,148,163	$4,065,564	$860,000	$59,923	$41,154	$15,372,496
	TOTAL CO TRANSMISSION EQUIPMENT	$15,473,898	$4,625,520	$975,000	$68,662	$71,454	$19,121,626
	TOTAL CENTRAL OFFICE ASSETS	$58,785,381	$15,058,762	$7,930,443	$119,474	$148,290	$65,884,884
	INFORMATION ORIG/TERM ASSETS						
235100	PUBLIC TELEPHONE TERMINAL EQUIPMENT	$1,246,840	$22,910	$15,500	$288	$40	$1,254,498
236202	OTHER TERMINAL EQUIPMENT	$1,234,663	$121,421	$265,000	($5,715)	$17,517	$1,067,852
	TOTAL INFORMATION ORIG/TERM ASSETS	$2,481,503	$144,331	$280,500	($5,427)	$17,557	$2,322,350
	POLES, CABLE AND WIRE FACILITIES						
241100	POLES	$6,106,240	$1,120,388	$683,000	($182,515)	($162,364)	$6,523,477
	AERIAL CABLE						
242110	NONMETALLIC FIBER	$1,149,665	$495,320	$0	($98)	($191)	$1,645,078
242151	METALLIC CABLE	$37,617,256	$5,425,362	$2,235,197	($309,430)	($232,088)	$40,730,079
	TOTAL ACCOUNT 2421	$38,766,921	$5,920,682	$2,235,197	($309,528)	($232,279)	$42,375,157
	UNDERGROUND CABLE						
242210	NONMETALLIC	$30,482	$20,301	$0	$0	($59)	$50,842
242251	METALLIC	$692,896	$124,977	$83,299	($4,168)	($2,715)	$733,121
	TOTAL ACCOUNT 2422	$723,378	$145,278	$83,299	($4,168)	($2,774)	$783,963

* COLUMN (H) = (C) + (D) - (E) + (F) - (G)

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1992, (ANNUAL
DEPRECIATION EXPENSE, RETIREMENTS, NET SALVAGE CHARGES AND AMORTIZATIONS DURING 1993)
AND BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1993

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	BOOK DEPR RESERVE 12-31-92	1993 ANNUAL DEPRECIATION EXPENSE	1993 RETIREMENTS	1993 ESTIMATED NET SALVAGE	1993 NET SALVAGE AMORTIZATION	BOOK DEPR RESERVE 12-31-93
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H) *
	BURIED CABLE						
242310	NONMETALLIC	$54,095	$17,531	$0	($448)	($178)	$71,356
242351	METALLIC	$9,708,989	$1,581,990	$654,720	($12,911)	($9,271)	$10,632,619
	TOTAL ACCOUNT 2423	$9,763,084	$1,599,521	$654,720	($13,359)	($9,449)	$10,703,975
242610	NONMETALLIC INTRABUILDING CABLE	$3,235	$1,815	$0	($71)	($33)	$5,012
242651	METALLIC INTRABUILDING CABLE	$72	$166	$1,000	($65)	($25)	($802)
243100	AERIAL WIRE	$1,083,011	$330,662	$256,000	($64,781)	($65,569)	$1,158,461
244100	CONDUIT SYSTEMS	$658,712	$61,168	$3,500	($3,790)	($2,111)	$714,701
	TOTAL POLES, CABLE AND WIRE FACILITIES	$57,104,653	$9,179,680	$3,916,716	($578,277)	($474,604)	$62,263,944
	TOTAL DEPRECIABLE PLANT IN SERVICE	$128,948,899	$26,648,491	$13,150,659	($565,021)	$185,188	$141,696,522

* COLUMN (H) = (C) + (D) - (E) + (F) - (G)

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
AND RELATED ANNUAL DEPRECIATION EXPENSE UNDER PRESENT AND PROPOSED (ELG/ARL) DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	PRESENT RATES		PROPOSED RATES		NET CHANGE DEPR EXP
			RATE %	ANNUAL ACCRUAL	RATE %	ANNUAL ACCRUAL	
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
DEPRECIABLE PLANT							
	GENERAL SUPPORT ASSETS						
211220	MOTOR VEHICLES	$7,749,020	6.71%	$519,959	11.45%	$887,263	$367,304
211500	GARAGE WORK EQUIPMENT	$39,154	4.86%	$1,903	3.26%	$1,276	($627)
211600	OTHER WORK EQUIPMENT	$2,471,882	3.55%	$87,752	3.13%	$77,370	($10,382)
212199	BUILDINGS & (212140)	$22,281,206	3.83%	$853,370	3.54%	$788,755	($64,615)
212200	FURNITURE	$1,018,122	6.18%	$62,920	2.91%	$29,627	($33,293)
	OFFICE EQUIPMENT						
212311	ELECTRONIC OFFICE EQUIPMENT	$879,482	15.14%	$133,154	11.01%	$96,831	($36,323)
212312	OTHER OFFICE EQUIPMENT	$92,098	3.68%	$3,389	4.25%	$3,914	$525
212320	CO COMMUNICATION EQUIPMENT	$1,035,218	7.72%	$79,919	8.84%	$91,513	$11,594
	TOTAL ACCT 2123	$2,006,798	10.79%	$216,462	9.58%	$192,258	($24,204)
212400	GENERAL PURPOSE COMPUTERS	$1,301,004	16.78%	$218,308	10.44%	$135,825	($82,483)
	TOTAL GENERAL SUPPORT ASSETS	$36,867,186	5.32%	$1,960,674	5.73%	$2,112,374	$151,700
	CENTRAL OFFICE ASSETS						
	SWITCHING EQUIPMENT						
221110	ANALOG ELECTRONIC SWITCHING - CO	$57,746	0.00%	$0	418.40%	$241,609	$241,609
	DIGITAL ELECTRONIC SWITCHING						
221210	DIGITAL CO EQUIPMENT	$40,382,053	10.25%	$4,139,160	9.53%	$3,848,410	($290,750)
221220	SOFTWARE	$1,794,180	1.49%	$26,733	1.29%	$23,145	($3,588)
221230	SPARES - REMOTE	$1,487,184	11.91%	$177,124	9.84%	$146,339	($30,785)
221231	SPARES - HOST	$2,235,097	9.94%	$222,169	13.46%	$300,844	$78,675
221240	REMOTE EQUIPMENT	$49,862,282	9.24%	$4,607,275	10.34%	$5,155,760	$548,485
221250	CENTRALIZED TEST EQUIPMENT	$2,074,185	8.62%	$178,795	9.05%	$187,714	$8,919
	TOTAL ACCOUNT 2212	$97,834,981	9.56%	$9,351,256	9.88%	$9,662,212	$310,956
	ELECTRONIC MECHANICAL SWITCHING						
221510	STEP X STEP EQUIPMENT	$2,268,537	0.00%	$0	3.93%	$89,154	$89,154
221520	CROSS BAR EQUIPMENT	$853,358	0.00%	$0	10.17%	$86,787	$86,787
221530	OTHER MECHANICAL SWITCHING EQUIPMENT	$44,431	0.00%	$0	109.89%	$48,825	$48,825
	TOTAL ACCOUNT 2215	$3,166,326	0.00%	$0	7.10%	$224,766	$224,766
	TOTAL CENTRAL OFFICE SWITCHING	$101,059,053	9.25%	$9,351,256	10.02%	$10,128,587	$777,331
	CENTRAL OFFICE TRANSMISSION						
	ANALOG TRANSMISSION EQUIPMENT						
223123	TERRESTRIAL MICROWAVE	$1,749,777	3.80%	$66,492	17.51%	$306,386	$239,894
223212	ANALOG CARRIER - SUBSCRIBER	$1,791,802	11.93%	$213,762	7.29%	$130,622	($83,140)
223213	AML EQUIPMENT	$95,919	11.65%	$11,175	11.29%	$10,829	($346)
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$1,185,408	15.70%	$186,109	5.91%	$70,058	($116,051)
223216	MODEMS IN CO	$368,387	12.97%	$47,780	9.69%	$35,697	($12,083)
	TOTAL ANALOG TRANSMISSION EQUIP	$5,191,293	10.12%	$525,318	10.66%	$553,592	$28,274

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
AND RELATED ANNUAL DEPRECIATION EXPENSE UNDER PRESENT AND PROPOSED (ELG/ARL) DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	PRESENT RATES		PROPOSED RATES		NET CHANGE
			RATE %	ANNUAL ACCRUAL	RATE %	ANNUAL ACCRUAL	DEPR EXP
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	DIGITAL TRANSMISSION EQUIPMENT						
223251	DIGITAL CARRIER - TRUNK	$10,523,031	9.31%	$979,694	9.92%	$1,043,885	$64,191
223252	DIGITAL CARRIER - SUBSCRIBER	$3,575,966	11.33%	$405,157	29.08%	$1,039,891	$634,734
223253	FIBER OBTIC - TRUNK	$8,830,944	11.28%	$996,130	11.23%	$991,715	($4,415)
223255	DIGITAL TRK INTF-REMOTE	$1,976,020	9.82%	$194,045	12.68%	$250,559	$56,514
223256	DIGITAL TRK INTF-HOST	$7,268,569	8.99%	$653,444	7.83%	$569,129	($84,315)
	TOTAL DIGITAL TRANS EQUIPMENT	$32,174,530	10.03%	$3,228,470	12.11%	$3,895,179	$666,709
	TOTAL CO TRANSMISSION EQUIPMENT	$37,365,823	10.05%	$3,753,788	11.91%	$4,448,771	$694,983
	TOTAL CENTRAL OFFICE ASSETS	$138,424,876	9.47%	$13,105,044	10.53%	$14,577,358	$1,472,314
	INFORMATION ORIG/TERM ASSETS						
235100	PUBLIC TELEPHONE TERMINAL EQUIPMENT	$1,445,422	7.77%	$112,309	1.54%	$22,259	($90,050)
236202	OTHER TERMINAL EQUIPMENT	$1,503,138	1.04%	$15,633	8.70%	$130,773	$115,140
	TOTAL INFORMATION ORIG/TERM ASSETS	$2,948,560	4.34%	$127,942	5.19%	$153,032	$25,090
	POLES, CABLE AND WIRE FACILITIES						
241100	POLES	$21,830,107	5.57%	$1,215,937	4.95%	$1,080,590	($135,347)
	AERIAL CABLE						
242110	NONMETALLIC FIBER	$9,294,340	4.45%	$413,598	4.94%	$459,140	$45,542
242151	METALLIC CABLE	$100,895,606	4.45%	$4,489,854	5.23%	$5,276,840	$786,986
	TOTAL ACCOUNT 2421	$110,189,946	4.45%	$4,903,452	5.21%	$5,735,980	$832,528
	UNDERGROUND CABLE						
242210	NONMETALLIC	$382,373	2.63%	$10,056	5.20%	$19,883	$9,827
242251	METALLIC	$2,336,608	2.63%	$61,453	5.14%	$120,102	$58,649
	TOTAL ACCOUNT 2422	$2,718,981	2.63%	$71,509	5.15%	$139,985	$68,476
	BURIED CABLE						
242310	NONMETALLIC	$344,280	4.16%	$14,322	4.94%	$17,007	$2,685
242351	METALLIC	$31,282,237	4.16%	$1,301,341	4.89%	$1,529,701	$228,360
	TOTAL ACCOUNT 2423	$31,626,517	4.16%	$1,315,663	4.89%	$1,546,708	$231,045
242610	NONMETALLIC INTRABUILDING CABLE	$23,715	3.40%	$806	5.29%	$1,255	$449
242651	METALLIC INTRABUILDING CABLE	$1,708	3.40%	$58	6.97%	$119	$61
243100	AERIAL WIRE	$5,031,029	5.88%	$295,825	6.45%	$324,501	$28,676
244100	CONDUIT SYSTEMS	$2,860,552	2.81%	$80,382	2.13%	$60,930	($19,452)
	TOTAL POLES, CABLE AND WIRE FACILITIES	$174,282,555	4.52%	$7,883,632	5.10%	$8,890,068	$1,006,436
	TOTAL DEPR REGULATED PLANT IN SERVICE	$352,523,177	6.55%	$23,077,292	7.30%	$25,732,832	$2,655,540
NON-DEPRECIABLE PLANT							
211100	LAND - GENERAL SUPPORT	$1,604,819					
	TOTAL UTILITY PLANT IN SERVICE	$354,127,996					

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
BOOK DEPRECIATION RESERVE, COMPOSITE AVERAGE REMAINING LIFE, AMORTIZATION OF FIVE
YEAR AVERAGE NET SALVAGE, AND AVERAGE REMAINING LIFE ELG/ARL DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	BOOK DEPR RESERVE	UNRECOVERED ORIGINAL COST	A.S.L./ SURVIVOR CURVE	AVERAGE REMAINING LIFE	ANNUAL DEPR ACCRUAL	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: ANNUAL DEPR RATE	FIVE YEAR AVERAGE NET SALVAGE	TOTAL ANNUAL DEPR ACCRUAL	ANNUAL DEPR RATE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
DEPRECIABLE PLANT											
	GENERAL SUPPORT ASSETS										
211200	MOTOR VEHICLES	$7,749,020	$2,511,671	$5,237,349	10-L3	5.61	$933,574	12.05%	$46,258	$887,316	11.45%
211500	GARAGE WORK EQUIPMENT	$39,154	$25,067	$14,087	15-S3	11.05	$1,275	3.26%	$0	$1,275	3.26%
211600	OTHER WORK EQUIPMENT	$2,471,882	$1,534,095	$937,787	20-L2	12.00	$78,149	3.16%	$804	$77,345	3.13%
212199	BUILDINGS & (212140)	$22,281,206	$5,022,775	$17,258,431	30-R0.5	17.40	$991,864	4.45%	$203,460	$788,404	3.54%
212200	FURNITURE	$1,018,122	$423,143	$594,979	20-R0.5	12.82	$46,410	4.56%	$16,821	$29,589	2.91%
	OFFICE EQUIPMENT										
212311	ELECTRONIC OFFICE EQUIPMENT	$879,482	$390,286	$489,196	7-L2	4.12	$118,737	13.50%	$21,879	$96,858	11.01%
212312	OTHER OFFICE EQUIPMENT	$92,098	$65,618	$26,480	10-R1	4.26	$6,216	6.75%	$2,304	$3,912	4.25%
212320	CO COMMUNICATION EQUIPMENT	$1,035,218	$717,402	$317,816	5-L2	3.30	$96,308	9.30%	$4,771	$91,537	8.84%
	TOTAL ACCT 2123	$2,006,798	$1,173,306	$833,492			$221,261	11.03%	$28,954	$192,307	9.58%
212400	GENERAL PURPOSE COMPUTERS	$1,301,004	($112,695)	$1,413,699	6-R5	4.24	$333,420	25.63%	$197,648	$135,772	10.44%
	TOTAL GENERAL SUPPORT ASSETS	$36,867,186	$10,577,362	$26,289,824			$2,605,953	7.07%	$493,945	$2,112,008	5.73%
	CENTRAL OFFICE ASSETS										
	SWITCHING EQUIPMENT										
221110	ANALOG ELECTRONIC SWITCHING - CO	$57,746	($197,264)	$255,010	**	1.00	$255,010	441.61%	$13,401	$241,609	418.40%
	DIGITAL ELECTRONIC SWITCHING										
221210	DIGITAL CO EQUIPMENT	$40,382,053	$17,996,587	$22,385,466	*13-L2	5.69	$3,934,177	9.74%	$85,401	$3,848,776	9.53%
221220	SOFTWARE	$1,794,180	$1,675,449	$118,731	10-L4	5.17	$22,965	1.28%	($203)	$23,168	1.29%
221230	SPARES - REMOTE	$1,487,184	$377,054	$1,110,130	11-R3	7.59	$146,262	9.83%	($24)	$146,286	9.84%
221231	SPARES - HOST	$2,235,097	$388,269	$1,846,828	10-S1.5	6.14	$300,786	13.46%	($54)	$300,840	13.46%
221240	REMOTE EQUIPMENT	$49,862,282	$18,908,803	$30,953,479	*15-L2	6.00	$5,158,913	10.35%	$1,967	$5,156,946	10.34%
221250	CENTRALIZED TEST EQUIPMENT	$2,074,185	$1,197,326	$876,859	8-L2	4.67	$187,764	9.05%	($22)	$187,786	9.05%
	TOTAL ACCOUNT 2212	$97,834,981	$40,543,488	$57,291,493			$9,750,867	9.97%	$87,065	$9,663,802	9.88%
	ELECTRONIC MECHANICAL SWITCHING										
221510	STEP X STEP EQUIPMENT	$2,268,537	$2,199,222	$69,315	**	1.00	$69,315	3.06%	($19,726)	$89,041	3.93%
221520	CROSS BAR EQUIPMENT	$853,358	$770,626	$82,732	**	1.00	$82,732	9.69%	($4,097)	$86,829	10.17%
221530	OTHER MECHANICAL SWITCHING EQUIPMENT	$44,431	($4,589)	$49,020	**	1.00	$49,020	110.33%	$193	$48,827	109.89%
	TOTAL ACCOUNT 2215	$3,166,326	$2,965,259	$201,067			$201,067	6.35%	($23,630)	$224,697	7.10%
	TOTAL CENTRAL OFFICE SWITCHING	$101,059,053	$43,311,483	$57,747,570			$10,206,944	10.10%	$76,836	$10,130,108	10.02%

* INTERIM SURVIVOR CURVE. LIFESPAN METHOD UTILIZED. SERVICE LIVES VARY. ** TOTAL ANALOG SWITCHING PLANT SCHEDULED FOR RETIREMENT DURING 1993.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
BOOK DEPRECIATION RESERVE, COMPOSITE AVERAGE REMAINING LIFE, AMORTIZATION OF FIVE YEAR AVERAGE NET SALVAGE, AND AVERAGE REMAINING LIFE ELG/ARL DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	BOOK DEPR RESERVE	UNRECOVERED ORIGINAL COST	A.S.L./ SURVIVOR CURVE	AVERAGE REMAINING LIFE	ANNUAL DEPR ACCRUAL	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: ANNUAL DEPR RATE	FIVE YEAR AVERAGE NET SALVAGE	TOTAL ANNUAL DEPR ACCRUAL	ANNUAL DEPR RATE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	CENTRAL OFFICE TRANSMISSION										
	ANALOG TRANSMISSION EQUIPMENT										
223123	TERRESTRIAL MICROWAVE	$1,749,777	$1,166,233	$583,544	10-R2	1.90	$307,128	17.55%	$665	$306,463	17.51%
223212	ANALOG CARRIER - SUBSCRIBER	$1,791,802	$1,201,880	$589,922	8-L0	4.03	$146,383	8.17%	$15,703	$130,680	7.29%
223213	AML EQUIPMENT	$95,919	$42,673	$53,246	10-L0	4.45	$11,965	12.47%	$1,133	$10,832	11.29%
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$1,185,408	$786,867	$398,541	9-L0	4.83	$82,514	6.96%	$12,420	$70,094	5.91%
223216	MODEMS IN CO	$368,387	$128,082	$240,305	10-S0.5	6.66	$36,082	9.79%	$379	$35,703	9.69%
	TOTAL ANALOG TRANSMISSION EQUIP	$5,191,293	$3,325,735	$1,865,558			$584,072	11.25%	$30,300	$553,772	10.67%
	DIGITAL TRANSMISSION EQUIPMENT										
223251	DIGITAL CARRIER - TRUNK	$10,523,031	$5,317,954	$5,205,077	9-L0	4.81	$1,082,137	10.28%	$38,154	$1,043,983	9.92%
223252	DIGITAL CARRIER - SUBSCRIBER	$3,575,966	$541,257	$3,034,709	6-L1	2.91	$1,042,855	29.16%	$2,838	$1,040,017	29.08%
223253	FIBER OBTIC - TRUNK	$8,830,944	$2,528,021	$6,302,923	9-L2	6.36	$991,026	11.22%	($803)	$991,829	11.23%
223255	DIGITAL TRK INTF-REMOTE	$1,976,020	$674,561	$1,301,459	9-S3	5.17	$251,733	12.74%	$1,162	$250,571	12.68%
223256	DIGITAL TRK INTF-HOST	$7,268,569	$3,086,370	$4,182,199	12-R4	7.35	$569,007	7.83%	($197)	$569,204	7.83%
	TOTAL DIGITAL TRANS EQUIPMENT	$32,174,530	$12,148,163	$20,026,367			$3,936,758	12.24%	$41,154	$3,895,604	12.11%
	TOTAL CO TRANSMISSION EQUIPMENT	$37,365,823	$15,473,898	$21,891,925			$4,520,830	12.10%	$71,454	$4,449,376	11.91%
	TOTAL CENTRAL OFFICE ASSETS	$138,424,876	$58,785,381	$79,639,495			$14,727,774	10.64%	$148,290	$14,579,484	10.53%
	INFORMATION ORIG/TERM ASSETS										
235100	PUBLIC TELEPHONE TERMINAL EQUIPMENT	$1,445,422	$1,246,840	$198,582	17-L3	8.93	$22,238	1.54%	$40	$22,198	1.54%
236202	OTHER TERMINAL EQUIPMENT	$1,503,138	$1,234,663	$268,475	5-R2	1.81	$148,329	9.87%	$17,517	$130,812	8.70%
	TOTAL INFORMATION ORIG/TERM ASSETS	$2,948,560	$2,481,503	$467,057			$170,567	5.78%	$17,557	$153,010	5.19%
	POLES, CABLE AND WIRE FACILITIES										
241100	POLES	$21,830,107	$6,106,240	$15,723,867	29-L0	17.14	$917,378	4.20%	($162,364)	$1,079,742	4.95%
	AERIAL CABLE										
242110	NONMETALLIC FIBER	$9,294,340	$1,149,665	$8,144,675	25-R2	17.76	$458,597	4.93%	($191)	$458,788	4.94%
242151	METALLIC CABLE	$100,895,606	$37,617,256	$63,278,350	28-R2	12.54	$5,046,120	5.00%	($232,088)	$5,278,208	5.23%
	TOTAL ACCOUNT 2421	$110,189,946	$38,766,921	$71,423,025			$5,504,717	5.00%	($232,279)	$5,736,996	5.21%
	UNDERGROUND CABLE										
242210	NONMETALLIC	$382,373	$30,482	$351,891	25-R2	17.76	$19,814	5.18%	($59)	$19,873	5.20%
242251	METALLIC	$2,336,608	$692,896	$1,643,712	33-R0.5	14.00	$117,408	5.02%	($2,715)	$120,123	5.14%
	TOTAL ACCOUNT 2422	$2,718,981	$723,378	$1,995,603			$137,222	5.05%	($2,774)	$139,996	5.15%

* INTERIM SURVIVOR CURVE. LIFESPAN METHOD UTILIZED. SERVICE LIVES VARY. ** TOTAL ANALOG SWITCHING PLANT SCHEDULED FOR RETIREMENT DURING 1993.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
BOOK DEPRECIATION RESERVE, COMPOSITE AVERAGE REMAINING LIFE, AMORTIZATION OF FIVE YEAR AVERAGE NET SALVAGE, AND AVERAGE REMAINING LIFE ELG/ARL DEPRECIATION RATES
ELG VINTAGES - 1987 AND SUBSEQUENT

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	BOOK DEPR RESERVE	UNRECOVERED ORIGINAL COST	A.S.L./ SURVIVOR CURVE	AVERAGE REMAINING LIFE	ANNUAL DEPR ACCRUAL	ANNUAL DEPR EXPENSE ADJ FOR EXPERIENCED 5 YR AVG NET SALVAGE: ANNUAL DEPR RATE	FIVE YEAR AVERAGE NET SALVAGE	TOTAL ANNUAL DEPR ACCRUAL	ANNUAL DEPR RATE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	BURIED CABLE										
242310	NONMETALLIC	$344,280	$54,095	$290,185	25-R2	17.26	$16,813	4.88%	($178)	$16,991	4.94%
242351	METALLIC	$31,282,237	$9,708,989	$21,573,248	24-R3	14.20	$1,519,243	4.86%	($9,271)	$1,528,514	4.89%
	TOTAL ACCOUNT 2423	$31,626,517	$9,763,084	$21,863,433			$1,536,056	4.86%	($9,449)	$1,545,505	4.89%
242610	NONMETALLIC INTRABUILDING CABLE	$23,715	$3,235	$20,480	25-R2	16.77	$1,221	5.15%	($33)	$1,254	5.29%
242651	METALLIC INTRABUILDING CABLE	$1,708	$72	$1,636	25-R2	17.44	$94	5.50%	($25)	$119	6.97%
243100	AERIAL WIRE	$5,031,029	$1,083,011	$3,948,018	25-L0	15.25	$258,886	5.15%	($65,569)	$324,455	6.45%
244100	CONDUIT SYSTEMS	$2,860,552	$658,712	$2,201,840	50-R4	37.46	$58,778	2.05%	($2,111)	$60,889	2.13%
	TOTAL POLES, CABLE AND WIRE FACILITIES	$174,282,555	$57,104,653	$117,177,902			$8,414,352	4.83%	($474,604)	$8,888,956	5.10%
	TOTAL DEPRECIABLE PLANT IN SERVICE	$352,523,177	$128,948,899	$223,574,278			$25,918,646	7.35%	$185,188	$25,733,458	7.30%
	NON-DEPRECIABLE PLANT										
211100	LAND - GENERAL SUPPORT	$1,604,819	$0	$1,604,819							
	TOTAL UTILITY PLANT IN SERVICE	$354,127,996	$128,948,899	$225,179,097							

* INTERIM SURVIVOR CURVE. LIFESPAN METHOD UTILIZED. SERVICE LIVES VARY. ** TOTAL ANALOG SWITCHING PLANT SCHEDULED FOR RETIREMENT DURING 1993.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
MISCELLANEOUS ADJUSTMENT, AND ORIGINAL COST PER DEPRECIATION STUDY
AS OF DECEMBER 31, 1992

TELECOMMUNICATIONS PLANT IN SERVICE 12-31-92

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	P.I.S PENDING ANALYSIS	RWIP PENDING ANALYSIS	OTHER PROPERTY	TOTAL	MISCELLANEOUS ADJUSTMENTS	DEREGULATED PLANT IN SERVICE	ORIGINAL COST PER DEPR STUDY 12/31/92
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
DEPRECIABLE PLANT									
	GENERAL SUPPORT ASSETS								
211200	MOTOR VEHICLES	$7,743,314	$5,706			$7,749,020			$7,749,020
211500	GARAGE WORK EQUIPMENT	$39,154				$39,154			$39,154
211600	OTHER WORK EQUIPMENT	$2,419,189	$52,881			$2,472,070	($188)		$2,471,882
212199	BUILDINGS & (212140)	$21,821,198	$460,008			$22,281,206			$22,281,206
212200	FURNITURE	$1,018,122				$1,018,122			$1,018,122
	OFFICE EQUIPMENT								
212311	ELECTRONIC OFFICE EQUIPMENT	$769,976	$109,506			$879,482			$879,482
212312	OTHER OFFICE EQUIPMENT	$92,098				$92,098			$92,098
212320	CO COMMUNICATION EQUIPMENT	$942,749	$93,045			$1,035,794	($576)		$1,035,218
	TOTAL ACCT 2123	$1,804,823	$202,551	$0	$0	$2,007,374	($576)	$0	$2,006,798
212400	GENERAL PURPOSE COMPUTERS	$1,195,399	$105,605			$1,301,004			$1,301,004
	TOTAL GENERAL SUPPORT ASSETS	$36,041,199	$826,751	$0	$0	$36,867,950	($764)	$0	$36,867,186
	CENTRAL OFFICE ASSETS								
	SWITCHING EQUIPMENT								
221110	ANALOG ELECTRONIC SWITCHING - CO	$57,746				$57,746			$57,746
	DIGITAL ELECTRONIC SWITCHING								
221210	DIGITAL CO EQUIPMENT	$37,940,502	$3,200,050	$783,280	$267,249	$40,624,521	($6,713)	$235,755	$40,382,053
221220	SOFTWARE	$1,793,974	$206			$1,794,180			$1,794,180
221230	SPARES - REMOTE	$1,392,496	$94,688			$1,487,184			$1,487,184
221231	SPARES - HOST	$2,223,418	$15,679	$4,000		$2,235,097			$2,235,097
221240	REMOTE EQUIPMENT	$45,008,750	$4,884,107	$30,575		$49,862,282			$49,862,282
221250	CENTRALIZED TEST EQUIPMENT	$2,074,185				$2,074,185			$2,074,185
	TOTAL ACCOUNT 2212	$90,433,325	$8,194,730	$817,855	$267,249	$98,077,449	($6,713)	$235,755	$97,834,981
	ELECTRONIC MECHANICAL SWITCHING								
221510	STEP X STEP EQUIPMENT	$3,698,211	$496	$1,431,404	$1,234	$2,268,537			$2,268,537
221520	CROSS BAR EQUIPMENT	$1,293,708	$3,550	$443,900		$853,358			$853,358
221530	OTHER MECHANICAL SWITCHING EQUIPMENT	$44,431				$44,431			$44,431
	TOTAL ACCOUNT 2215	$5,036,350	$4,046	$1,875,304	$1,234	$3,166,326	$0	$0	$3,166,326
	TOTAL CENTRAL OFFICE SWITCHING	$95,527,421	$8,198,776	$2,693,159	$268,483	$101,301,521	($6,713)	$235,755	$101,059,053

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
MISCELLANEOUS ADJUSTMENT, AND ORIGINAL COST PER DEPRECIATION STUDY
AS OF DECEMBER 31, 1992

TELECOMMUNICATIONS PLANT IN SERVICE 12-31-92

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	P.I.S PENDING ANALYSIS	RWIP PENDING ANALYSIS	OTHER PROPERTY	TOTAL	MISCELLANEOUS ADJUSTMENTS	DEREGULATED PLANT IN SERVICE	ORIGINAL COST PER DEPR STUDY 12/31/92
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
	CENTRAL OFFICE TRANSMISSION								
	ANALOG TRANSMISSION EQUIPMENT								
223123	TERRESTRIAL MICROWAVE	$1,749,777				$1,749,777			$1,749,777
223212	ANALOG CARRIER - SUBSCRIBER	$1,797,744	$6,859	$12,801		$1,791,802			$1,791,802
223213	AML EQUIPMENT	$95,338	$581			$95,919			$95,919
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$1,121,429	$63,979			$1,185,408			$1,185,408
223216	MODEMS IN CO	$321,762	$46,625			$368,387			$368,387
	TOTAL ANALOG TRANSMISSION EQUIP	$5,086,050	$118,044	$12,801	$0	$5,191,293	$0	$0	$5,191,293
	DIGITAL TRANSMISSION EQUIPMENT								
223251	DIGITAL CARRIER - TRUNK	$9,926,865	$542,589		$55,574	$10,525,028	($596)	$1,401	$10,523,031
223252	DIGITAL CARRIER - SUBSCRIBER	$3,265,811	$159,257	$21,117	$180,047	$3,583,998	($8,032)		$3,575,966
223253	FIBER OPTIC - TRUNK	$7,146,139	$1,684,805			$8,830,944			$8,830,944
223255	DIGITAL TRK INTF-REMOTE	$1,889,816	$86,204			$1,976,020			$1,976,020
223256	DIGITAL TRK INTF-HOST	$7,175,914	$92,655			$7,268,569			$7,268,569
	TOTAL DIGITAL TRANS EQUIPMENT	$29,404,545	$2,565,510	$21,117	$235,621	$32,184,559	($8,628)	$1,401	$32,174,530
	TOTAL CO TRANSMISSION EQUIPMENT	$34,490,595	$2,683,554	$33,918	$235,621	$37,375,852	($8,628)	$1,401	$37,365,823
	TOTAL CENTRAL OFFICE ASSETS	$130,018,016	$10,882,330	$2,727,077	$504,104	$138,677,373	($15,341)	$237,156	$138,424,876
	INFORMATION ORIG/TERM ASSETS								
235100	PUBLIC TELEPHONE TERMINAL EQUIPMENT	$1,445,422				$1,445,422			$1,445,422
236202	OTHER TERMINAL EQUIPMENT	$1,485,603	$17,535			$1,503,138			$1,503,138
	TOTAL INFORMATION ORIG/TERM ASSETS	$2,931,025	$17,535	$0	$0	$2,948,560	$0	$0	$2,948,560
	POLES, CABLE AND WIRE FACILITIES								
241100	POLES	$21,570,022	$304,652	$44,567		$21,830,107			$21,830,107
	AERIAL CABLE								
242110	NONMETALLIC FIBER	$9,258,513	$35,827			$9,294,340			$9,294,340
242151	METALLIC CABLE	$100,052,284	$1,267,163	$423,841		$100,895,606			$100,895,606
	TOTAL ACCOUNT 2421	$109,310,797	$1,302,990	$423,841	$0	$110,189,946	$0	$0	$110,189,946
	UNDERGROUND CABLE								
242210	NONMETALLIC	$382,373				$382,373			$382,373
242251	METALLIC	$2,351,599	$13,809	$28,800		$2,336,608			$2,336,608
	TOTAL ACCOUNT 2422	$2,733,972	$13,809	$28,800	$0	$2,718,981	$0	$0	$2,718,981

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF ORIGINAL COST OF UTILITY PLANT IN SERVICE AS OF DECEMBER 31, 1992
MISCELLANEOUS ADJUSTMENT, AND ORIGINAL COST PER DEPRECIATION STUDY
AS OF DECEMBER 31, 1992

TELECOMMUNICATIONS PLANT IN SERVICE 12-31-92

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	ORIGINAL COST 12/31/92	P.I.S PENDING ANALYSIS	RWIP PENDING ANALYSIS	OTHER PROPERTY	TOTAL	MISCELLANEOUS ADJUSTMENTS	DEREGULATED PLANT IN SERVICE	ORIGINAL COST PER DEPR STUDY 12/31/92
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
	BURIED CABLE								
242310	NONMETALLIC	$344,280				$344,280			$344,280
242351	METALLIC	$30,560,957	$773,744	$52,464		$31,282,237			$31,282,237
	TOTAL ACCOUNT 2423	$30,905,237	$773,744	$52,464	$0	$31,626,517	$0	$0	$31,626,517
242610	NONMETALLIC INTRABUILDING CABLE	$23,715				$23,715			$23,715
242651	METALLIC INTRABUILDING CABLE	$1,708				$1,708			$1,708
243100	AERIAL WIRE	$4,975,915	$62,582	$7,468		$5,031,029			$5,031,029
244100	CONDUIT SYSTEMS	$2,855,851	$4,701			$2,860,552			$2,860,552
	TOTAL POLES, CABLE AND WIRE FACILITIES	$172,377,217	$2,462,478	$557,140	$0	$174,282,555	$0	$0	$174,282,555
	TOTAL DEPRECIABLE PLANT IN SERVICE	$341,367,457	$14,189,094	$3,284,217	$504,104	$352,776,438	($16,105)	$237,156	$352,523,177
NON-DEPRECIABLE PLANT									
211100	LAND - GENERAL SUPPORT	$1,604,819				$1,604,819			$1,604,819
	TOTAL UTILITY PLANT IN SERVICE	$342,972,276	$14,189,094	$3,284,217	$504,104	$354,381,257	($16,105)	$237,156	$354,127,996

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF EXPERIENCED NET SALVAGE FOR FIVE YEAR PERIOD ENDING
DECEMBER 31, 1992, ESTIMATED NET SALVAGE FOR 1993 AND
AVERAGE NET SALVAGE FOR FIVE YEAR PERIOD ENDING DECEMBER 31, 1993

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	1988 NET SALVAGE	1989 NET SALVAGE	1990 NET SALVAGE	1991 NET SALVAGE	1992 NET SALVAGE	TOTAL NET SALVAGE 1988-1992	1988-1992 5 YEAR AVERAGE NET SALVAGE	1993 ESTIMATED NET SALVAGE **	TOTAL NET SALVAGE 1989-1993	1989-1993 5 YEAR AVERAGE NET SALVAGE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
DEPRECIABLE PLANT											
	GENERAL SUPPORT ASSETS										
211200	MOTOR VEHICLES	$66,534	$25,421	$49,386	$19,147	$70,800	$231,288	$46,258	$44,973	$209,727	$41,945
211500	GARAGE WORK EQUIPMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
211600	OTHER WORK EQUIPMENT	$1,800	$0	$1,035	$146	$1,039	$4,020	$804	$593	$2,813	$563
212199	BUILDINGS & (212140)	($579)	$31,080	($62,667)	($75,769)	$1,125,235	$1,017,300	$203,460	($162,767)	$855,112	$171,022
212200	FURNITURE	$395	$55,450	$282	$27,954	$25	$84,106	$16,821	$13,990	$97,701	$19,540
	OFFICE EQUIPMENT										
212311	ELECTRONIC OFFICE EQUIPMENT	$100	$150	$109,097	$50	$0	$109,397	$21,879	$25	$109,322	$21,864
212312	OTHER OFFICE EQUIPMENT	$0	$0	$11,521	$0	$0	$11,521	$2,304	$0	$11,521	$2,304
212320	CO COMMUNICATION EQUIPMENT	$0	$12,165	$6,900	$2,577	$2,213	$23,855	$4,771	$2,395	$26,250	$5,250
	TOTAL ACCT 2123	$100	$12,315	$127,518	$2,627	$2,213	$144,773	$28,954	$2,420	$147,093	$29,418
212400	GENERAL PURPOSE COMPUTERS	$20,000	$970,938	($2,696)	$0	$0	$988,242	$197,648	$0	$968,242	$193,648
	TOTAL GENERAL SUPPORT ASSETS	$88,250	$1,095,204	$112,858	($25,895)	$1,199,312	$2,469,729	$493,945	($100,791)	$2,280,688	$456,136
	CENTRAL OFFICE ASSETS										
	SWITCHING EQUIPMENT										
221110	ANALOG ELECTRONIC SWITCHING - CO	$77,590	($103)	$0	($8,433)	($2,047)	$67,007	$13,401	($5,240)	($15,823)	$0 *
	DIGITAL ELECTRONIC SWITCHING										
221210	DIGITAL CO EQUIPMENT	($6,271)	($6,962)	$308,074	$108,607	$23,555	$427,003	$85,401	$66,081	$499,355	$99,871
221220	SOFTWARE	$0	($86)	($372)	$0	($564)	($1,022)	($203)	($282)	($1,304)	($261)
221230	SPARES - REMOTE	$0	($90)	$0	$0	($33)	($123)	($24)	($17)	($140)	($28)
221231	SPARES - HOST	($27)	$0	($44)	($174)	($31)	($276)	($54)	($103)	($352)	($70)
221240	REMOTE EQUIPMENT	($4,275)	($7,029)	($12,179)	$45,184	($11,865)	$9,836	$1,967	$16,660	$30,771	$6,154
221250	CENTRALIZED TEST EQUIPMENT	$0	$0	$0	($344)	$227	($117)	($22)	($59)	($176)	($35)
	TOTAL ACCOUNT 2212	($10,573)	($14,167)	$295,479	$153,273	$11,289	$435,301	$87,065	$82,280	$528,154	$105,631
	ELECTRONIC MECHANICAL SWITCHING										
221510	STEP X STEP EQUIPMENT	($16,832)	($6,721)	($10,264)	$1,751	($66,568)	($98,634)	($19,726)	($32,409)	($114,211)	$0 *
221520	CROSS BAR EQUIPMENT	($18,069)	($11,952)	($2,830)	$1,197	$11,165	($20,489)	($4,097)	$6,181	$3,761	$0 *
221530	OTHER MECHANICAL SWITCHING EQUIP	$0	$967	$0	$0	$0	$967	$193	$0	$967	$0 *
	TOTAL ACCOUNT 2215	($34,901)	($17,706)	($13,094)	$2,948	($55,403)	($118,156)	($23,630)	($26,228)	($109,483)	$0
	TOTAL CENTRAL OFFICE SWITCHING	$32,116	($31,976)	$282,385	$147,788	($46,161)	$384,152	$76,836	$50,812	$402,848	$105,631
	CENTRAL OFFICE TRANSMISSION										
	ANALOG TRANSMISSION EQUIPMENT										
223123	TERRESTRIAL MICROWAVE	$0	$3,727	$0	$0	($400)	$3,327	$665	($200)	$3,127	$625
223212	ANALOG CARRIER - SUBSCRIBER	$58,023	$13,788	$1,063	($226)	$5,866	$78,514	$15,703	$2,820	$23,311	$4,662
223213	AML EQUIPMENT	$11,278	($2,001)	$7,155	($4,015)	($6,752)	$5,665	$1,133	($5,384)	($10,997)	($2,199)
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$14,773	$6,380	$19,866	$7,186	$13,894	$62,099	$12,420	$10,540	$57,866	$11,573
223216	MODEMS IN CO	$0	($18)	($15)	$358	$1,568	$1,893	$379	$963	$2,856	$571
	TOTAL ANALOG TRANSMISSION EQUIP	$84,074	$21,876	$28,069	$3,303	$14,176	$151,498	$30,300	$8,739	$76,163	$15,232

* ANALOG SWITCH PLANT SCHEDULED FOR RET DURING 1993. ** 1993 EST NET SALV (BASED ON AVG OF 1991 & 1992) FOR BLDGS EXCLUDES 1991 NONRECURRING SALVAGE OF $1,375,000.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF EXPERIENCED NET SALVAGE FOR FIVE YEAR PERIOD ENDING
DECEMBER 31, 1992, ESTIMATED NET SALVAGE FOR 1993 AND
AVERAGE NET SALVAGE FOR FIVE YEAR PERIOD ENDING DECEMBER 31, 1993

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	1988 NET SALVAGE	1989 NET SALVAGE	1990 NET SALVAGE	1991 NET SALVAGE	1992 NET SALVAGE	TOTAL NET SALVAGE 1988-1992	1988-1992 5 YEAR AVERAGE NET SALVAGE	1993 ESTIMATED NET SALVAGE **	TOTAL NET SALVAGE 1989-1993	1989-1993 5 YEAR AVERAGE NET SALVAGE
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
	DIGITAL TRANSMISSION EQUIPMENT										
223251	DIGITAL CARRIER - TRUNK	$13,743	$9,386	$65,341	$21,259	$81,040	$190,769	$38,154	$51,149	$228,175	$45,635
223252	DIGITAL CARRIER - SUBSCRIBER	($263)	($493)	$2,877	($4,872)	$16,940	$14,189	$2,838	$6,034	$20,486	$4,097
223253	FIBER OPTIC - TRUNK	($1,054)	($223)	($2,717)	($1,396)	$1,372	($4,018)	($803)	($12)	($2,976)	($595)
223255	DIGITAL TRK INTF-REMOTE	$0	$0	$0	$5,808	$0	$5,808	$1,162	$2,904	$8,712	$1,742
223256	DIGITAL TRK INTF-HOST	($161)	($523)	$0	($304)	$0	($988)	($197)	($152)	($979)	($196)
	TOTAL DIGITAL TRANS EQUIPMENT	$12,265	$8,147	$65,501	$20,495	$99,352	$205,760	$41,154	$59,923	$253,418	$50,683
	TOTAL CO TRANSMISSION EQUIPMENT	$96,339	$30,023	$93,570	$23,798	$113,528	$357,258	$71,454	$68,662	$329,581	$65,915
	TOTAL CENTRAL OFFICE ASSETS	$128,455	($1,953)	$375,955	$171,586	$67,367	$741,410	$148,290	$119,474	$732,429	$171,546
	INFORMATION ORIG/TERM ASSETS										
235100	PUBLIC TELEPHONE TERMINAL EQUIPMEN	($2,299)	$1,579	$343	$518	$58	$199	$40	$288	$2,786	$557
236202	OTHER TERMINAL EQUIPMENT	($292)	$106,805	($7,496)	($5,537)	($5,893)	$87,587	$17,517	($5,715)	$82,164	$16,433
	TOTAL INFORMATION ORIG/TERM ASSETS	($2,591)	$108,384	($7,153)	($5,019)	($5,835)	$87,786	$17,557	($5,427)	$84,950	$16,990
	POLES, CABLE AND WIRE FACILITIES										
241100	POLES	($101,598)	($149,769)	($195,430)	($176,593)	($188,437)	($811,827)	($162,364)	($182,515)	($892,744)	($178,549)
	AERIAL CABLE										
242110	NONMETALLIC FIBER	($37)	$0	($728)	$0	($195)	($960)	($191)	($98)	($1,021)	($204)
242151	METALLIC CABLE	($178,705)	($219,284)	($143,593)	($350,847)	($268,014)	($1,160,443)	($232,088)	($309,430)	($1,291,168)	($258,234)
	TOTAL ACCOUNT 2421	($178,742)	($219,284)	($144,321)	($350,847)	($268,209)	($1,161,403)	($232,279)	($309,528)	($1,292,189)	($258,438)
	UNDERGROUND CABLE										
242210	NONMETALLIC	$0	$0	($302)	$0	$0	($302)	($59)	$0	($302)	($60)
242251	METALLIC	($611)	($853)	($3,782)	($133)	($8,203)	($13,582)	($2,715)	($4,168)	($17,139)	($3,428)
	TOTAL ACCOUNT 2422	($611)	($853)	($4,084)	($133)	($8,203)	($13,884)	($2,774)	($4,168)	($17,441)	($3,488)
	BURIED CABLE										
242310	NONMETALLIC	$0	$0	$0	($895)	$0	($895)	($178)	($448)	($1,343)	($269)
242351	METALLIC	($5,143)	($8,273)	($7,122)	($8,590)	($17,232)	($46,360)	($9,271)	($12,911)	($54,128)	($10,826)
	TOTAL ACCOUNT 2423	($5,143)	($8,273)	($7,122)	($9,485)	($17,232)	($47,255)	($9,449)	($13,359)	($55,471)	($11,095)
242610	NONMETALLIC INTRABUILDING CABLE	$0	($26)	$0	($142)	$0	($168)	($33)	($71)	($239)	($48)
242651	METALLIC INTRABUILDING CABLE	$0	$0	$0	$0	($130)	($130)	($25)	($65)	($195)	($39)
243100	AERIAL WIRE	($41,360)	($89,550)	($67,378)	($60,979)	($68,583)	($327,850)	($65,569)	($64,781)	($351,271)	($70,254)
244100	CONDUIT SYSTEMS	($37)	$960	($3,905)	($6,602)	($978)	($10,562)	($2,111)	($3,790)	($14,315)	($2,863)
	TOTAL POLES, CABLE AND WIRE FAC	($327,491)	($466,795)	($422,240)	($604,781)	($551,772)	($2,373,079)	($474,604)	($578,277)	($2,623,865)	($524,774)
	TOTAL DEPRECIABLE PLANT IN SERVICE	($113,377)	$734,840	$59,420	($464,109)	$709,072	$925,846	$185,188	($565,021)	$474,202	$119,898

* ANALOG SWITCH PLANT SCHEDULED FOR RET DURING 1993. ** 1993 EST NET SALV (BASED ON AVG OF 1991 & 1992) FOR BLDGS EXCLUDES 1991 NONRECURRING SALVAGE OF $1,375,000.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1992,
ADJUSTMENTS RELATED TO ELIMINATION OF BOOKED PROSPECTIVE NET SALVAGE,
AND ADJUSTED BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1992

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	BOOK DEPR RESERVE 12-31-92	PROSPECTIVE NET ADJUSTED: LESS PROSPECTIVE SALVAGE	PROSPECTIVE NET ADJUSTED: PLUS 5 YEAR AMORTIZATION	PROSPECTIVE NET ADJUSTED: NET ADJUSTMENT	ADJUSTED BOOK RESERVE
(A)	(B)	(C)	(D)	(E)	(F)	(G)
DEPRECIABLE PLANT						
	GENERAL SUPPORT ASSETS					
211200	MOTOR VEHICLES	$3,589,309	$263,088	($814,550)	($1,077,638)	$2,511,671
211500	GARAGE WORK EQUIPMENT	$25,067			$0	$25,067
211600	OTHER WORK EQUIPMENT	$1,550,307		($16,212)	($16,212)	$1,534,095
212199	BUILDINGS & (212140)	$5,159,739		($136,964)	($136,964)	$5,022,775
212200	FURNITURE	$507,180		($84,037)	($84,037)	$423,143
	OFFICE EQUIPMENT					
212311	ELECTRONIC OFFICE EQUIPMENT	$469,637		($79,351)	($79,351)	$390,286
212312	OTHER OFFICE EQUIPMENT	$74,401		($8,783)	($8,783)	$65,618
212320	CO COMMUNICATION EQUIPMENT	$744,083		($26,681)	($26,681)	$717,402
	TOTAL ACCT 2123	$1,288,121		($114,815)	($114,815)	$1,173,306
212400	GENERAL PURPOSE COMPUTERS	$709,875		($822,570)	($822,570)	($112,695)
	TOTAL GENERAL SUPPORT ASSETS	$12,829,598	$263,088	($1,989,148)	($2,252,236)	$10,577,362
	CENTRAL OFFICE ASSETS					
	SWITCHING EQUIPMENT					
221110	ANALOG ELECTRONIC SWITCHING - CO	$57,746	($120,371)*	($375,381)	($255,010)	($197,264)
	DIGITAL ELECTRONIC SWITCHING					
221210	DIGITAL CO EQUIPMENT	$18,969,252		($972,665)	($972,665)	$17,996,587
221220	SOFTWARE	$1,728,707		($53,258)	($53,258)	$1,675,449
221230	SPARES - REMOTE	$388,201		($11,147)	($11,147)	$377,054
221231	SPARES - HOST	$421,795		($33,526)	($33,526)	$388,269
221240	REMOTE EQUIPMENT	$19,593,449		($684,646)	($684,646)	$18,908,803
221250	CENTRALIZED TEST EQUIPMENT	$1,265,406		($68,080)	($68,080)	$1,197,326
	TOTAL ACCOUNT 2212	$42,366,810	$0	($1,823,322)	($1,823,322)	$40,543,488
	ELECTRONIC MECHANICAL SWITCHING					
221510	STEP X STEP EQUIPMENT	$2,268,513	($167,481)*	($236,772)	($69,291)	$2,199,222
221520	CROSS BAR EQUIPMENT	$853,136	($25,761)*	($108,271)	($82,510)	$770,626
221530	OTHER MECHANICAL SWITCHING EQUIPMENT	$39,454	*	($44,043)	($44,043)	($4,589)
	TOTAL ACCOUNT 2215	$3,161,103	($193,242)	($389,086)	($195,844)	$2,965,259
	TOTAL CENTRAL OFFICE SWITCHING	$45,585,659	($313,613)	($2,587,789)	($2,274,176)	$43,311,483
	CENTRAL OFFICE TRANSMISSION					
	ANALOG TRANSMISSION EQUIPMENT					
223123	TERRESTRIAL MICROWAVE	$1,289,671	$39,230	($84,208)	($123,438)	$1,166,233
223212	ANALOG CARRIER - SUBSCRIBER	$1,324,203		($122,323)	($122,323)	$1,201,880
223213	AML EQUIPMENT	$66,196		($23,523)	($23,523)	$42,673
223214	VOICE FREQUENCY REPEATER EQUIPMENT	$828,163		($41,296)	($41,296)	$786,867
223216	MODEMS IN CO	$128,515		($433)	($433)	$128,082
	TOTAL ANALOG TRANSMISSION EQUIP	$3,636,748	$39,230	($271,783)	($311,013)	$3,325,735

* ELIMINATION OF JOURNAL ENTRIES REVERSING NEGATIVE RESERVE BALANCE.

COMMONWEALTH TELEPHONE COMPANY
SUMMARY OF BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1992,
ADJUSTMENTS RELATED TO ELIMINATION OF BOOKED PROSPECTIVE NET SALVAGE,
AND ADJUSTED BOOK DEPRECIATION RESERVE AS OF DECEMBER 31, 1992

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	BOOK DEPR RESERVE 12-31-92	PROSPECTIVE NET ADJUSTED: LESS PROSPECTIVE SALVAGE	PROSPECTIVE NET ADJUSTED: PLUS 5 YEAR AMORTIZATION	PROSPECTIVE NET ADJUSTED: NET ADJUSTMENT	ADJUSTED BOOK RESERVE
(A)	(B)	(C)	(D)	(E)	(F)	(G)
	DIGITAL TRANSMISSION EQUIPMENT					
223251	DIGITAL CARRIER - TRUNK	$5,712,419		($394,465)	($394,465)	$5,317,954
223252	DIGITAL CARRIER - SUBSCRIBER	$599,210		($57,953)	($57,953)	$541,257
223253	FIBER OBTIC - TRUNK	$2,525,071		$2,950	$2,950	$2,528,021
223255	DIGITAL TRK INTF-REMOTE	$688,415		($13,854)	($13,854)	$674,561
223256	DIGITAL TRK INTF-HOST	$3,137,366		($50,996)	($50,996)	$3,086,370
	TOTAL DIGITAL TRANS EQUIPMENT	$12,662,481	$0	($514,318)	($514,318)	$12,148,163
	TOTAL CO TRANSMISSION EQUIPMENT	$16,299,229	$39,230	($786,101)	($825,331)	$15,473,898
	TOTAL CENTRAL OFFICE ASSETS	$61,884,888	($274,383)	($3,373,890)	($3,099,507)	$58,785,381
	INFORMATION ORIG/TERM ASSETS					
235100	PUBLIC TELEPHONE TERMINAL EQUIPMENT	$1,195,396		$51,444	$51,444	$1,246,840
236202	OTHER TERMINAL EQUIPMENT	$1,305,468		($70,805)	($70,805)	$1,234,663
	TOTAL INFORMATION ORIG/TERM ASSETS	$2,500,864	$0	($19,361)	($19,361)	$2,481,503
	POLES, CABLE AND WIRE FACILITIES					
241100	POLES	$9,715,052	$4,767,907	$1,159,095	($3,608,812)	$6,106,240
	AERIAL CABLE					
242110	NONMETALLIC FIBER	$1,140,797		$8,868	$8,868	$1,149,665
242151	METALLIC CABLE	$48,270,601	$12,195,936	$1,542,591	($10,653,345)	$37,617,256
	TOTAL ACCOUNT 2421	$49,411,398	$12,195,936	$1,551,459	($10,644,477)	$38,766,921
	UNDERGROUND CABLE					
242210	NONMETALLIC	$33,296		($2,814)	($2,814)	$30,482
242251	METALLIC	$726,943		($34,047)	($34,047)	$692,896
	TOTAL ACCOUNT 2422	$760,239	$0	($36,861)	($36,861)	$723,378
	BURIED CABLE					
242310	NONMETALLIC	$55,462		($1,367)	($1,367)	$54,095
242351	METALLIC	$11,707,055	$1,789,459	($208,607)	($1,998,066)	$9,708,989
	TOTAL ACCOUNT 2423	$11,762,517	$1,789,459	($209,974)	($1,999,433)	$9,763,084
242610	NONMETALLIC INTRABUILDING CABLE	$3,779		($544)	($544)	$3,235
242651	METALLIC INTRABUILDING CABLE	$46		$26	$26	$72
243100	AERIAL WIRE	$5,613,327	$5,234,814	$704,498	($4,530,316)	$1,083,011
244100	CONDUIT SYSTEMS	$689,888		($31,176)	($31,176)	$658,712
	TOTAL POLES, CABLE AND WIRE FACILITIES	$77,956,246	$23,988,116	$3,136,523	($20,851,593)	$57,104,653
	TOTAL DEPRECIABLE PLANT IN SERVICE	$155,171,596	$23,976,821	($2,245,876)	($26,222,697)	$128,948,899

* ELIMINATION OF JOURNAL ENTRIES REVERSING NEGATIVE RESERVE BALANCE.

COMMONWEALTH TELEPHONE COMPANY

General

This report sets forth the results of our study of the depreciable property of the Commonwealth Telephone Company (the Company) as of December 31, 1992 and contains the basic parameters (recommended average service lives and life characteristics) for the proposed average remaining life depreciation rates until a subsequent service life study is completed. All average service lives set forth in this report are developed based upon plant in service as of December 31, 1992.

The scope of the study included an analysis of Company historical data through December 31, 1992, together with a review of various engineering schedules, as well as Company plans and policies, to determine prior and prospective factors affecting the Company's plant in service. Accordingly, this study includes an interpretation of past service life data experience and future life expectancies to determine the appropriate average service lives of the Company's surviving plant. The service lives and life characteristics, resulting from the study, were utilized together with the Company's plant in service and book depreciation reserve to determine the recommended Average Remaining Life (ARL) depreciation rates related to the Company's plant in service as of December 31, 1992. Furthermore, the Company's 1993 capital budget reflecting estimated additions and retirements was utilized to update the December 31, 1992 plant in

service and depreciation reserves to December 31, 1993. Using the service life parameters developed per the study together with 1993 estimated net salvage, and amortization of five year average net salvage, annual depreciation expense and rates were calculated relative to the Company's property as of December 31, 1993.

In preparing the study, the Company's historical investment data were studied using various service life analysis techniques. Further, the Company's management plans were reviewed to delineate factors which could have a bearing on the service lives of the Company's property.

The Company maintains a property record containing a summary of its fixed capital investments by property account. This investment data was analyzed and summarized by property group and/or sub group and vintage then utilized as a basis for the various depreciation calculations.

Depreciation Study Overview

There are numerous methods utilized to recover property investment depending upon the goal. For example, accelerated methods such as double declining balance and sum of years digits are methods used in tax accounting to motivate additional investments. Broad Group (BG) and Equal Life Group (ELG) are both Straight Line Grouping Procedures recognized and utilized by various regulatory jurisdictions depending upon the policy of the specific agency.

The Straight Line (Group) Method of depreciation utilized in

this study to develop the recommended depreciation rates is a composite of the Broad Group and Equal Life Group Procedure together with the Average Remaining Life Technique. The Company telephone plant in service is being depreciated utilizing the Broad Group Procedure for vintages through 1986 and the Equal Life Group Procedure for vintages 1987 and subsequent. The use of this procedure and technique is based upon recovering the net book cost (original cost less book reserve) of the surviving plant in service over its estimated remaining useful life. Any variance between the book reserve and an implied theoretical calculated reserve is compensated for under this procedure. That is, as the Company's book reserve increases above or declines below the theoretical reserve at a specific point in time, the Company's average remaining life depreciation rate in subsequent years will be increased or decreased to compensate for the variance, thereby, assuring full recovery of the Company's investment by the end of the property's life.

The Company, like any other business, includes as an annual operating expense an amount which reflects a portion of the capital investment which was consumed in providing service during the accounting period. The annual depreciation amount to be utilized is based upon the remaining productive life over which the undepreciated capital investment needs to be recovered. The determination of the productive remaining life for each property group usually includes an in-depth study of past experience in addition to estimates of future expectations.

Annual Depreciation Accrual

Through the utilization of the Composite Average Remaining Life Technique, the Company will recover the undepreciated fixed capital investment in the appropriate amounts as annual depreciation expense in each year throughout the remaining life of the property. The procedures incorporate the future life expectancy of the property, and the vintaged surviving plant in service, together with the book depreciation reserve balance to develop the annual depreciation rate for each property account. Accordingly, the ARL technique meets the objective of providing a straight line recovery of the undepreciated fixed capital property investment.

As indicated, the use of the Average Remaining Life Technique results in charging the appropriate annual depreciation amounts over the remaining life of the property to insure full recovery by end of life. That does not mean that once an average remaining life is estimated, it can not be changed at any point throughout the service life, but that the annual expense is calculated on a Straight Line Method rather than by the previously mentioned, "sum of the years digits" or "double declining balance" methods, etc. The "group" refers to the method of calculating annual depreciation on the summation of the investment in any one depreciable group or plant account rather than calculating depreciation for each individual unit. Under Broad Group depreciation some units may be over depreciated and other units may be under depreciated at the time when they are

retired from service, but overall, the account is fully depreciated when average service life is attained. By comparison, the Equal Life Group depreciation rates are designed to fully accrue the cost of the asset group by the time of retirement. For both the Broad Group and Equal Life Group Procedures the full cost of the investment is credited to plant in service when the retirement occurs and likewise the depreciation reserve is debited with an equal retirement cost. No gain or loss is recognized at the time of property retirement because of the assumption the retired property was at average service life.

Group Depreciation Procedures

Group depreciation procedures are utilized to depreciate property when more than one item of property is being depreciated. Such a procedure is appropriate because all of the items within a specific group typically do not have identical service lives, but have lives which are dispersed over a range of time. Utilizing a group depreciation procedure allows for a condensed application of depreciation rates to groups of similar property in lieu of extensive depreciation calculations on an item by item basis. The two more common group depreciation procedures are Broad Group (BG) and Equal Life Group (ELG).

In developing depreciation rates using the Broad Group procedure, the annual depreciation rate is based on the average of the overall group, which is then applied to the group's surviving original cost investment. A characteristic of this

procedure is that retirements of individual units occurring prior to average service life will be under depreciated, while individual units retired after average service life will be over depreciated when removed from service, but overall, the group investment will achieve full recovery by the end of the life of the total property group. That is, the under recovery occurring early in the life of the account is balanced by the over recovery occurring subsequent to average service life. In summary, the cost of the investment is complete at the end of the property's life cycle, but the rate of recovery does not match the consumption pattern which was used to provide service to the company's customers.

Under the Broad Group procedure, the annual depreciation rate is calculated by the following formula:

$$\text{Annual Accrual Rate, Percent} = \frac{100\% - \text{Salvage}}{\text{Average Service Life}} \times 100$$

The application of the Broad Group procedure to life span groups results in each vintage investment having a different average service life. This circumstance exists because the concurrent retirement of all vintages at the anticipated retirement year results in truncating and, therefore, restricting the life of each successive years vintage investment. An average service life is calculated for each vintage investment in accordance with the above formula. Subsequently, a composite service life and depreciation rate is calculated relative to all vintages within the property group by weighting the life for each

vintage by the related surviving vintage investment within the group.

In the Equal Life Group, the property group is subdivided, through the use of plant life tables, into equal life groups. In each equal life group, portions of the overall property group includes that portion which experiences the life of the specific sub-group. The relative size of each sub-group is determined from the overall group life characteristic (property dispersion curve). This procedure both overcomes the disadvantage of voluminous record requirements of unit depreciation, as well as, eliminates the need to base depreciation on overall lives as required under the average service live procedure. The application of this procedure results in each sub-group of the property having a single life. In this procedure, the full cost of short lived units is accrued during their lives leaving no under accruals to be recovered by over accruals on long lived plant. The annual depreciation for the group is the summation of the depreciation accruals based on the service life of each Equal Life Group.

The ELG Procedure is superior to the BG Procedure because it allocates the capital cost of a group property to annual expense in accordance with the consumption of the property group providing service to customers. In this regard, the company's customers are more appropriately charged with the cost of the property consumed in providing them service during the applicable service period. The more timely return of plant cost is

accomplished by fully accruing each unit's cost during its service life, thereby, not only reducing the risk of incomplete cost recovery, but also the procedure results in less return on rate base over the life of a depreciable group. The total depreciation expense is the same for all procedures which allocate the full capital cost to expense, but at any specific point in time, the depreciated original cost is less under the ELG procedure than under the BG procedure. This circumstance exists because under the equal life group procedure, the rate base is not maintained at a level of greater than the future service value of the surviving plant as is the case when using the average service life procedure. Consequently, the total return required from the ratepayers is less under the ELG procedure.

While the Equal Life Group procedure has been known to depreciation experts for many years widespread interest in applying the procedure developed only after high speed electronic computers became available to perform the large volume of arithmetic computations required in developing ELG based depreciation lives and rates. The table on the following page illustrates the procedure for calculating Equal Life Group depreciation accrual rates and summarizes the results of the underlying calculations. Depreciation rates are determined for each age interval (one year increment) during the life of a group of property which was installed in a given year or vintage group. The age of the vintage group is shown in column (A) of the ELG

XYZ UTILITY COMPANY
CALCULATION OF ASL, ARL AND ACCRUED DEPRECIATION FACTORS
BASED UPON AN IOWA 10-R3 CURVE USING THE EQUAL LIFE GROUP (ELG) PROCEDURE

				EQUAL LIFE GROUP PROCEDURE						
AGE AT BEGIN OF INTERVAL	LIFE TABLE BEGIN OF INTERVAL	RETIREMENT DURING INTERVAL	AVERAGE SURVIVING	AGE OF AMOUNT RETIRED	AMOUNT FOR EACH LIFE GROUP	AMOUNT FOR REMAINING LIFE GROUPS	AVERAGE SERVICE LIFE	AVERAGE REMAINING LIFE	ELG/ARL DEPR RATE	ACCRUED DEPR RES FACTOR
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
0.0	1.0000000	0.0009198	0.9995401	0.25	0.0009198	0.0583036	8.57	8.57	11.67	0.0000000
0.5	0.9990802	0.0033314	0.9974145	1.0	0.0033314	0.1131019	8.82	8.32	11.34	0.0566975
1.5	0.9957488	0.0065393	0.9924792	2.0	0.0032697	0.1098013	9.04	7.54	11.06	0.1659501
2.5	0.9892095	0.0117037	0.9833577	3.0	0.0039012	0.1062159	9.26	6.76	10.80	0.2700337
3.5	0.9775058	0.0193690	0.9678213	4.0	0.0048422	0.1018442	9.50	6.00	10.52	0.3683062
4.5	0.9581368	0.0300339	0.9431199	5.0	0.0060068	0.0964196	9.78	5.28	10.22	0.4600565
5.5	0.9281029	0.0442969	0.9059545	6.0	0.0073828	0.0897248	10.10	4.60	9.90	0.5447146
6.5	0.8838060	0.0631367	0.8522377	7.0	0.0090195	0.0815237	10.45	3.95	9.57	0.6217794
7.5	0.8206693	0.0876232	0.7768577	8.0	0.0109529	0.0715375	10.86	3.36	9.21	0.6906424
8.5	0.7330461	0.1166879	0.6747022	9.0	0.0129653	0.0595783	11.32	2.82	8.83	0.7505770
9.5	0.6163582	0.1431836	0.5447664	10.0	0.0143184	0.0459365	11.86	2.36	8.43	0.8010714
10.5	0.4731746	0.1533568	0.3964962	11.0	0.0139415	0.0318066	12.47	1.97	8.02	0.8423003
11.5	0.3198178	0.1363216	0.2516570	12.0	0.0113601	0.0191557	13.14	1.64	7.61	0.8753616
12.5	0.1834962	0.0975199	0.1347363	13.0	0.0075015	0.0097249	13.85	1.35	7.22	0.9022159
13.5	0.0859763	0.0559043	0.0580242	14.0	0.0039932	0.0039775	14.59	1.09	6.85	0.9254232
14.5	0.0300720	0.0244398	0.0178521	15.0	0.0016293	0.0011663	15.31	0.81	6.53	0.9473077
15.5	0.0056322	0.0055324	0.0028660	16.0	0.0003458	0.0001788	16.03	0.53	6.24	0.9667657
16.5	0.0000998	0.0000998	0.0000499	17.0	0.0000059	0.0000029	17.00	0.50	5.88	0.9705882
17.5	0.0000000	0.0000000	0.0000000	18.0	0.0000000	0.0000000				
		1.0000000				1.0000000				

TABLE 9

table. The percent surviving at the beginning of each age interval is determined from the Iowa 10-R3 survivor curve which is set forth in column (B). The percent retired during each age interval, as shown in column (C), is the difference between the percent surviving at successive age intervals. Accordingly, the percentage amount of the vintage group retired defines the size of each equal life group. For example, during the interval 3 1/2 to 4 1/2, 1.93690 percent of the vintage group is retired at an average age of four years. In this case, the 1.93690 percent of the group experiences an equal life of four years. Likewise, 3.00339 percent is retired during the interval 4 1/2 to 5 1/2 and experiences a service life of five years. Further, 4.42969 percent experiences a six-year life; etc. Calculations are made for each age interval from the zero age interval through the end of the life of the vintage group. The average service life for each age interval's equal life group is shown in column (E) of the table.

The amount to be accrued annually for each equal life group is equal to the percentage retired in the equal life group divided by its service life. Inasmuch as additions and retirements are assumed, for calculation purposes, to occur at midyear only one-half of the equal life group's annual accrual is allocated to expense during its first and last years of service life. The accrual amount for the property retired during age interval 0 to 1/2 must be equal to the amount retired to insure full recovery of that component during that period. The accruals

for each equal life group during the age intervals of the vintage group's life cycle are shown in column (F). The total accrual for a given year is the summation of the equal life group accruals for that year. For example, the total accrual for the second year, as shown in column (G), is 11.31019 percent and is the sum of all succeeding years remaining equal life group accruals plus one half of the current years life group accrual listed in column (F). For the zero age interval year, the total accrual is equal to one half of the sum of all succeeding years remaining equal life accruals plus the amount for the zero interval equal life group accrual. The one half year accrual for the zero age interval is consistent with the half year convention relative to property during its installation year. The sum of the annual accruals for each age interval contained in column (G) total to 1.000 demonstrating that the developed rates will recover 100% of plant no more and no less. The annual accrual rate which will result in the accrual amount is the ratio of the accrual amount (11.31019 percent) to the average percent surviving during the interval, column (D), (99.74145 percent), which is a rate of 11.34% (column J). Column (J) contains a summary of the accrual rates for each age interval of the property groups life cycle based upon an Iowa 10-R3 survivor curve.

Remaining Life Technique

In the Average Remaining Life depreciation technique, the annual accrual is calculated according to the following formula

where, (A) the annual depreciation for each group equals, (D) the depreciable cost of plant, less (U) the accumulated provision for depreciation, less (S) the estimated future net salvage, divided by (R) the composite remaining life of the group:

$$A = \frac{D - U - S}{R}$$

The annual accrual rate (a) is expressed as a percentage of the depreciable plant balance by dividing the equation by (D) the depreciable cost of plant times 100:

$$(a) = \frac{D - U - S}{D} \times \frac{1}{} \times 100$$

As further indicated by the equation, the accumulated provision for depreciation by vintage is required in order to calculate the remaining life depreciation rate for each property group. In practice, most often such detail is not available; therefore, composite remaining lives are determined for each depreciable group, i.e., property account.

The remaining life for a depreciable group is calculated by first determining the remaining life for each vintage year in which there is surviving investment. This is accomplished by solving the area under the survivor curve selected to represent the average life and life characteristic of the property account. The remaining life for each vintage is composited by dividing (D) the depreciable cost of each vintage, by (L) its average service life, and multiplying this ratio by its average remaining life

(E). The composite remaining life of the group (R) equals the sums of products divided by the sum of the quotients:

$$R \text{ Group} = \frac{\Sigma \ D/L \times E}{\Sigma \ D/L}$$

The accumulated provision for depreciation, which was the basis for developing the composite average remaining life accrual and annual depreciation rate for each property account as per this report, was obtained from the Company's books and records.

Salvage

Net salvage is the difference between gross salvage, or what is received when an asset is disposed of, and the cost of removing it from service. Salvage experience is normally included with the depreciation rate so that current accounting periods reflect a proportional share of the ultimate abandonment and removal cost or salvage received at the end of the property service life. Net salvage is said to be positive if gross salvage exceeds the cost of removal, but if cost of removal exceeds gross salvage the result is then negative salvage.

The cost of removal includes such costs as demolishing, dismantling, tearing down, disconnecting or otherwise removing plant and related transportation, handling and overheads incurred in connection with the work. Salvage includes proceeds received for the sale of plant and materials or the return of equipment to stores for reuse.

Net salvage experience is studied for a period of years to

determine the trends which have occurred in the past. These trends are considered together with any changes that are anticipated in the future to determine the future net salvage factor for remaining life depreciation purposes. The net salvage percentage is determined by relating the total net positive or negative salvage to the book cost of the property investment.

However, within the Commonwealth of Pennsylvania, prospective net salvage factors are not included as an integral part of the annual depreciation rate or expense either for rate making or accounting purposes. Utilizing a prior Superior Court case as a basis, the policy and practice of the Pennsylvania Public Utility Commission dictates that the salvage components included with the annual depreciation expense for rate making treatment shall be limited to include an amount for net salvage based on the actual experienced five (5) year rolling average. While this practice is considered totally inappropriate because it defers the recovery of a portion of cost of service (net salvage) to the end of the property's useful service life, only the five (5) year average amortization of experienced net salvage is booked. To do otherwise would result in accruing depreciation expense to the Company's books which it has not had an opportunity to recover via customer rates. Accordingly, depreciation expense per this report incorporates only an amortization of experienced five (5) year average net salvage.

Service Lives

Several factors contribute to the length of time or average

service life which the property achieves. The three (3) major categories under which these factors fall are: (1) physical; (2) functional, and; (3) contingent casualties.

The physical category includes such things as deterioration, wear and tear and the action of the natural elements. The functional category includes inadequacy, obsolescence and requirements of governmental authorities. Obsolescence occurs when it is no longer economically feasible to use the property to provide service to customers or when technological advances have provided a substitute of superior performance. The remaining factor of contingent casualties relates to retirements caused by accidental damage or construction activity of one type or another.

In performing the life analysis for any property being studied, both past experience and future expectations must be considered in order to fully evaluate the circumstances which may have a bearing on the remaining life of the property. This ensures the selection of an average service life which best represents the expected life of each property investment.

Survivor Curves

The preparation of a depreciation study or theoretical depreciation reserve typically incorporates smooth curves to represent the experienced or estimated survival characteristics of the property. The "smoothed" or standard survivor curves generally used are the family of curves developed at Iowa State University which are widely used and accepted throughout the

utility industry.

The shape of the curves within the Iowa family are dependent upon whether the maximum rate of retirement occurs before, during or after the average service life. If the maximum retirement rate occurs earlier in life, it is a left (L) mode curve; if occurring at average life, it is a symmetrical (S) mode curve; if it occurs after average life, it is a right (R) mode curve. In addition, there is the origin (O) mode curve for plant which has heavy retirements at the beginning of life.

Many times, actual Company data has not completed its life cycle, therefore, the survivor table generated from the Company data is not extended to zero percent surviving. This situation requires an estimate be made with regard to the remaining segment of the property group's life experience. Further, actual Company experience is often erratic, making its utilization for average service life estimating difficult. Accordingly, the Iowa curves are used to both extend Company experience to zero percent surviving as well as to smooth actual Company data.

Study Procedures

Several study procedures were used to determine the prospective service lives recommended for the Company's plant in service. These include the review and analysis of historical retirements, current and future construction, historical experience and future expectations of salvage and cost of removal as related to plant investment. Service lives are affected by many different factors, some of which can be obtained from

studying plant experience, others which may rely heavily on future expectations. When physical aspects are the controlling factor in determining the service life of property, historical experience is a valuable tool in selecting service lives. In the case where changing technology or a less costly alternative develops, then historical experience is of lesser value.

While various methods are available to study historical data, the principal methods utilized to determine average service lives for a Company's property are the Retirement Rate Method, the Simulated Plant Record Method, the Life Span Method, and the Judgement Method.

Retirement Rate Method - The Retirement Rate Method uses actual Company retirement experience to develop a survivor curve (observed life table) which is used to determine the average service life being experienced in the account under study. Computer processing provides the opportunity to review various experience bands throughout the life of the account to observe trends and changes. For each experience band studied, the "observed life table" is constructed based on retirement experience within the band of years. In some cases, the total life of the account has not been achieved and the experienced life table, when plotted, results in a "stub curve." It is this "stub curve" or total life curve, if achieved, which is matched or fitted to a standard Survivor curve. The matching process is performed both by computer analysis, using a least square technique, and by manually plotting observed life tables to which

smooth curves are fitted. The fitted smooth curve provides the basis to determine the average service life of the property group under study.

Simulated Balances Method - In this method of analysis, simulated surviving balances are determined for each balance included in the test band by multiplying each proceeding years original gross additions installed by the Company by the appropriate factor of each Standard Survivor Curve, summing the products, and comparing the results with the related year end plant balance to determine the "best fitting" curve and life within the test period. Various test bands are reviewed to determine trends or changes to indicated service lives in various bands of years. By definition, the curve with the "best fit" is the curve which produces simulated plant balances that most closely matches the actual plant balances as determined by the sum of the "least squares". The sum of the "least squares" is arrived at by starting with the difference between the simulated balances and the actual balance for a given year, squaring the difference, and the curve which produces the smallest sum (of squared difference) is judged to be the "best fit".

Period Retirements Method - The application of the Period Retirements Method is similar to the "Simulated Plant Balances" Method, except the procedure utilizes an Standard Survivor Curve and service life to simulate annual retirements instead of balances in performing the "least squares" fitting process during the test period. This procedure does tend to experience wider

fluctuations due to the greater variations in level of experienced retirements versus additions and balances thereby producing greater variation in the study results.

Life Span Method - The Life Span or Forecast Method is a method utilized to study various accounts in which the expected retirement dates of specific property or locations can be reasonably estimated. In the Life Span Method, an estimated probable retirement year is determined for each location of the property group. An example of this would be a structure account, in which the various segments of the account are "life spanned" to a probable retirement date which is determined after considering a number of factors, such as management plans, industry standards, the original construction date, subsequent additions, resultant average age and the current - as well as the overall - expected service life of the property being studied. If in the past the property has experienced interim retirements, these are studied to determine an interim retirement rate. Otherwise, interim retirement rate parameters are estimated for properties which are anticipated to experience such retirements. The selected interim service life parameters (Iowa curve and life) are then used with the vintage investment and probable retirement year of the property to determine the average remaining life as of the study date. No attempt is made to include any anticipated additions to the property subsequent to the study date. The recovery of such additions if made, is reflected when preparing subsequent depreciation studies.

Judgement Method - Standard quantitative methods such as the Retirement Rate Method, Simulated Plant Record Method, etc. are normally utilized to analyze a Company's available historical service life data. The results of the analysis together with information provided by management as well as judgement are utilized in estimating the prospective recommended average service lives. However, there are some circumstances where sufficient retirements have not occurred, or where prospective plans or guidelines are unavailable. In these circumstances, judgement alone is utilized to estimate service lives based upon service lives used by other utilities for this class of plant as well as what might be reasonable life for this plant giving consideration to the current age and use of the facilities.

COMMONWEALTH TELEPHONE COMPANY

Study Results

Account 211200 - Motor Vehicles

The Company's investment in this account totals $7,749,020, has achieved a current average age of 4.9 years, and is being depreciated using a present depreciation rate of 6.71 percent. This class of property typically includes the Company's investment in cars and light service trucks, including vans and pickups. General policy is to replace cars and light trucks after 60,000 miles and/or four years of use. Cable and line trucks are utilized for longer time periods and are reviewed on an individual basis. In addition, for the heavy truck class the construction and cable bodies are reused on new replacement cab and chassis components. Currently, the Company has approximately 300 vehicles of which seventy-seven (77) percent are light trucks and cars and the remaining twenty-three (23) percent are heavy cable and line trucks.

Retirements during the period 1990 to 1992 have totaled approximately $1 million. An analysis of the Company's historical data using the Retirement Rate Method indicates that the property life is currently experiencing a life characteristic of an Iowa 10-L3 life and curve.

Application of the recommended Iowa 10-L3 life and curve to the Company's current surviving investments produces an average remaining life of 5.61 years. The resulting recommended annual depreciation rate is 11.45 percent.

Account 211500 - Garage Work Equipment

The current surviving investment in this account totals only $39,154. The average age of the surviving plant investment is 8.9 years and the present annual depreciation rate is 4.86 percent. Retirements totaling $23,003 were analyzed via the Retirement Rate Method over various experience bands. Based upon the analysis of the available data, the content of the current investment, and the experience of others, an Iowa 15-S3 is recommended for this property group. Application of the recommended service life parameters to the Company's current surviving property investment produces an average remaining life of 11.05 years and a depreciation rate of 3.26 percent.

Account 211600 - Other Work Equipment

The investment in this account is related to the investment in various work tools utilized by the telecommunications workers totals $2,471,882. The present surviving investment has achieved an average age of 8.6 years and is being depreciated using an annual depreciation rate of 3.55 percent. Retirements from this account during the years 1962-1992 totaled $414,551 and have generally been occurring at increasing levels over time. With the rapid technological changes within the telecommunications industry, work equipment must continue to be upgraded more frequently. An analysis of the historical data, via the Retirement Rate Method, provided the basis of the estimated service life parameters of an Iowa 20-L2. Application of the estimated service life parameters to the Company's investment

produces an average remaining life of 12.00 years and a recommended annual depreciation rate of 3.13 percent.

Account 212199 - Buildings

The Company's current investment in buildings totals $22,281,206, has achieved a current average age of 12.3 years, and is being depreciated using an annual depreciation rate of 3.83 percent. Most of the Company's structures included in this account are of masonry construction. While many of the Company's structures are used to house the Company's central office equipment at switching centers, others were constructed for the Company's numerous remote switching equipment sites. These facilities are typically small properties and are subject to ongoing revisions to the Company's switching network requirements.

A review of the Company's accounting records relative to its investment in buildings reveals that routine changes, modifications, and upgrades have been occurring from this property category over the Company's history. For example, the Company has replaced HVAC systems, roofs, interior walls, as well as made a variety of other improvements. Historical retirements during the years 1947 - 1992 have totalled more than $6 million. The Company has added sizeable investments in recent years, plus many of the Company's facilities were constructed throughout the 1960's to 1980's. As the technology continues to advance within the industry, changes within the Company's local exchange area will continue. An analysis of the historical retirements, via

the Retirement Rate Method, indicates that the Company's property has experienced a service life of less than twenty-five (25) years. Recognizing that the Company's recent retirement of its Lake Street office center contributed to a shorter overall life indication, a somewhat longer life of an Iowa 30-R0.5 is currently recommended for this property group.

Application of the recommended Iowa 30-R0.5 life and curve to the Company's surviving investment produced an average remaining life of 17.40 years. The use of the Company's surviving investment, recommended service life parameters, book depreciation reserve, and amortization of five year average net salvage results in an average remaining life depreciation rate of 3.54 percent.

Account 212200 - Furniture

The Company's current investment in furniture totals only $1,018,122. The account investment, which has achieved a current average age of 8.3 years, is presently being depreciated using an annual depreciation rate of 6.18 percent. The investment in this account is modest, nevertheless, the level of property additions and/or replacements has been larger in more recent years resulting in measurable account growth during the 1980's. These additions were relative to the continued replacement and/or upgrading of the Company's office facilities. An analysis of retirements totaling approximately $190,000, which occurred during the years 1989 - 1992, was completed via the Retirement Rate Method. This analysis indicated that while the yearly

average age of retirements has generally remained stable, the retirement levels varied measurably from year to year. While levels of retirements have trended downwards during recent years, it is expected that over the longer term the Company will continue to upgrade and/or replace fixtures to maintain a good working environment for its employees. Based upon the Company's general experience during the period 1990 - 1992, an Iowa 20-R0.5 life characteristic is currently estimated for this property. Application of the recommended Iowa 20-R0.5 to the Company's current surviving investment results in an average remaining life of 12.82 years and a recommended annual depreciation rate of 2.91 percent.

Account 212311 - Electronic Office Equipment

The Company's surviving investment in this account totals only $879,482, has achieved a current average age of 3.5 years, and is presently being depreciated using an annual depreciation rate of 15.14 percent. This category of property includes the Company's investment in equipment utilized by the Company's administrative and operating personnel in the course of business. The account investment has grown significantly during more recent years as greater emphasis has been placed upon the increased utilization of labor saving equipment in office environment.

Historical retirements totaling $261,886 were analyzed via the Retirement Rate Method. Because of the continual change in office environments, additional changes are anticipated to occur in future years. Based upon the results of the Company's recent

experience, an Iowa 7-L2 is currently recommended for this property group. Application of the estimated service life parameters to the current surviving investment results in an average remaining life of 4.12 years. The resulting recommended average remaining life annual depreciation rate is 11.01 percent.

Account 212312 - Other Office Equipment

The current investment in this account totals only $92,098, has achieved a current average age of 11.2 years, and is presently being depreciated using an annual depreciation rate of 3.68 percent. This category of property includes the Company's investment in general equipment utilized by the Company's administrative and operating personnel in the course of business. Based upon retirements during the years 1989 - 1992 totaling $15,158, a 10-R1 life and curve is currently recommended for this property group. Application of the estimated service life parameters to the current surviving investment results in an average remaining life of 4.26 years. The resulting recommended average remaining life annual depreciation rate is 4.25 percent.

Account 212320 - Company Communication Equipment

The current investment in this account totals $1,035,218 and is being depreciated using an annual depreciation rate of 7.72 percent. The current average age of the account investment is 2.4 years and is related to the Company's centrex equipment used in the Company's internal operations. Because of the expanding requirements and continual changes in the industry, this property category is anticipated to change rapidly in future years.

Retirements totaling $760,969, which occurred during the period 1989 to 1992, were analyzed via the Retirement Rate Method which produced a service life indication of five (5) years. Based upon this experience and future expectations, an Iowa 5-L2 life and curve is estimated for this property group. Application of the recommended Iowa 5-L2 life and curve to the Company's investment produces an average remaining life of 3.30 years and a recommended annual depreciation rate of 8.84 percent.

Account 212400 - General Purpose Computers

The Company's investment in this property category totals $1,301,004 and is related to a variety of computers and peripheral equipment. During 1993, the Company will be installing a new LAN to operate throughout the Company's administrative offices. The account investment has attained a current average age of 2.8 years and is depreciated using an annual depreciation rate of 16.78 percent. The investment in this account has grown significantly in recent years as the Company has continued to expand its computer capabilities. Nevertheless, the Company will need to routinely upgrade its existing equipment. Retirements totaling approximately $23,259 were analyzed via the Retirement Rate Method. This analysis demonstrated that the Company's property has temporarily experienced low levels of retirements during the period when historical data was available, which produced a life indication of Iowa 8-R5. Inasmuch as the Company needs to continually maintain and/or upgrade its data handling capability, increased

property replacement is anticipated in future years. Based upon the Company's limited recent experience and current plans, plus consideration of future needs, an Iowa 6-R5 life and curve is estimated to represent the average service life for the Company's investment in this account. Application of the recommended service life parameters to the current investment produces an average remaining life of 4.24 years and a proposed annual depreciation rate of 10.44 percent.

Account 221110 - Analog Electric Switching - Company

The Company's investment in this property category totals only $57,746 which is scheduled for retirement during 1993. Accordingly, the net unrecovered investment in this account will be written off.

Account 221210 - Digital Central Office Equipment

The Company's investment in digital host equipment totals $40,382,053 and is presently being depreciated via an annual depreciation rate of 10.25 percent. The investment in this account has achieved an average age of 4.4 years.

The Company presently has seventy-eight (78) exchanges for which the switching network is comprised of eight (8) large host centers (DMS-100), seventeen (17) small host centers (DMS-10), while the remaining exchanges are served with remote switching equipment. Currently, the Company is in the process of upgrading its Northern DMS-100 Switches to generic 300 and 400 switches. As part of this process, the Company is converting to a true host/remote network which will result in its changing the network

to a Super Node configuration. This realignment, as well as other upgrades, will result in ongoing changes to existing equipment. Furthermore, the Company is phasing in the implementation of System Signaling 7 equipment. As the Company changes its network configuration and upgrades switches to current generation equipment and software systems, components such as processors, line cards, and other equipment, will require changes. In future years, the Company's switching network will be further impacted by new technologies on the horizon, such as SONET, Broad Band Switching, and Optical Switching facilities.

The average overall service life for this property group is being developed through the utilization of the Life Span Method. In the application of this method, life spans are based upon specific Company plans over the next five years plus a maximum life span of twelve (12) years was utilized based upon the Company's plans to continually upgrade its switching equipment to stay abreast of the technological changes and to meet customer needs.

Retirements totaling more than $8 million, which are related to interim retirements of components of the Company's switching facilities, were analyzed via the Retirement Rate Method. This analysis clearly indicates that the Company has been experiencing ongoing levels of interim retirements. Due to the Company's current plans, continued upgrades and replacements are expected in the foreseeable future. Based upon the Company's recent experience, an interim retirement rate of an Iowa 13-L2 is

estimated for the property group. Application of the Life Span Method to the Company's current investment on a location basis together with the Iowa 13-L2 interim retirement rate results in an average remaining life of 5.69 years. The resulting recommended annual depreciation rate is 9.53 percent.

Account 221220- Software

The Company's current investment in this account totals $1,794,180 for which the current depreciation rate is 1.49 percent. The average age of the Company's surviving investment is 6.3 years. Retirements totaling approximately $249,882 during the years 1990-1992 were analyzed via the Retirement Rate Method. Based upon the available historical data, an average service life of an Iowa 10-L4 is estimated for this property. The resulting average remaining life is 5.17 years and the resulting annual depreciation rate is 1.29 percent.

Account 221230 - Spares - Remote

The Company's investment in this account totals $1,487,184, has achieved an average age of 2.8 years, and is currently being depreciated based upon an annual depreciation rate of 11.91 percent. Retirements totaling approximately $18,282 during the years 1991-1992 were analyzed via the Retirement Rate Method and resulted in a life indication of an Iowa 11-R3. Application of the estimated Iowa 11-R3 life and curve to the Company's surviving investment results in an average remaining life of 7.59 years and a recommended depreciation rate of 9.84 percent.

Account 221231 - Spares - Host

The Company's investment in this account totals $2,235,097, has achieved an average age of 4.2 years, and is currently being depreciated based upon an annual depreciation rate of 9.94 percent. Retirements totaling approximately $206,000, which occurred during the years 1989 - 1992, were analyzed via the Retirement Rate Method resulting in a life indication of an Iowa 10-S1.5. Application of the estimated Iowa 10-S1.5 life and curve to the Company's surviving investment results in an average remaining life of 6.14 years and a recommended depreciation rate of 13.46 percent.

Account 221240 - Remote Equipment

The current investment in this account totals $49,862,282. The average age of the investment is 3.6 years and the present depreciation rate is 9.24 percent. The investment in this account is principally related to a variety of remote switching units, such as DMSIU, DMSIR, TS128, RLCM, OPM, RSC's, etc. The Company's utilization of the various types of remote equipment is the product of continual evolution of equipment and its implementation to provide the Company with maximum flexibility in serving its customers in the most efficient manner. Due to changes in technology, the Company is constantly upgrading and/or changing its equipment to meet current customer requirements. Current technology presently utilized to meet new customer requirements are Remote Switching Centers (RSC) and Outside Plant Modules (OPM). Other existing generations of equipment are being phased out due to obsolescence.

Retirements totaling more than $3.3 million, which occurred during the years 1988-1992, were analyzed via the Retirement Rate Method to interim retirements relative to this property class. Based upon the Company's experience, an Iowa 15-L2 interim retirement rate is recommended for this property. Furthermore, the overall life and depreciation rate is being developed via the utilization of the Life Span Method. In applying the Life Span Method, probable retirement dates are based upon specific Company plans over the next five years plus a maximum life span of twelve (12) years was utilized based upon the Company's plans to continually upgrade its switching network to stay abreast of technological changes and to meet customer needs. Application of the Life Span Method to the Company's current surviving investment on a location basis together with the Iowa 15-L2 interim retirement rate produces an average remaining life of 6.00 years and an annual depreciation rate of 10.34 percent.

Account 221250 - Centralized Test Equipment

The Company's investment in this account totals $2,074,185, has achieved an average age of 5.4 years, and is currently being depreciated based upon an annual depreciation rate of 8.62 percent. Retirements totaling approximately $862,000 were analyzed via the Retirement Rate Method and produced a general life indication of an Iowa 8-L2. Application of the estimated Iowa 8-L2 life and curve to the Company's surviving investment results in an average remaining life of 4.67 years and a recommended depreciation rate of 9.05 percent.

Account 221510 - Step x Step Equipment

The Company's investment in this account which totals $2,268,537 is scheduled for retirement during 1993. Accordingly, the net unrecovered investment in this accounts will be written off.

Account 221520 - Cross Bar Equipment

The Company's investment in this account which totals $853,358 is scheduled for retirement during 1993. Accordingly, the net unrecovered investment in this account will be written off.

Account 221530 - Other Mechanical Switching Equipment

The current investment in this account which totals $44,432 is scheduled for retirement during 1993. Accordingly, the net unrecovered investment in this account will be written off.

Account 223123 - Terrestrial Microwave

The Company's investment in this account totals $1,749,777, has achieved an average age of 12.9 years, and is currently being depreciated using an annual depreciation rate of 3.80 percent. Retirements totaling approximately $25,779 have occurred during the years 1988-1992. As the Company moves toward increased utilization of fiber facilities for inter-exchange traffic, less requirements will exist for this obsolete equipment. A ten (10) year average service life is recommended for the property group based upon the limited available historical service life data and consideration of the property contained in this account. Application of the estimated Iowa 10-R2 to the current surviving

investment produces an average remaining life of 1.90 years and an annual depreciation rate of 17.51 percent.

Account 223212 - Analog Carrier - Subscriber

The Company's investment in this account totals $1,791,802, has achieved an average age of 8.9 years, and is currently being depreciated using an annual depreciation rate of 11.93 percent. Retirements totaling more than $1,728,000 have occurred during the years 1988-1992 which produced a service life indication of an Iowa 8-L0. Application of the estimated Iowa 8-L0 to the current surviving investment produces an average remaining life of 4.03 years and an annual depreciation rate of 7.29 percent.

Account 223213 - AML Equipment

The Company's investment in this account totals only $95,919 and is currently being depreciated using an annual depreciation rate of 11.65 percent. Retirements have totaled $302,495 during the period 1988-1992. Based upon the retirement history in this account an Iowa 10-L0 is recommended for the property group. Application of the estimated Iowa 10-L0 to the current surviving investment produces an average remaining life of 4.45 years and an annual depreciation rate of 11.29 percent.

Account 223214 - Voice Frequency Repeater Equipment

The Company's current investment in this account totals $1,185,408 for which the current depreciation rate is 15.70 percent. The average age of the Company's surviving investment is 8.0 years. Retirements totaling approximately $590,886, which occurred during the years 1988-1992, were analyzed via the

Retirement Rate Method. Based upon these factors, an average service life of an Iowa 9-L0 is estimated for this property. The resulting average remaining life is 4.83 years and the resulting annual depreciation rate is 5.91 percent.

Account 223216 - Modems in Central Office

The Company's current investment in this account totals $368,387 and the current depreciation rate is 12.97 percent. The average age of the Company's surviving investment is 1.6 years. Retirements totaling approximately $8,818, which occurred during the years 1989-1992, were analyzed via the Retirement Rate Method. Based upon the available historical data, an average service life of an Iowa 10-S0.5 is estimated for this property. The resulting average remaining life is 6.66 years and the resulting annual depreciation rate is 9.69 percent.

Account 223251 - Digital Carrier - Trunk

The Company's current investment in this account totals $10,523,031 while the current depreciation rate is 9.31 percent, and the average age of the Company's surviving investment is 7.4 years. Retirements totaling approximately $4,624,167, which occurred during the years 1988-1992, were analyzed via the Retirement Rate Method resulting in a life indication of an Iowa 9-L0. Application of the estimated Iowa 9-L0 life and curve to the Company's surviving investment results in an average remaining life of 4.81 years and a resulting annual depreciation rate of 9.92 percent.

Account 223252 - Digital Carrier - Subscriber

The Company's current investment in this account totals $3,575,966, for which the current depreciation rate is 11.33 percent. The average age of the Company's surviving investment is 5.6 years. This class of property is utilized extensively to provide customer service in rapid growth areas until more permanent cable facilities can be constructed. Once cable facilities become available, the Subscriber Carrier facilities are removed from service result in a very short service life for this class of property. Retirements have been in excess of six percent of the account investment during 1991 and 1992. These retirements totaling $1,210,664, which occurred during the years 1988-1992, were analyzed via the Retirement Rate Method which produced a service life indication of an Iowa 6-L1. Application of the estimated Iowa 6-L1 life and curve to the Company's current investment produces an average remaining life of 2.91 years. The resulting annual depreciation rate is 29.08 percent.

Account 223253 - Fiber Optic - Trunk

The Company's current investment in this account totals $8,830,944. The property account's current depreciation rate is 11.28 percent and the average age of the investment is only 1.5 years. Retirements totaling more than $57,000 have occurred during the years 1989-1992 relative to this new account. While the retirements did not produce a clear life indication, the retirement occurrences delineate the fact that this property will experience ongoing changes. Based upon the limited data and life utilized by other transmission plants, an Iowa 9-L2 life and

curve is recommended for this property group. Application of the estimated Iowa 9-L2 life and curve to the Company's investment produces an average remaining life of 6.36 years and a recommended depreciation rate of 11.23 percent.

Account 223255 - Digital Trunk Interface-Remote

The Company's current investment in this account totals $1,976,020 for which the current depreciation rate is 9.82 percent. The average age of the Company's surviving investment is 4.0 years. Retirements from this account have totaled $136,828 during the years 1990-1992. These retirements were analyzed via the Retirement Rate Method and produced a service life indication of an Iowa 9-S3. Application of the estimated service life parameters to this Company's surviving investment produces an average remaining life of 5.17 years. The resulting proposed annual depreciation rate is 12.68 percent.

Account 223256 - Digital Trunk Interface - Host

The Company's current investment in this account totals $7,268,569 which is being depreciated using current depreciation rate of 8.99 percent. The average age of the Company's surviving investment is 4.8 years. Retirements during the period 1988-1992, which totalled $394,743, were analyzed via the Retirement Rate Method and produced a service life indication of Iowa 12-R4. Application of the estimated Iowa 12-R4 service life characteristics to the Company's current investment produced an average remaining life of 7.35 years. The resulting recommended annual depreciation rate is 7.83 percent.

Account 235100 - Public Telephone Terminal Equipment

The Company's current investment in this account totals $1,445,422. The account's current depreciation rate is 7.77 percent and the current average age of the Company's surviving investment is 9.5 years. Retirements totaling approximately $135,281, which occurred during the years 1988-1992, were analyzed via the Retirement Rate Method which resulted in a historical service life indication of an Iowa 17-L3 life and curve. Application of the Iowa 17-L3 life characteristics to the Company's investment results in an average remaining life of 8.93 years and an annual depreciation rate of 1.54 percent.

Account 236202 - Other Terminal Equipment

The Company's current investment in this account totals $1,503,138, is being depreciated using a current depreciation rate of 1.04 percent, and has achieved a current average age of 9.0 years. Retirements from this account have totaled $951,376 during the years 1990-1992. An analysis of this data, via the Retirement Rate Method, produced a service life indication of an Iowa 5-R2. Application of the recommended service life parameters to the Company's surviving investment produced an average remaining life of 1.81 years and a recommended annual depreciation rate of 8.70 percent.

Account 241100 - Poles

The Company's current investment in Poles totals $21,830,107 and has achieved an average age of 12.0 years. The account's current annual depreciation rate is 5.57 percent. The investment

in this account has been growing continuously with gross additions aggregating in the range of eight (8) - ten (10) percent per year. The average age of property retirements remained relatively constant over time. Retirements totaling $5,493,327, which occurred during the years 1962 - 1992, were analyzed via the Retirement Rate Method. This analysis indicates that the service life achieved by this property has become shorter in recent years. Recent analysis of retirements produced a service life indication of approximately 32 years. It is noted that the Company is in the process of instituting a scheduled pole replacement program which is expected to dramatically impact the achieved useful life of this property group. In conjunction with this program, the Company completed a survey of its pole lines to determine their current physical condition. The goal of the survey was to identify the poles that were dangerous and needed immediate replacement, as well as rejected poles, which do not meet construction standards and/or other physical requirements. This survey identified nearly 6,000 poles throughout the Company's operating system which will require replacement on an accelerated basis. In addition, other poles will need to be routinely replaced as a result of vehicle damage, plus changes resulting from routine construction. Accordingly, the recently achieved average service life of thirty-two (32) years was shortened by approximately ten (10) percent to recognize the impact of this major replacement program. Based upon the Company's experience and future expectancies, an Iowa

29-L0 life and curve is estimated for this property group. Application of the recommended Iowa 29-L0 life and curve to the Company's current investment produces an average remaining life of 17.14 years and a recommended 4.95 percent annual depreciation rate.

Account 242110 - Aerial Cable - Non-Metallic

The current investment in this account totals $9,294,340 and has achieved a current average age of 2.9 years. The Company has been installing single mode multiple fiber facilities for interoffice trunking. While a small quantity of retirements have occurred, an insufficient quantity of retirements of fiber cable has occurred to produce any meaningful service life indications. Ongoing changes and rearrangements are anticipated to occur over the coming years. Based upon this factor, an Iowa 25-R2 life and curve is recommended for this property class. Application of the estimated Iowa 25-R2 life and curve to the Company's surviving investment produces an average remaining life of 17.76 years and a recommended annual depreciation rate of 4.94 percent.

Account 242151 - Aerial Cable - Metallic

The Company's current investment in this account totals $100,895,606 which contains the Company's investment in metallic aerial cable plus its investment related to the Company's aerial cable drop wires. The property investment in this account is currently being depreciated utilizing an annual depreciation rate of 4.45 percent.

A review of the historical data contained in this account

identifies that the present average age of the overall plant account is 11.2 years. The level of additions and growth in this account has been substantial over the history of the account, averaging in the range of eight (8) to ten (10) percent in many years. However, in future years it is anticipated that the growth of the property group will slow considerably and decline as increasing amounts of fiber optic cable are utilized.

Various studies have been completed based upon current trends in substitution of fiber for copper-based facilities, as well as future Company plans for continued deployment of fiber throughout the feeder and distribution networks. With the implementation of broad band services and possible alternative service providers, deployment of fiber-based facilities will continue to grow rapidly. It is expected that by shortly after the turn of the century, subscriber plant will be dramatically impacted by fiber facilities. Furthermore, as increased use of fiber facilities occurs, the cable pair utilization (cable fill) is expected to decline accordingly, resulting in the plant in service being measurably under-utilized.

As stated, in recent years, the Company has been installing fiber cable for inter-office trunking. Further installation of fiber is anticipated in the future (i.e. fiber rings) plus ultimately it is anticipated that fiber will also be utilized in the local loop network. With the continued growth and the use of fiber optics in the future, it is anticipated that the recent experience will be the base line of future activity.

In summary, as the operating efficiencies increase there will be an increasingly rapid migration to fiber technology. In fact, consideration is being given to infrastructure legislation in Pennsylvania with the goal of rapidly converting the telecommunications network from the current copper facilities to fiber-based facilities.

Retirements totaling approximately $10.5 million, which occurred during the years 1962-1992, were reviewed and analyzed via the Retirement Rate Method. The Company's recent experience band clearly indicates that the Company is currently experiencing a present life characteristic of an Iowa 28-R2 life and curve. This analysis also reveals that the Company's replacement of copper facilities has grown continuously over the years and have accelerated at an even greater rate in more recent years due to the need for necessary upgrades, as well as the increased use of fiber optic cable.

Based upon the factors previously discussed, it is evident that the life of this property class will clearly be limited in the longer term future. To give recognition to this factor, the currently achieved Iowa 28-R2 service life characteristic was terminated at a maximum life of sixteen (16) years (2008) in developing the average remaining life for the account. Utilization of the Iowa 28-R2 life and curve together with the truncation date of 2008 and the Company's current surviving investment produces an average remaining life of 12.54 years and a recommended average remaining depreciation rate of 5.23

percent.

Account 242210 - Underground Cable - Non-Metallic

The Company's present investment in this account totals $382,373, has achieved a current average age of 3.5 years, and is currently being depreciated utilizing an annual depreciation rate of 2.63 percent. Given that this account contains a relatively new class of property, only a limited quantity of retirements have occurred to date and no meaningful service life indications can be obtained from historical analysis. Nevertheless, the telecommunications industry is, and will continue to be, exposed to ongoing technological, as well as changes in customer requirements. Based upon this factor, an Iowa 25-R2 life and curve is recommended for this account. Application of the estimated Iowa 25-R2 life and curve to the Company's surviving investment produces an average remaining life of 17.76 years and a recommended annual depreciation rate of 5.20 percent.

Account 242251 - Underground Cable - Metallic

The Company's current investment in metallic underground cable is $2,336,608 and is presently being depreciated utilizing an annual depreciation rate of 2.63 percent. The property has currently achieved a present average age of 11.7 years. The investment in this plant category is related to facilities installed in the Company's conduit systems which typically extend from the Company's central office locations to the riser poles where the underground facilities are connected to aerial plant.

Various studies have been completed based upon current

trends in substitution of fiber for copper-based facilities, as well as future Company plans for continued deployment of fiber throughout the feeder and distribution networks. With the implementation of broad band services and possible alternative service providers, deployment of fiber-based facilities will continue to grow rapidly. It is expected that by shortly after the turn of the century, subscriber plant will be dramatically impacted by fiber facilities. Furthermore, as increased use of fiber facilities occurs, the cable pair utilization (cable fill) is expected to decline accordingly, resulting in the plant in service being measurably under-utilized.

In summary, as the operating efficiencies continue to increase there will be an even more rapid migration to fiber technology. Consideration is currently being given to infrastructure legislation in Pennsylvania with the goal of rapidly converting the telecommunications network from the current copper facilities to fiber-based facilities.

Retirements relative to the underground metallic cable totaling $329,509, which occurred during the years 1962 to 1992, were studied via the Retirement Rate Method. This analysis showed that the level of retirements has generally been increasing over the life of the account. In fact, during recent years retirements have increased measurably from earlier years as the Company is upgrading its facilities and using increasing amounts of fiber optic facilities. Based upon the Company's recent experience, an Iowa 33-R0.5 life and curve are currently

estimated for this property group.

Based upon the factors discussed, it is evident that the life of this property class will be clearly limited in the longer term future. Accordingly, to give such recognition, the currently achieved Iowa 33-R0.5 life characteristic was terminated at a maximum life of twenty (20) years (2012) in developing the average remaining life for the account.

Utilization of the Iowa 33-R0.5 life and curve together with the truncation date of 2012 and the Company's surviving investment produces an average remaining life of 14.00 years and a recommended average remaining life depreciation rate of 5.14 percent.

Account 242310 - Buried Cable - Non-Metallic

The Company's current investment in this account totals $344,280, has achieved a current average age of 5.5 years, and is presently being depreciated using an annual depreciation rate of 4.16 percent. Due to the current young age of this property group, no historical service life indications could be achieved. Based upon the expectation that the telecommunications industry will continue to experience rapid changes in customer requirements and resulting rearrangements, an Iowa 25-R2 life and curve are recommended for this property. Application of the recommended service life parameters to the Company's current investment produces an average remaining life of 17.26 years and a resulting annual depreciation rate of 4.94 percent.

Account 242351 - Buried Cable - Metallic

The Company's current investment in Buried Metallic Cable totals $31,282,237. The current annual depreciation rate for this account is 4.16 percent, while the surviving plant in service has achieved a current average age of 8.5 years.

The level of additions and growth in this account has been significant throughout the account's history averaging in the range of eight (8) to ten (10) percent or more in many years. However, in future years, it is anticipated that the growth of the property group will slow considerably as increasing amounts of fiber are utilized to provide service to the Company's customers. For example, in recent years the Company has been utilizing increasing amounts of fiber for inter office trunking facilities. Further, it is anticipated that in future years the Company will be utilizing fiber rings for network survivability, plus substantial increases in the use of fiber in the local loop. With the increased use of fiber optic facilities in future years, it is anticipated that the recent experience will be the base line of future activity.

Various studies have been completed based upon current trends in substitution of fiber for copper-based facilities, as well as future Company plans for continued deployment of fiber throughout the feeder and distribution networks. With the implementation of broad band services and possible alternative service providers, deployment of fiber-based facilities will continue to grow rapidly. It is expected that by shortly after the turn of the century, subscriber plant will be dramatically

impacted by fiber facilities. Furthermore, as increased use of fiber facilities occurs, the cable pair utilization (cable fill) is expected to decline accordingly, resulting in the plant in service being measurably under-utilized.

In summary, as the operating efficiencies increase there will be an increase migration to fiber technology. In fact, consideration is being given to infrastructure legislation in Pennsylvania with the goal of rapidly converting the telecommunications network from the current copper facilities to fiber-based facilities.

Retirements relative to buried metallic cable of $2,818,763, which occurred during the years 1966 - 1992, were analyzed via the Retirement Rate Method. This analysis which resulted in a service life indication of an Iowa 24-R3 life and curve shows that retirements have continued to escalate in more recent years. Furthermore, the retirements have occurred at relatively young ages, thus, demonstrating that the property group is experiencing a rapid turnover.

Based upon the factors discussed, it is evident that the life of this property class will clearly be limited in the longer term future. In recognition of this factor, the currently achieved service life characteristic of an Iowa 24-R3 was terminated at a maximum life of twenty (20) years (the year 2012) in developing the average remaining life for this account. Utilizing the Iowa 24-R3 life and curve together with the truncation date of 2012 and the Company's surviving investment

produces an average remaining life of 14.20 years and a recommended annual depreciation rate of 4.89 percent.

Account 242610 - Intrabuilding Cable - Non-Metallic

The Company's current investment in this account totals $23,715, has achieved a current average age of 8.4 years, and is currently being depreciated based upon an annual depreciation rate of 3.40 percent. An average service life characteristic of an Iowa 25-R2 is estimated based upon the life used for other cable accounts. Application of the Iowa 25-R2 life and curve to the Company's surviving plant produces an average remaining life of 16.77 years and a resulting annual depreciation rate of 5.29 percent.

Account 242651 - Intrabuilding Cable - Metallic

The Company's surviving investment in this account totals $1,708 and the current depreciation rate is 3.40 percent. Application of the estimated Iowa 25-R2 life and curve to the surviving investment produces an average remaining life of 17.44 years and a resulting depreciation rate of 6.97 percent.

Account 243100 - Aerial Wire

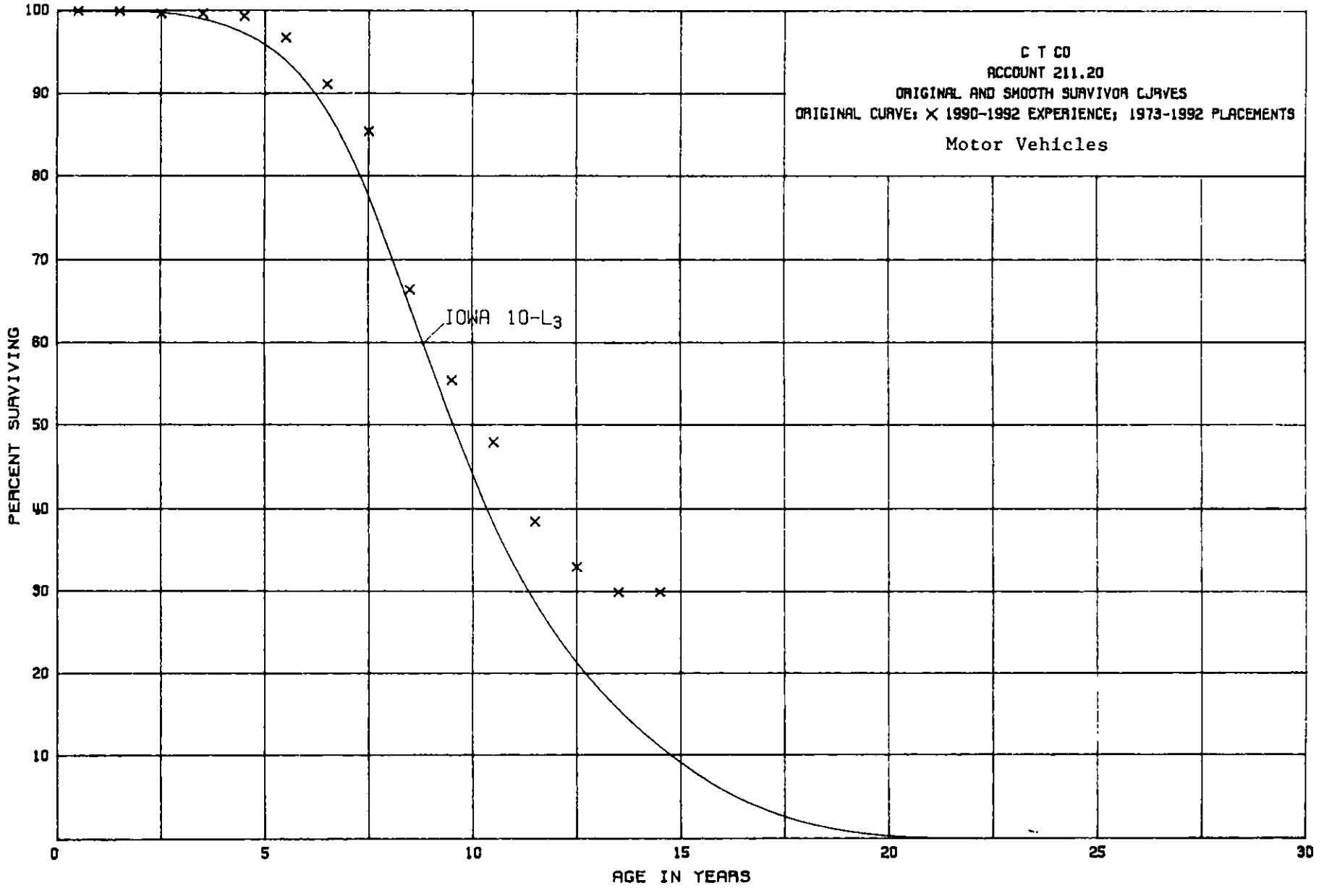
The Company's current investment in this account totals $5,031,029. The property has achieved an average age of 9.8 years and is presently being depreciated using an annual depreciation rate of 5.88 percent.

Retirements totaling $4,899,586, which occurred during the years 1962 - 1992, were analyzed via the Retirement Rate Method. This analysis demonstrated that this property has been achieving

an average service life representative of an Iowa 25-L0 life and curve. Application of the estimated Iowa 25-L0 life and curve to the Company's surviving plant results in an average remaining life of 15.25 years and a recommended depreciation rate of 6.45 percent.

Account 244100 - Conduit Systems

The Company's investment in this account totals $2,860,552 is being depreciated using an annual depreciation rate of 2.81 percent, and has achieved an average age of 11.5 years. The Company has experienced only limited retirements from this account, therefore, no meaningful service life indication could be achieved. Based upon the general industry, an average service life of an Iowa 50-R4 life and curve is recommended for this property. Application of the recommended service life parameters to the Company's investment produces an average remaining life of 37.46 years and a recommended annual depreciation rate of 2.13 percent.

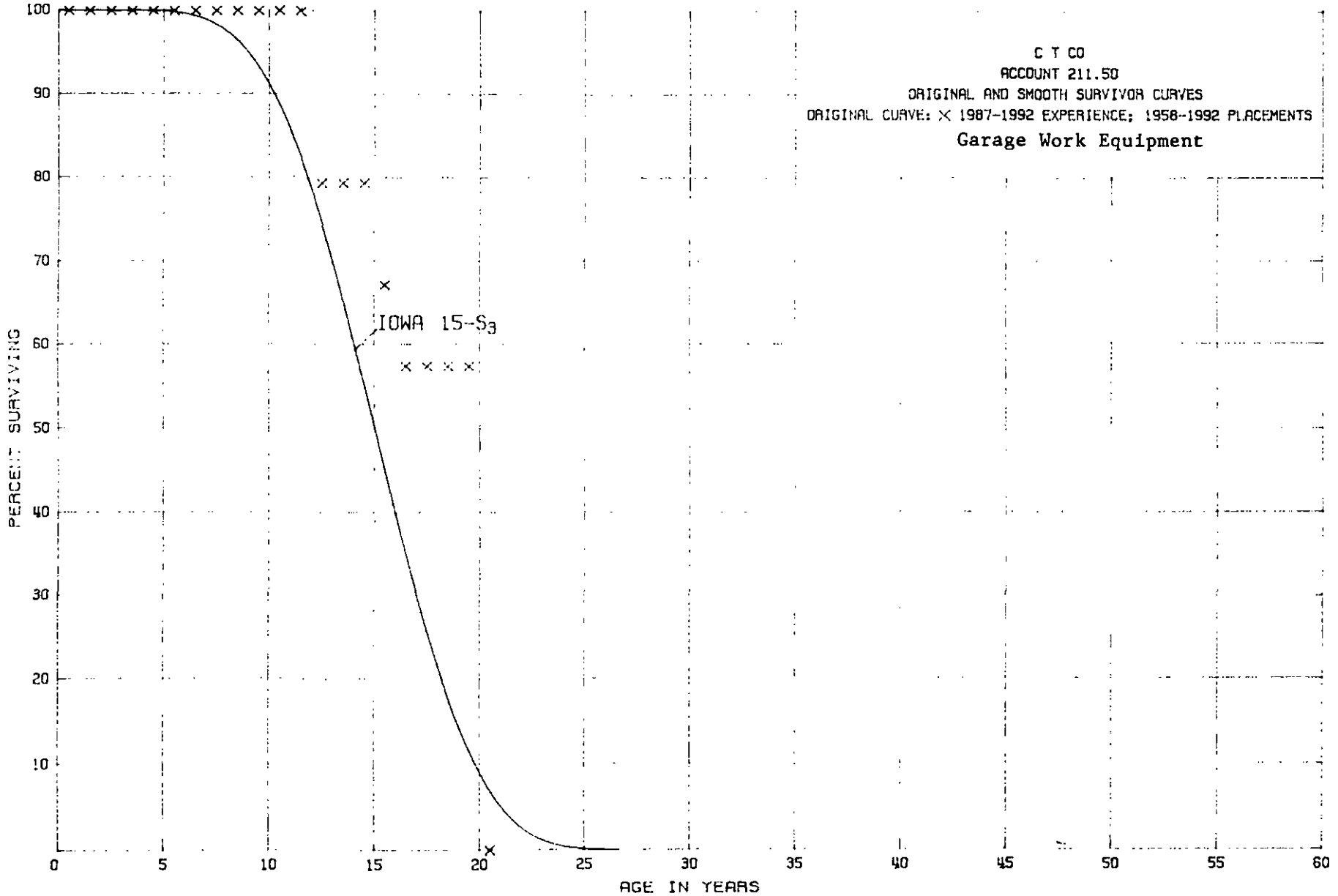

C T CO
ACCOUNT 211.20
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1973-1992 PLACEMENTS
Motor Vehicles
IOWA 10-L3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 211.20
Motor Vehicles
ORIGINAL LIFE TABLE

AVG AGE RET 8.2 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1973-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,265,361		0.0000	1.0000	100.00
0.5	2,303,460		0.0000	1.0000	100.00
1.5	2,685,978	9,715	0.0036	0.9964	100.00
2.5	2,952,916		0.0000	1.0000	99.64
3.5	2,764,237	8,950	0.0032	0.9968	99.64
4.5	2,559,648	68,376	0.0267	0.9733	99.32
5.5	2,186,925	125,220	0.0573	0.9427	96.67
6.5	1,766,108	110,350	0.0625	0.9375	91.13
7.5	1,293,943	288,847	0.2232	0.7768	85.43
8.5	1,108,104	183,445	0.1655	0.8345	66.36
9.5	636,534	85,783	0.1348	0.8652	55.38
10.5	494,357	96,907	0.1960	0.8040	47.91
11.5	203,657	28,[illegible]	[illegible]122	0.8578	38.52
12.5	173,999	16,788	0.0965	0.9035	33.04
13.5	14,967		0.0000	1.0000	29.85
14.5					29.85
15.5	6,835		0.0000		
16.5	13,069		0.0000		
17.5	13,069		0.0000		
18.5	6,234		0.0000		
19.5					
TOTAL	23,449,403	1,023,336			

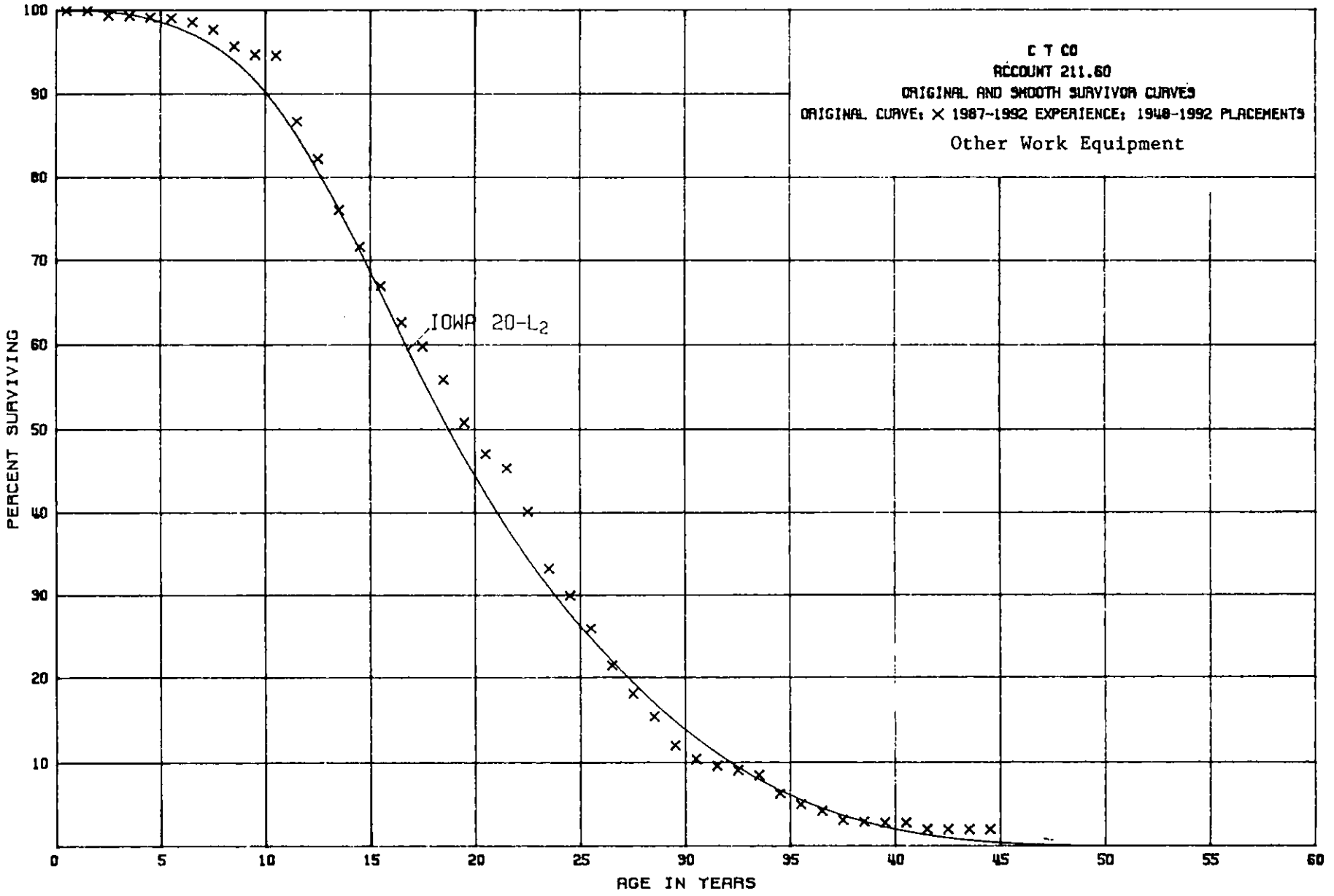

C T CO
ACCOUNT 211.50
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1987-1992 EXPERIENCE; 1958-1992 PLACEMENTS
Garage Work Equipment
IOWA 15-S3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 211.50
Garage Work Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 15.4 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1958-1992 — EXPERIENCE BAND 1987-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	19,876		0.0000	1.0000	100.00
0.5	18,332		0.0000	1.0000	100.00
1.5	15,013		0.0000	1.0000	100.00
2.5	11,512		0.0000	1.0000	100.00
3.5	11,278		0.0000	1.0000	100.00
4.5	12,103		0.0000	1.0000	100.00
5.5	7,171		0.0000	1.0000	100.00
6.5	9,182		0.0000	1.0000	100.00
7.5	7,849		0.0000	1.0000	100.00
8.5	12,604		0.0000	1.0000	100.00
9.5	18,369		0.0000	1.0000	100.00
10.5	14,634		0.0000	1.0000	100.00
11.5	13,729	2,836	0.2066	0.7934	100.00
12.5	12,896		0.0000	1.0000	79.34
13.5	13,114		0.0000	1.0000	79.34
14.5	8,503	1,312	0.1543	0.8457	79.34
15.5	3,680	538	0.1462	0.8538	67.10
16.5	3,142		0.0000	1.0000	57.29
17.5	3,372		0.0000	1.0000	57.29
18.5	1,252		0.0000	1.0000	57.29
19.5	230	230	1.0000	0.0000	57.29
20.5					0.00
21.5	498		0.0000		
22.5	498		0.0000		
23.5	498	498	1.0000		
24.5					
25.5					
26.5					
27.5					
28.5	967		0.0000		
29.5	967		0.0000		
30.5	967	299	0.3092		
31.5	669		0.0000		
32.5	669		0.0000		
33.5	669		0.0000		
34.5					
TOTAL	224,243	5,713			


C T CO
ACCOUNT 211.60
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1987-1992 EXPERIENCE; 1948-1992 PLACEMENTS
Other Work Equipment
IOWA 20-L2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 211.60
Other Work Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 16.5 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1948-1992 — EXPERIENCE BAND 1987-1992

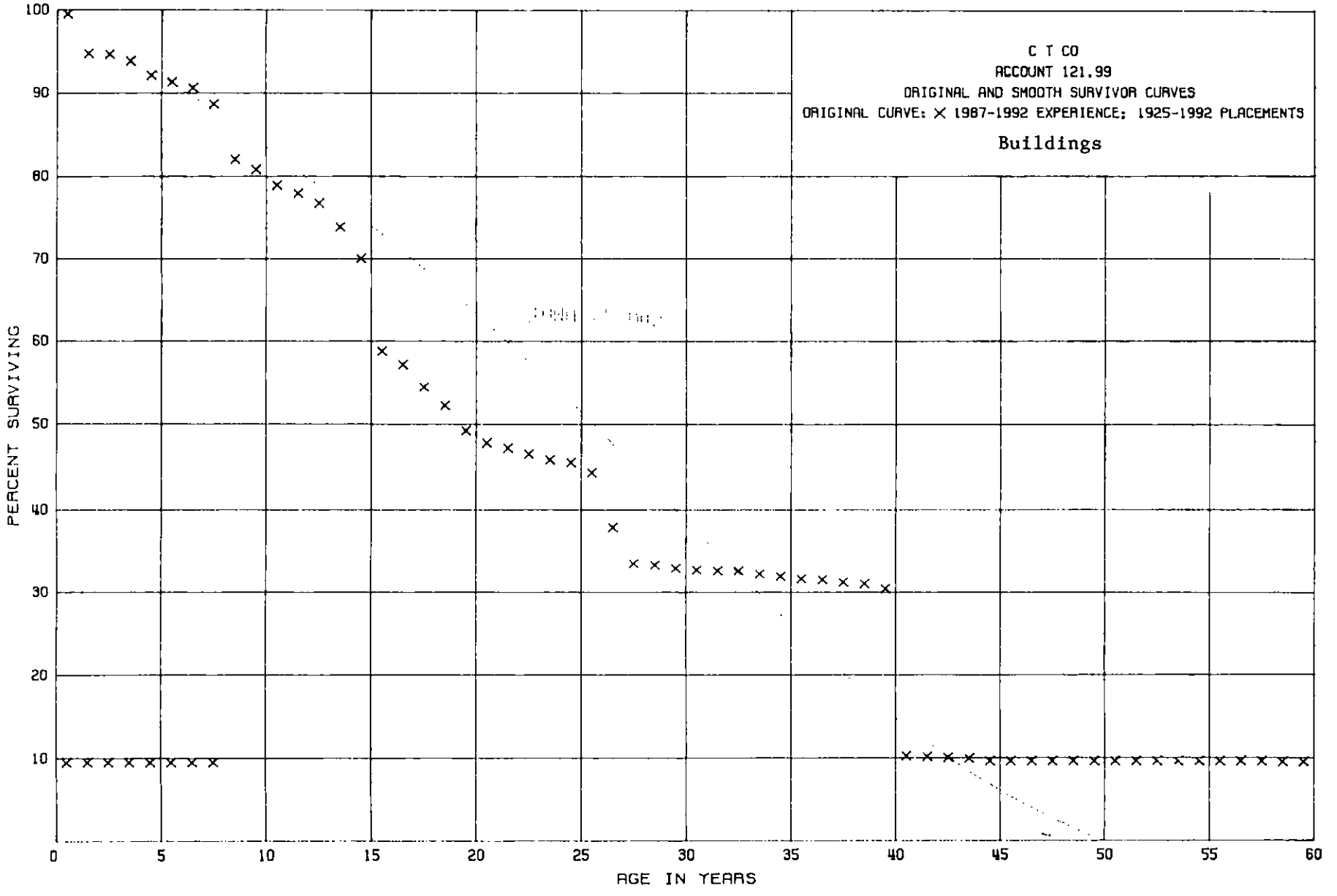
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,052,828		0.0000	1.0000	100.00
0.5	1,064,040	858	0.0008	0.9992	100.00
1.5	946,262	5,837	0.0062	0.9938	99.92
2.5	942,934		0.0000	1.0000	99.30
3.5	1,014,458	1,651	0.0016	0.9984	99.30
4.5	938,771	1,161	0.0012	0.9988	99.14
5.5	803,848	4,585	0.0057	0.9943	99.02
6.5	639,878	5,403	0.0084	0.9916	98.46
7.5	616,337	12,937	0.0210	0.9790	97.63
8.5	571,570	5,846	0.0102	0.9898	95.58
9.5	584,549	446	0.0008	0.9992	94.61
10.5	513,352	42,597	0.0830	0.9170	94.53
11.5	484,199	25,028	0.0517	0.9483	86.68
12.5	447,811	33,843	0.0756	0.9244	82.20
13.5	402,681	23,529	0.0584	0.9416	75.99
14.5	363,988	23,805	0.0654	0.9346	71.55
15.5	311,669	19,949	0.0640	0.9360	66.87
16.5	310,560	13,677	0.0440	0.9560	62.59
17.5	264,052	17,365	0.0658	0.9342	59.84
18.5	209,062	19,094	0.0913	0.9087	55.90
19.5	185,812	13,688	0.0737	0.9263	50.80
20.5	168,902	6,198	0.0367	0.9633	47.06
21.5	108,039	12,569	0.1163	0.8837	45.33
22.5	54,238	9,359	0.1726	0.8274	40.06
23.5	48,912	4,833	0.0988	0.9012	33.15
24.5	60,183	7,994	0.1328	0.8672	29.87
25.5	44,003	7,611	0.1730	0.8270	25.90
26.5	32,192	4,957	0.1540	0.8460	21.42
27.5	23,079	3,452	0.1496	0.8504	18.12
28.5	19,480	4,302	0.2208	0.7792	15.41
29.5	12,417	1,662	0.1338	0.8662	12.01
30.5	13,853	1,060	0.0765	0.9235	10.40
31.5	16,108	883	0.0548	0.9452	9.60
32.5	17,641	1,190	0.0675	0.9325	9.07
33.5	16,971	4,275	0.2519	0.7481	8.46
34.5	17,477	3,815	0.2183	0.7817	6.33
35.5	15,809	2,566	0.1623	0.8377	4.95
36.5	7,325	1,859	0.2538	0.7462	4.15
37.5	5,466	320	0.0585	0.9415	3.10
38.5	5,744	284	0.0494	0.9506	2.92

C T CO

ACCOUNT 211.60
Other Work Equipment
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 16.5 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1948-1992 — EXPERIENCE BAND 1987-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,461		0.0000	1.0000	2.78
40.5	3,040	807	0.2655	0.7345	2.78
41.5	1,213		0.0000	1.0000	2.04
42.5	598		0.0000	1.0000	2.04
43.5	598		0.0000	1.0000	2.04
44.5					2.04
TOTAL	13,367,410	351,295			


C T CO
ACCOUNT 121.99
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1987-1992 EXPERIENCE; 1925-1992 PLACEMENTS
Buildings
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 121.99
Buildings
ORIGINAL LIFE TABLE

PLACEMENT BAND 1925-1992 EXPERIENCE BAND 1987-1992

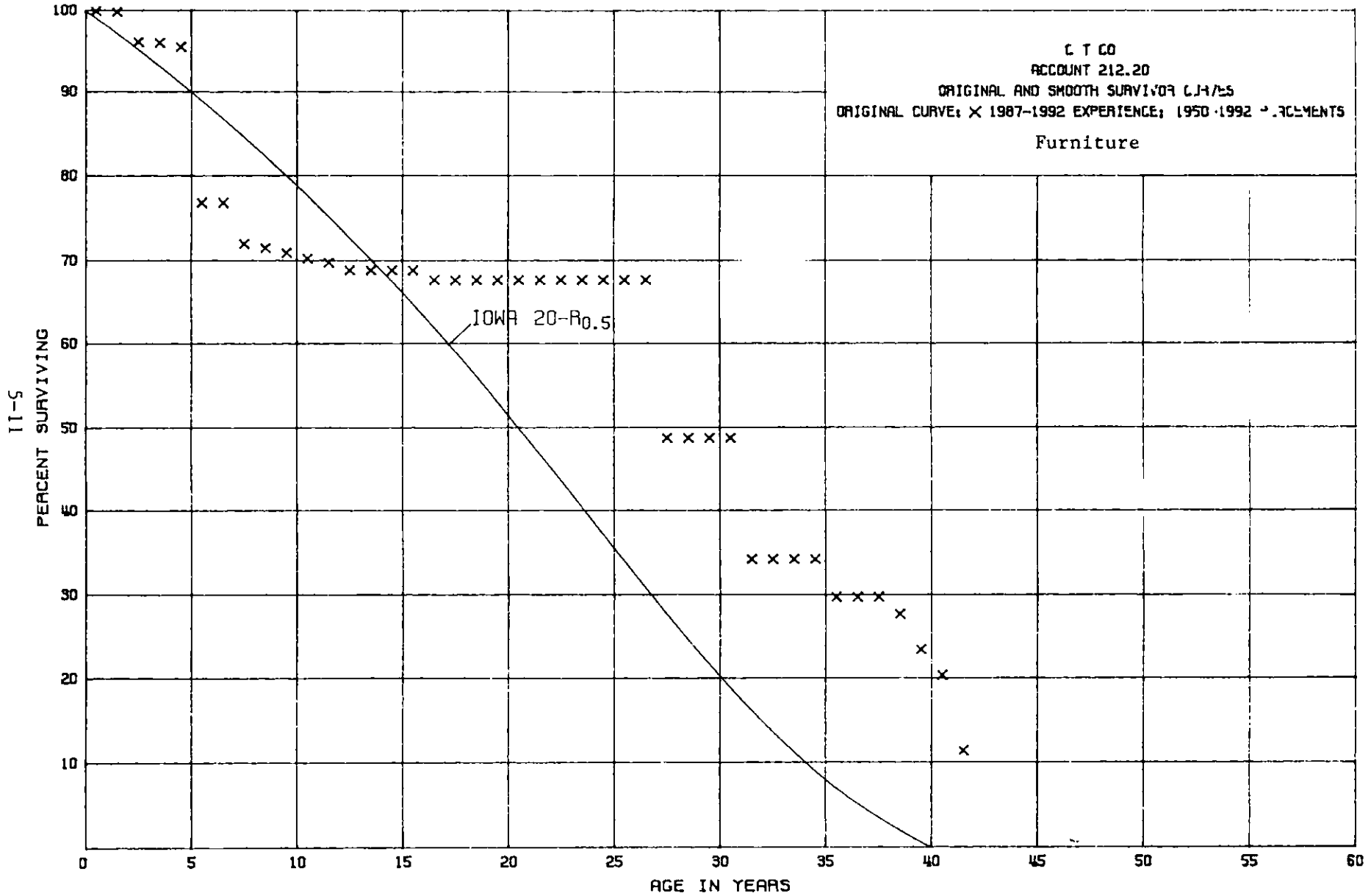
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	10,789,108	55,078	0.0051	0.9949	100.00
0.5	9,955,257	482,142	0.0484	0.9516	99.49
1.5	8,990,767	8,835	0.0010	0.9990	94.67
2.5	4,567,750	36,424	0.0080	0.9920	94.58
3.5	3,905,661	73,894	0.0189	0.9811	93.82
4.5	3,839,785	30,093	0.0078	0.9922	92.05
5.5	3,035,714	23,241	0.0077	0.9923	91.33
6.5	3,274,965	74,858	0.0229	0.9771	90.63
7.5	2,400,875	177,746	0.0740	0.9260	88.55
8.5	2,203,080	33,199	0.0151	0.9849	82.00
9.5	6,997,941	159,093	0.0227	0.9773	80.76
10.5	7,507,436	98,372	0.0131	0.9869	78.93
11.5	7,832,054	124,014	0.0158	0.9842	77.90
12.5	7,789,188	295,735	0.0380	0.9620	76.67
13.5	7,995,135	407,229	0.0509	0.9491	73.76
14.5	6,456,315	1,035,980	0.1605	0.8395	70.01
15.5	2,627,776	71,829	0.0273	0.9727	58.77
16.5	1,890,978	87,266	0.0461	0.9539	57.17
17.5	1,410,553	60,454	0.0429	0.9571	54.53
18.5	1,155,056	65,291	0.0565	0.9435	52.19
19.5	1,628,597	46,383	0.0285	0.9715	49.24
20.5	1,757,182	24,499	0.0139	0.9861	47.84
21.5	1,874,463	27,032	0.0144	0.9856	47.18
22.5	1,817,846	28,706	0.0158	0.9842	46.50
23.5	1,858,861	12,581	0.0068	0.9932	45.77
24.5	1,956,820	51,571	0.0264	0.9736	45.46
25.5	1,410,914	202,953	0.1438	0.8562	44.26
26.5	1,219,431	140,888	0.1155	0.8845	37.90
27.5	856,491	4,765	0.0056	0.9944	33.52
28.5	763,931	9,219	0.0121	0.9879	33.33
29.5	656,119	3,966	0.0060	0.9940	32.93
30.5	1,224,586	4,165	0.0034	0.9966	32.73
31.5	1,238,780	1,496	0.0012	0.9988	32.62
32.5	1,180,297	14,742	0.0125	0.9875	32.58
33.5	1,252,891	9,159	0.0073	0.9927	32.17
34.5	1,736,740	17,703	0.0102	0.9898	31.94
35.5	1,618,336	7,422	0.0046	0.9954	31.61
36.5	772,778	7,296	0.0094	0.9906	31.46
37.5	854,967	3,888	0.0045	0.9955	31.16
38.5	851,144	16,922	0.0199	0.9801	31.02

C T CO

ACCOUNT 121.99
Buildings
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1925-1992 EXPERIENCE BAND 1987-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	711,788	474,161	0.6662	0.3338	30.40
40.5	201,456	1,500	0.0074	0.9926	10.15
41.5	199,258	1,200	0.0060	0.9940	10.07
42.5	179,233	1,700	0.0095	0.9905	10.01
43.5	17,631	500	0.0284	0.9716	9.91
44.5	6,525		0.0000	1.0000	9.63
45.5	1,391		0.0000	1.0000	9.63
46.5	432		0.0000	1.0000	9.63
47.5	2,106		0.0000	1.0000	9.63
48.5	2,106		0.0000	1.0000	9.63
49.5	2,101		0.0000	1.0000	9.63
50.5	3,191		0.0000	1.0000	9.63
51.5	3,191		0.0000	1.0000	9.63
52.5	2,782		0.0000	1.0000	9.63
53.5	2,410		0.0000	1.0000	9.63
54.5	2,410		0.0000	1.0000	9.63
55.5	2,410		0.0000	1.0000	9.63
56.5	8,170		0.0000	1.0000	9.63
57.5	20,772	200	0.0096	0.9904	9.63
58.5	20,572		0.0000	1.0000	9.54
59.5	19,252		0.0000	1.0000	9.54
60.5	19,252		0.0000	1.0000	9.54
61.5	21,885		0.0000	1.0000	9.54
62.5	15,235		0.0000	1.0000	9.54
63.5	2,633		0.0000	1.0000	9.54
64.5	2,633		0.0000	1.0000	9.54
65.5	2,633		0.0000	1.0000	9.54
66.5	2,633		0.0000	1.0000	9.54
67.5					9.54


C T CO
ACCOUNT 212.20
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1987-1992 EXPERIENCE; 1950-1992 RETIREMENTS
Furniture
IOWA 20-R0.5
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 212.20
Furniture
ORIGINAL LIFE TABLE

AVG AGE RET 6.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1950-1992 — EXPERIENCE BAND 1987-1992

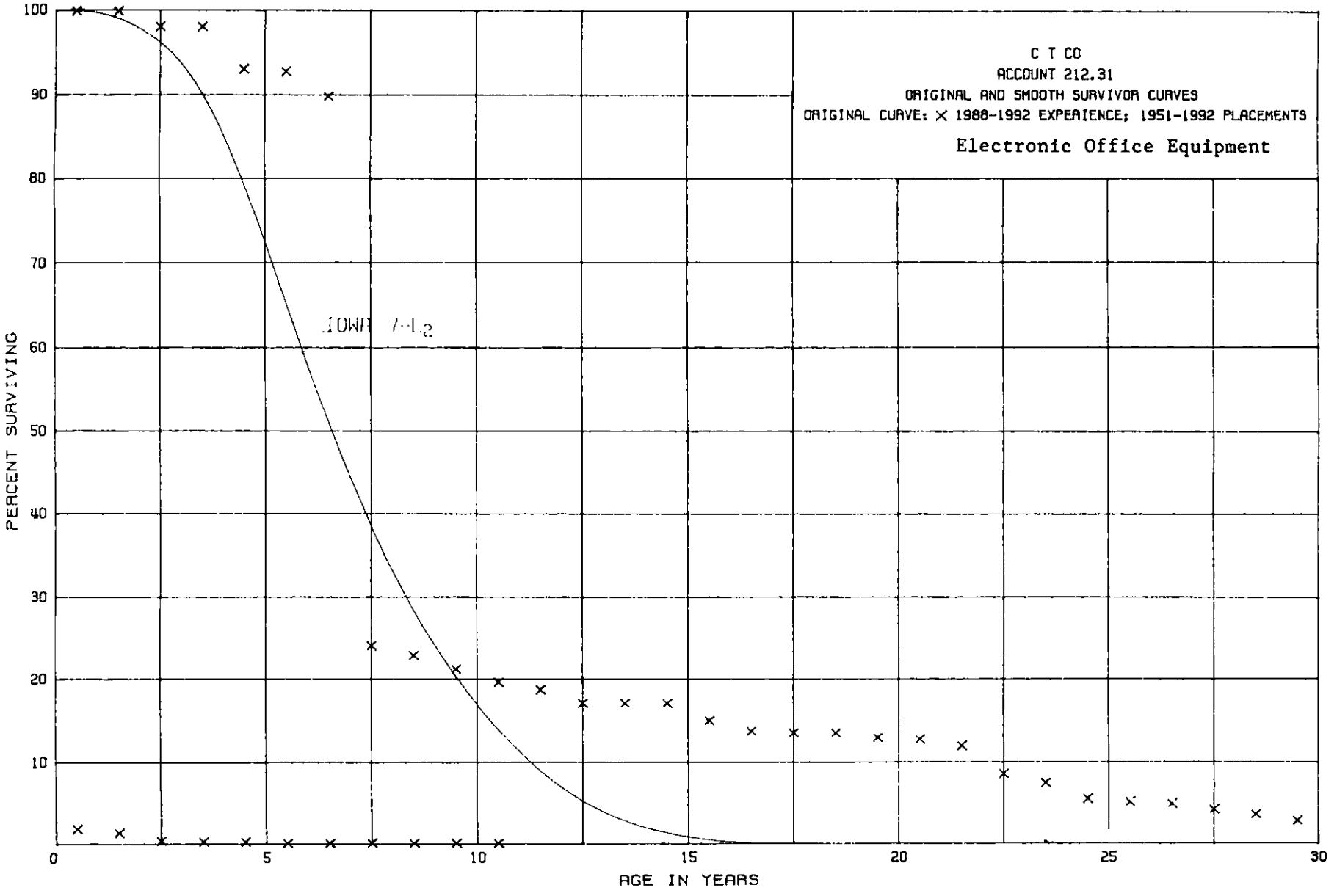
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	455,339		0.0000	1.0000	100.00
0.5	511,596	844	0.0016	0.9984	100.00
1.5	649,382	25,010	0.0385	0.9615	99.84
2.5	695,525	803	0.0012	0.9988	96.00
3.5	634,132	2,936	0.0046	0.9954	95.88
4.5	627,096	122,223	0.1949	0.8051	95.44
5.5	358,236		0.0000	1.0000	76.84
6.5	316,357	19,924	0.0630	0.9370	76.84
7.5	197,280	1,446	0.0073	0.9927	72.00
8.5	255,153	1,944	0.0076	0.9924	71.47
9.5	192,808	2,059	0.0107	0.9893	70.93
10.5	238,611	1,528	0.0064	0.9936	70.17
11.5	242,582	3,102	0.0128	0.9872	69.72
12.5	202,173		0.0000	1.0000	68.83
13.5	181,767		0.0000	1.0000	68.83
14.5	99,067		0.0000	1.0000	68.83
15.5	66,769	1,152	0.0173	0.9827	68.83
16.5	17,143		0.0000	1.0000	67.64
17.5	14,969		0.0000	1.0000	67.64
18.5	15,716		0.0000	1.0000	67.64
19.5	6,425		0.0000	1.0000	67.64
20.5	6,425		0.0000	1.0000	67.64
21.5	4,723		0.0000	1.0000	67.64
22.5	2,073		0.0000	1.0000	67.64
23.5	2,073		0.0000	1.0000	67.64
24.5	1,326		0.0000	1.0000	67.64
25.5	1,326		0.0000	1.0000	67.64
26.5	2,090	586	0.2804	0.7196	67.64
27.5	1,269		0.0000	1.0000	48.67
28.5	1,269		0.0000	1.0000	48.67
29.5	1,269		0.0000	1.0000	48.67
30.5	2,574	764	0.2968	0.7032	48.67
31.5	2,102		0.0000	1.0000	34.22
32.5	2,102		0.0000	1.0000	34.22
33.5	1,761		0.0000	1.0000	34.22
34.5	9,765	1,305	0.1336	0.8664	34.22
35.5	11,273		0.0000	1.0000	29.65
36.5	12,106		0.0000	1.0000	29.65
37.5	11,814	762	0.0645	0.9355	29.65
38.5	11,052	1,751	0.1584	0.8416	27.74

C T CO

ACCOUNT 212.20
Furniture
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 6.3 EXPERIENCE ANALYSIS
PLACEMENT BAND 1950-1992 EXPERIENCE BAND 1987-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	9,300	1,233	0.1326	0.8674	23.35
40.5	1,884	833	0.4421	0.5579	20.25
41.5					11.30
TOTAL	6,077,702	190,205			


C T CO
ACCOUNT 212.31
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: × 1988-1992 EXPERIENCE; 1951-1992 PLACEMENTS
Electronic Office Equipment
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 212.31
Electronic Office Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 8.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1951-1992 — EXPERIENCE BAND 1988-1992

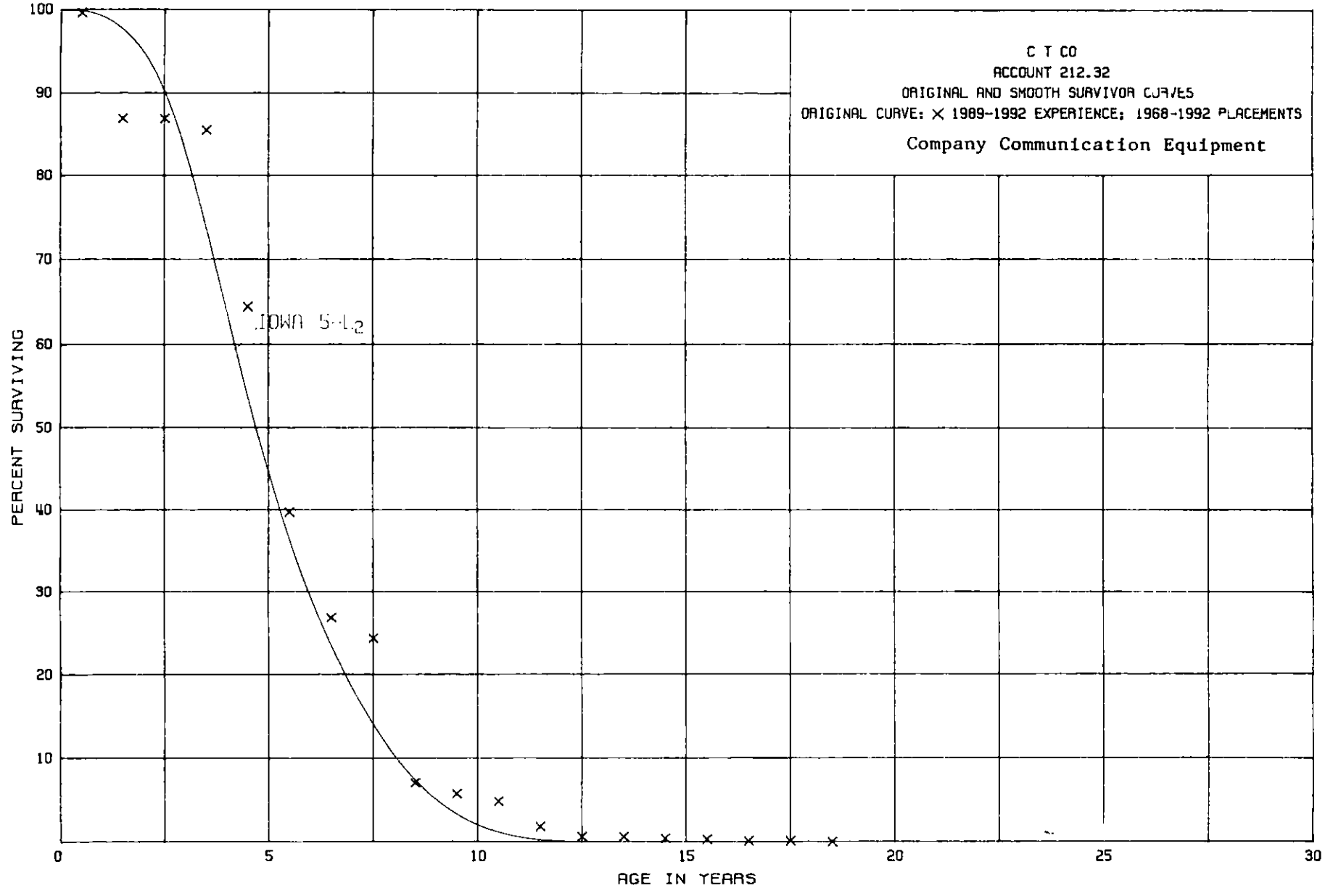
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	755,848		0.0000	1.0000	100.00
0.5	638,028		0.0000	1.0000	100.00
1.5	225,236	4,190	0.0186	0.9814	100.00
2.5	169,255		0.0000	1.0000	98.14
3.5	233,799	12,142	0.0519	0.9481	98.14
4.5	428,949	1,258	0.0029	0.9971	93.05
5.5	419,645	13,378	0.0319	0.9681	92.78
6.5	272,356	199,352	0.7320	0.2680	89.82
7.5	78,283	3,737	0.0477	0.9523	24.07
8.5	57,659	4,430	0.0768	0.9232	22.92
9.5	51,650	3,790	0.0734	0.9266	21.16
10.5	39,700	1,892	0.0477	0.9523	19.61
11.5	36,272	3,136	0.0865	0.9135	18.67
12.5	32,114		0.0000	1.0000	17.06
13.5	20,062		0.0000	1.0000	17.06
14.5	16,033	1,950	0.1216	0.8784	17.06
15.5	18,886	1,648	0.0873	0.9127	14.99
16.5	17,652	285	0.0161	0.9839	13.68
17.5	12,666		0.0000	1.0000	13.46
18.5	12,439	514	0.0413	0.9587	13.46
19.5	11,151	140	0.0126	0.9874	12.90
20.5	4,816	322	0.0669	0.9331	12.74
21.5	4,119	1,133	0.2751	0.7249	11.89
22.5	8,029	1,036	0.1290	0.8710	8.62
23.5	7,495	1,872	0.2498	0.7502	7.51
24.5	6,068	502	0.0827	0.9173	5.63
25.5	7,687	218	0.0284	0.9716	5.16
26.5	7,683	1,108	0.1442	0.8558	5.01
27.5	5,474	749	0.1368	0.8632	4.29
28.5	5,896	1,316	0.2232	0.7768	3.70
29.5	3,527	1,171	0.3320	0.6680	2.87
30.5	2,390	612	0.2561	0.7439	1.92
31.5	1,474	1,047	0.7103	0.2897	1.43
32.5	1,074	426	0.3966	0.6034	0.41
33.5	3,847		0.0000	1.0000	0.25
34.5	3,847	1,928	0.5012	0.4988	0.25
35.5	4,128		0.0000	1.0000	0.12
36.5	4,435	1,328	0.2994	0.7006	0.12
37.5	2,459	307	0.1248	0.8752	0.08
38.5	880		0.0000	1.0000	0.07

C T CO

ACCOUNT 212.31
Electronic Office Equipment
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 8.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1951-1992 — EXPERIENCE BAND 1988-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	880		0.0000	1.0000	0.07
40.5					0.07
TOTAL	3,633,891	266,917			

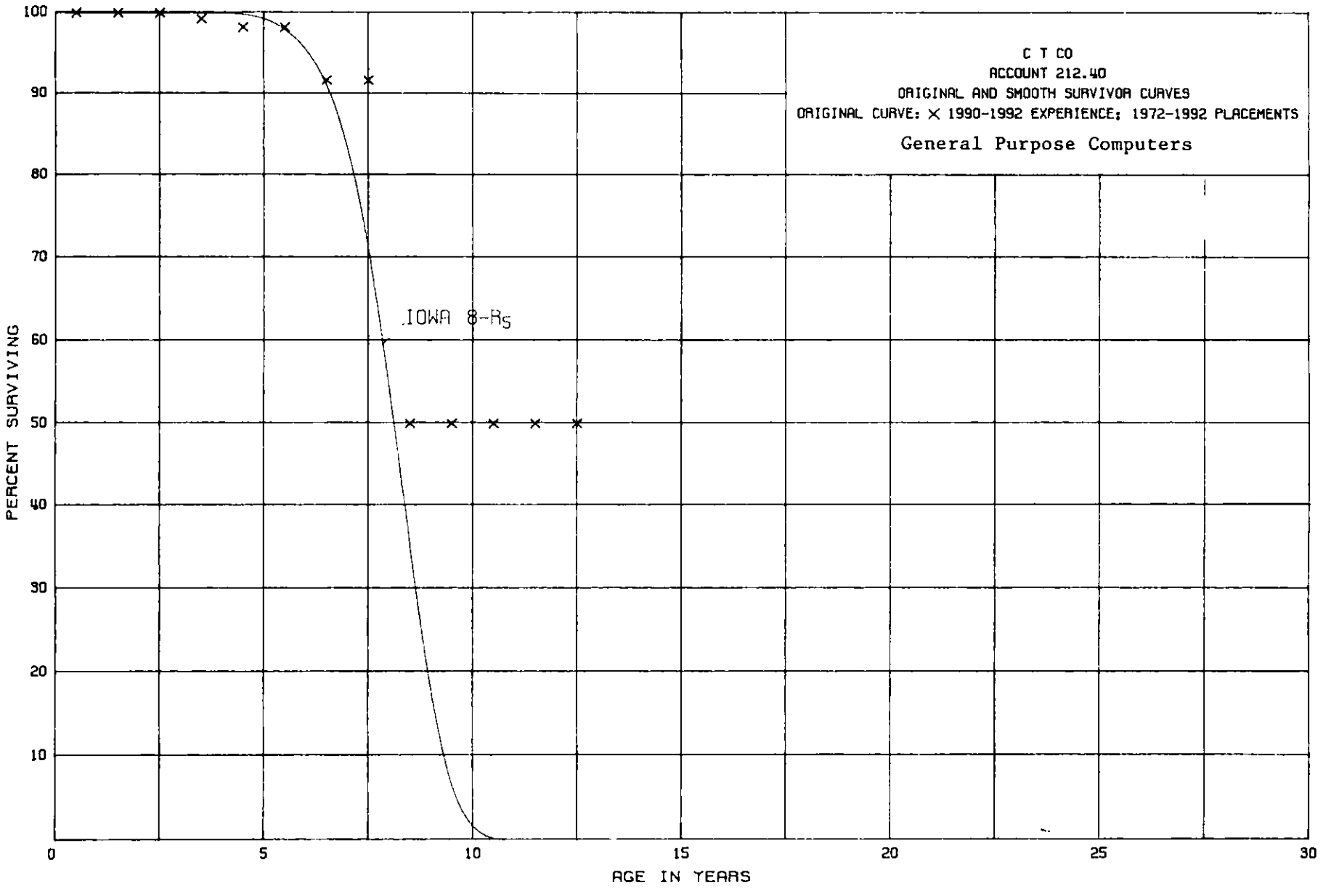

C T CO
ACCOUNT 212.32
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1989-1992 EXPERIENCE; 1968-1992 PLACEMENTS
Company Communication Equipment
IOWA 5-L2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 212.32
Company Communication Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 9.9 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1968-1992 — EXPERIENCE BAND 1989-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	864,971	3,625	0.0042	0.9958	100.00
0.5	308,128	39,291	0.1275	0.8725	99.58
1.5	148,515		0.0000	1.0000	86.88
2.5	144,602	2,327	0.0161	0.9839	86.88
3.5	249,406	61,497	0.2466	0.7534	85.48
4.5	109,356	41,936	0.3835	0.6165	64.40
5.5	102,141	33,176	0.3248	0.6752	39.70
6.5	112,736	10,641	0.0944	0.9056	26.81
7.5	296,743	211,425	0.7125	0.2875	24.28
8.5	92,859	16,449	0.1771	0.8229	6.98
9.5	71,976	11,898	0.1653	0.8347	5.74
10.5	69,615	44,060	0.6329	0.3671	4.79
11.5	179,218	123,575	0.6895	0.3105	1.76
12.5	75,618		0.0000	1.0000	0.55
13.5	103,076	30,697	0.2978	0.7022	0.55
14.5	70,390	24,419	0.3469	0.6531	0.39
15.5	38,138	19,866	0.5209	0.4791	0.25
16.5	18,787	3,142	0.1672	0.8328	0.12
17.5	15,719	13,468	0.8568	0.1432	0.10
18.5	70,469	19,577	0.2778	0.7222	0.01
19.5	49,600	25,682	0.5178	0.4822	0.01
20.5	24,218	24,218	1.0000	0.0000	0.00
21.5					0.00
22.5					
TOTAL	3,216,281	760,969			

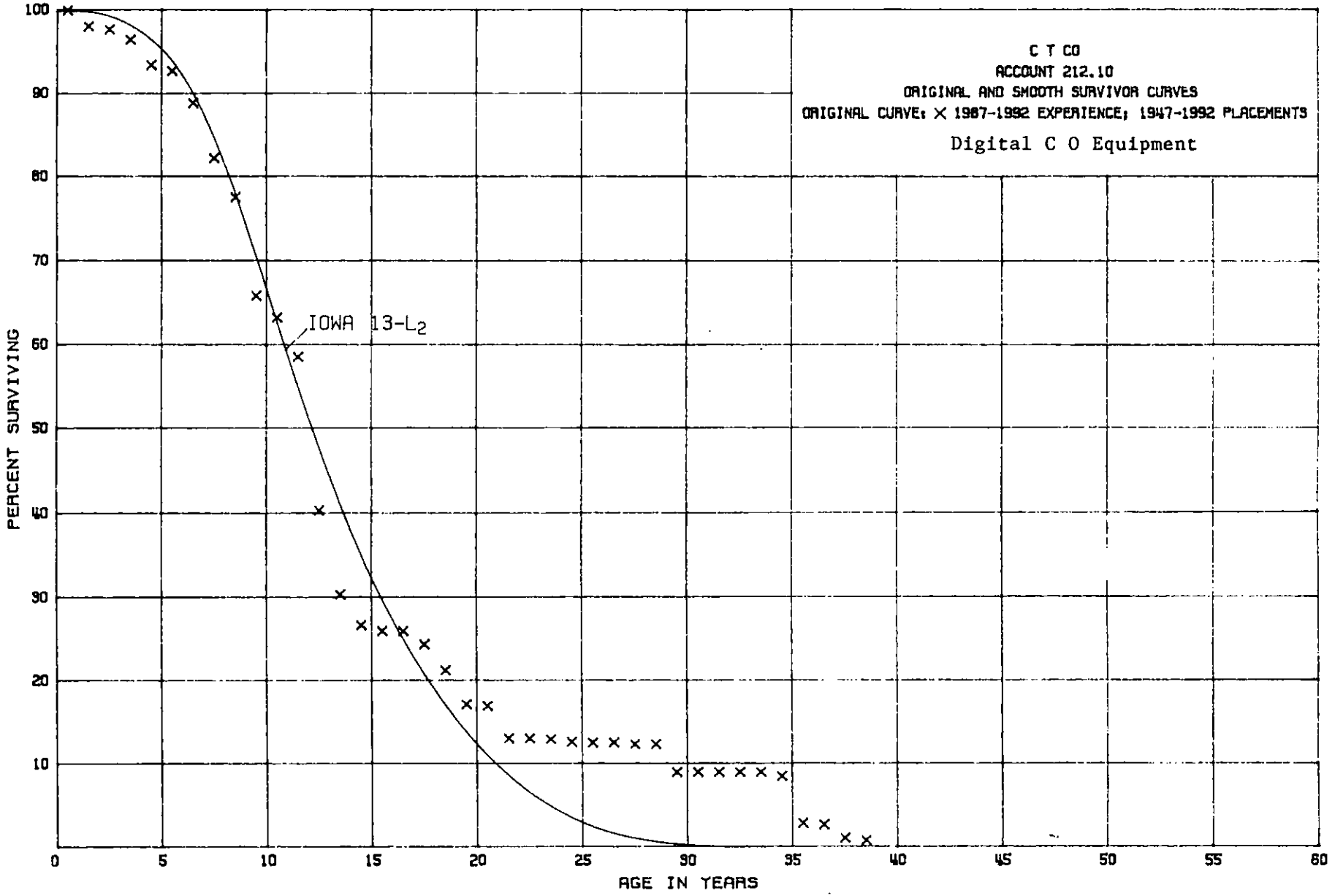

C T CO
ACCOUNT 212.40
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1972-1992 PLACEMENTS
General Purpose Computers
IOWA 8-R5
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 212.40
General Purpose Computers
ORIGINAL LIFE TABLE

AVG AGE RET 8.2 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1972-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	941,524	366	0.0004	0.9996	100.00
0.5	754,183		0.0000	1.0000	99.96
1.5	601,673		0.0000	1.0000	99.96
2.5	281,433	2,134	0.0076	0.9924	99.96
3.5	145,062	1,480	0.0102	0.9898	99.20
4.5	81,631		0.0000	1.0000	98.19
5.5	54,628	3,658	0.0670	0.9330	98.19
6.5	34,694		0.0000	1.0000	91.61
7.5	25,663	11,687	0.4554	0.5446	91.61
8.5	8,360		0.0000	1.0000	49.89
9.5	12,857		0.0000	1.0000	49.89
10.5	28,571		0.0000	1.0000	49.89
11.5	6,503		0.0000	1.0000	49.89
12.5					49.89
13.5	2,516	2,516	1.0000		
14.5					
15.5					
16.5					
17.5					
18.5	1,418	1,418	1.0000		
19.5					
TOTAL	2,980,716	23,259			

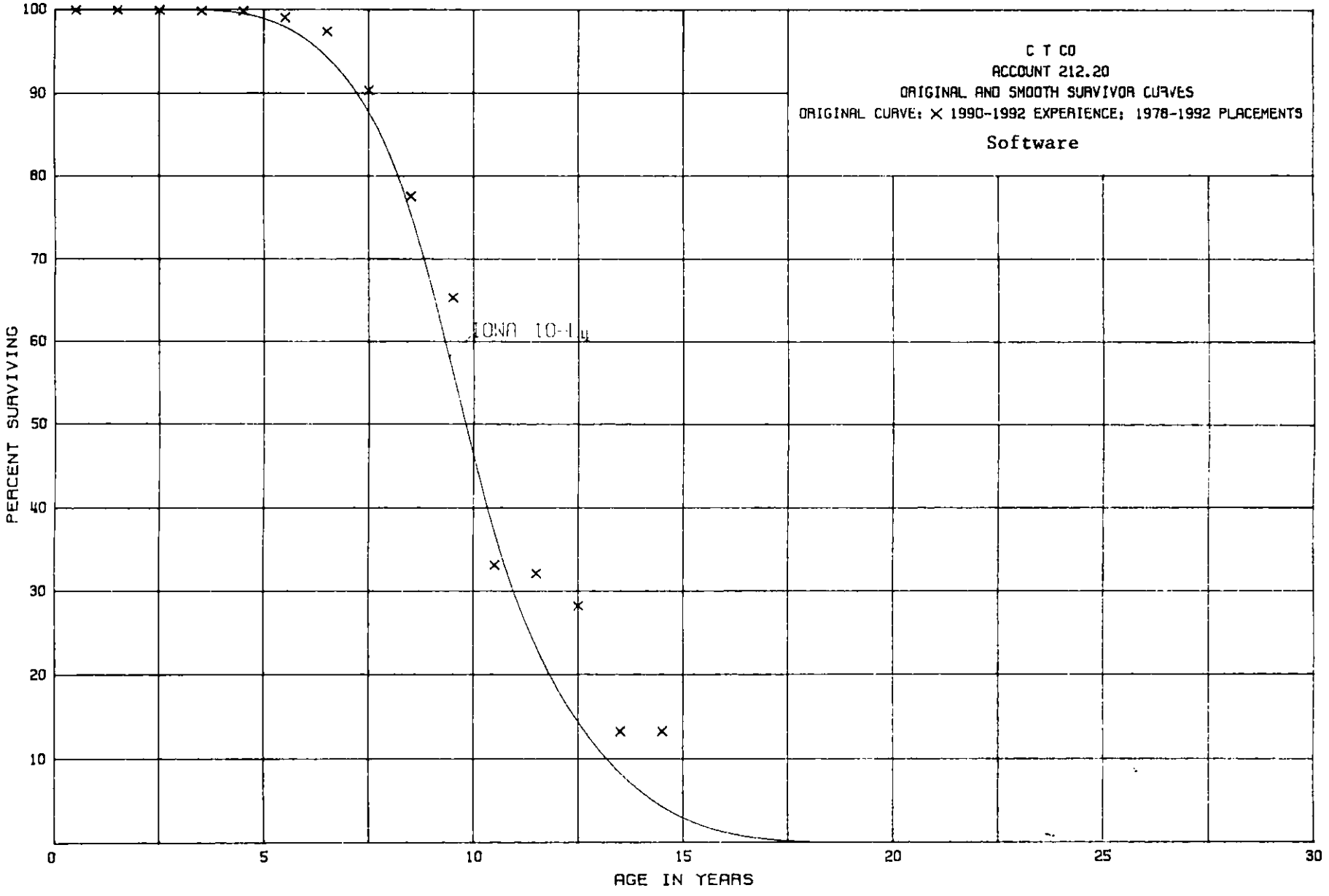

C T CO
ACCOUNT 212.10
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1987-1992 EXPERIENCE; 1947-1992 PLACEMENTS
Digital C O Equipment
IOWA 13-L2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 212.10
Digital C O Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 8.7 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1947-1992 — EXPERIENCE BAND 1987-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	32,862,556	7,500	0.0002	0.9998	100.00
0.5	26,553,048	513,874	0.0194	0.9806	99.98
1.5	19,390,435	94,182	0.0049	0.9951	98.04
2.5	18,443,121	218,600	0.0119	0.9881	97.56
3.5	15,384,534	481,970	0.0313	0.9687	96.40
4.5	14,810,755	108,482	0.0073	0.9927	93.38
5.5	10,862,267	453,965	0.0418	0.9582	92.70
6.5	12,312,107	917,186	0.0745	0.9255	88.83
7.5	11,166,354	638,805	0.0572	0.9428	82.21
8.5	9,836,014	1,491,506	0.1516	0.8484	77.51
9.5	8,812,262	346,263	0.0393	0.9607	65.76
10.5	6,682,341	493,889	0.0739	0.9261	63.18
11.5	4,708,660	1,463,288	0.3108	0.6892	58.51
12.5	2,851,854	707,106	0.2479	0.7521	40.33
13.5	1,965,214	239,252	0.1217	0.8783	30.33
14.5	138,600	4,100	0.0296	0.9704	26.64
15.5	130,148		0.0000	1.0000	25.85
16.5	88,537	5,248	0.0593	0.9407	25.85
17.5	65,868	8,384	0.1273	0.8727	24.32
18.5	58,718	11,369	0.1936	0.8064	21.22
19.5	57,996	762	0.0131	0.9869	17.11
20.5	56,420	12,873	0.2282	0.7718	16.89
21.5	40,234	92	0.0023	0.9977	13.04
22.5	39,713	297	0.0075	0.9925	13.01
23.5	24,168	525	0.0217	0.9783	12.91
24.5	23,401	281	0.0120	0.9880	12.63
25.5	3,454		0.0000	1.0000	12.48
26.5	3,454	40	0.0116	0.9884	12.48
27.5	1,694		0.0000	1.0000	12.34
28.5	1,515	427	0.2818	0.7182	12.34
29.5	1,204		0.0000	1.0000	8.86
30.5	2,342		0.0000	1.0000	8.86
31.5	2,178		0.0000	1.0000	8.86
32.5	2,427		0.0000	1.0000	8.86
33.5	2,427	125	0.0515	0.9485	8.86
34.5	2,303	1,533	0.6657	0.3343	8.40
35.5	625	54	0.0864	0.9136	2.81
36.5	399	240	0.6015	0.3985	2.57
37.5	159	53	0.3333	0.6667	1.02
38.5					0.68
TOTAL	197,389,506	8,222,271			


C T CO
ACCOUNT 212.20
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1978-1992 PLACEMENTS
Software
IOWA 10-L4
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

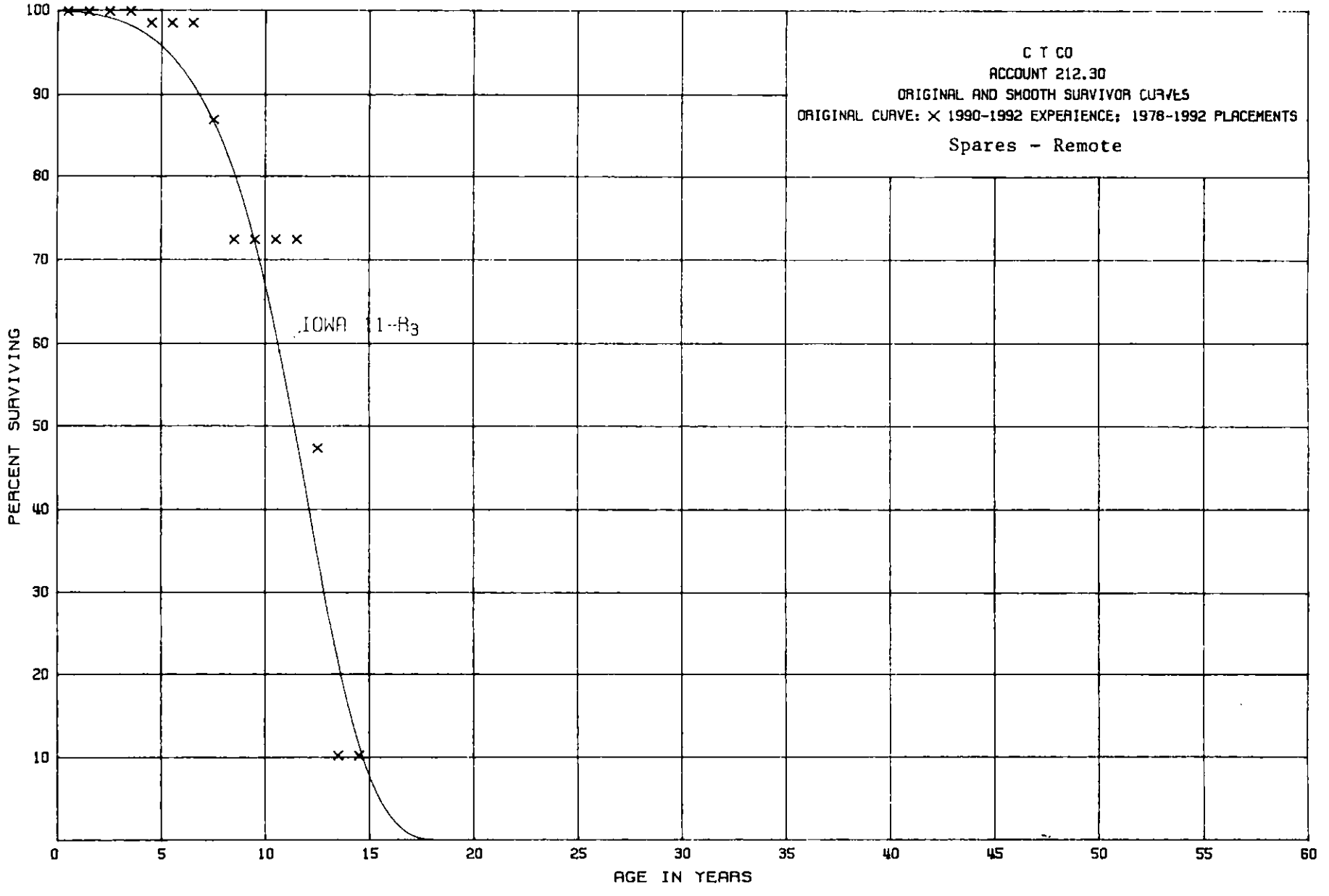
C T CO

ACCOUNT 212.20
Software
ORIGINAL LIFE TABLE

AVG AGE RET 8.6
PLACEMENT BAND 1978-1992

EXPERIENCE ANALYSIS
EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	75,820		0.0000	1.0000	100.00
0.5	78,950		0.0000	1.0000	100.00
1.5	288,659		0.0000	1.0000	100.00
2.5	677,563	1,449	0.0021	0.9979	100.00
3.5	998,220	390	0.0004	0.9996	99.79
4.5	1,210,784	9,166	0.0076	0.9924	99.75
5.5	956,355	16,810	0.0176	0.9824	98.99
6.5	650,271	46,668	0.0718	0.9282	97.25
7.5	349,247	49,475	0.1417	0.8583	90.27
8.5	163,161	25,842	0.1584	0.8416	77.48
9.5	171,860	84,726	0.4930	0.5070	65.21
10.5	38,674	1,135	0.0293	0.9707	33.06
11.5	26,489	3,204	0.1210	0.8790	32.09
12.5	20,662	11,016	0.5332	0.4668	28.21
13.5	8,442		0.0000	1.0000	13.17
14.5					13.17
TOTAL	5,715,157	249,881			

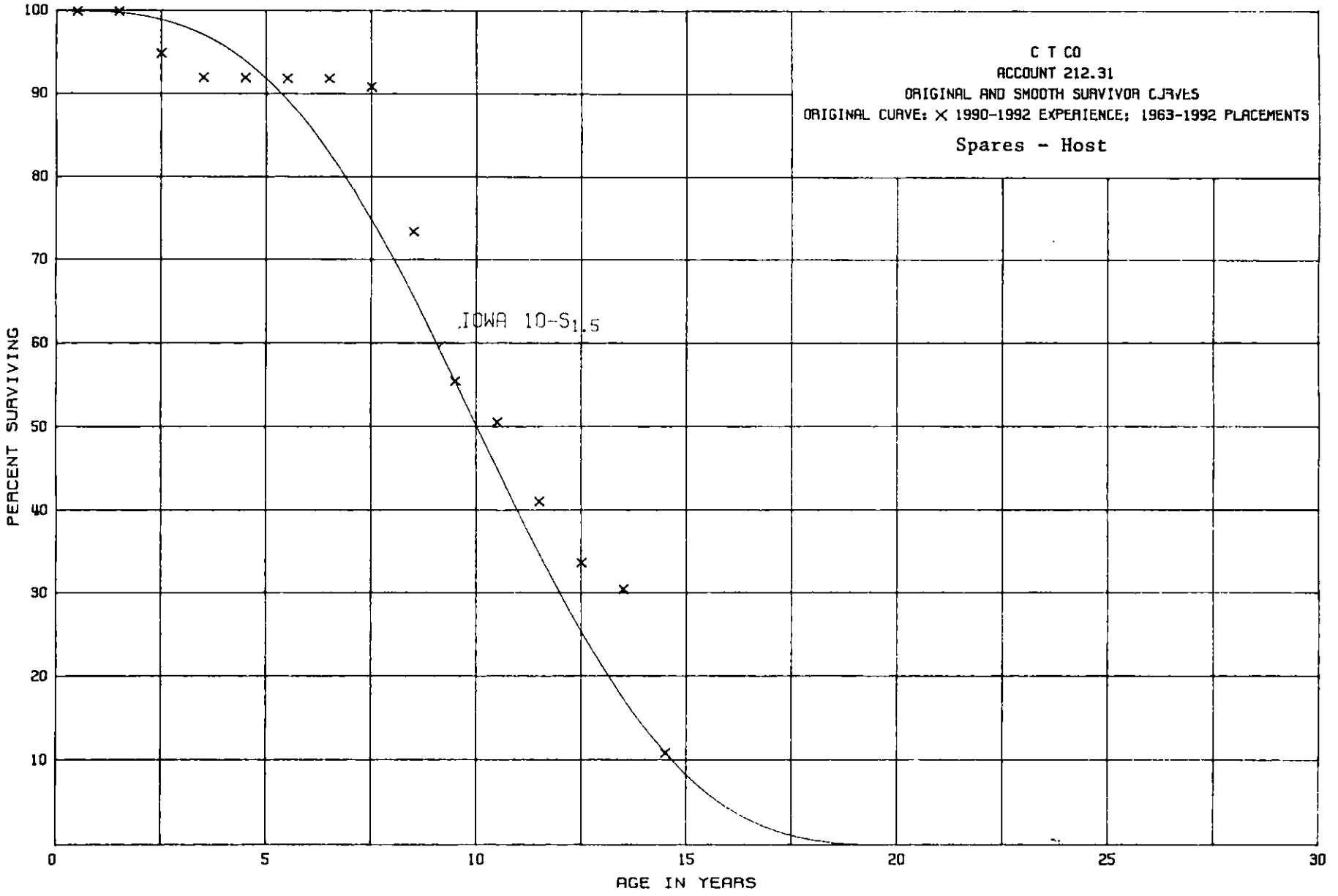

C T CO
ACCOUNT 212.30
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1978-1992 PLACEMENTS
Spares - Remote
IOWA 1-R3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 212.30
Spares - Remote
ORIGINAL LIFE TABLE

AVG AGE RET 6.9 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1978-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	977,742		0.0000	1.0000	100.00
0.5	750,888		0.0000	1.0000	100.00
1.5	457,542		0.0000	1.0000	100.00
2.5	313,916	147	0.0005	0.9995	100.00
3.5	301,606	4,436	0.0147	0.9853	99.95
4.5	249,761		0.0000	1.0000	98.48
5.5	236,499		0.0000	1.0000	98.48
6.5	82,839	9,782	0.1181	0.8819	98.48
7.5	12,264	2,038	0.1662	0.8338	86.85
8.5	4,896		0.0000	1.0000	72.42
9.5	5,656		0.0000	1.0000	72.42
10.5	6,260		0.0000	1.0000	72.42
11.5	2,187	760	0.3475	0.6525	72.42
12.5	1,427	1,120	0.7849	0.2151	47.25
13.5	307		0.0000	1.0000	10.16
14.5					10.16
TOTAL	3,403,790	18,283			


C T CO
ACCOUNT 212.31
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1963-1992 PLACEMENTS
Spares - Host
IOWA 10-S1.5
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

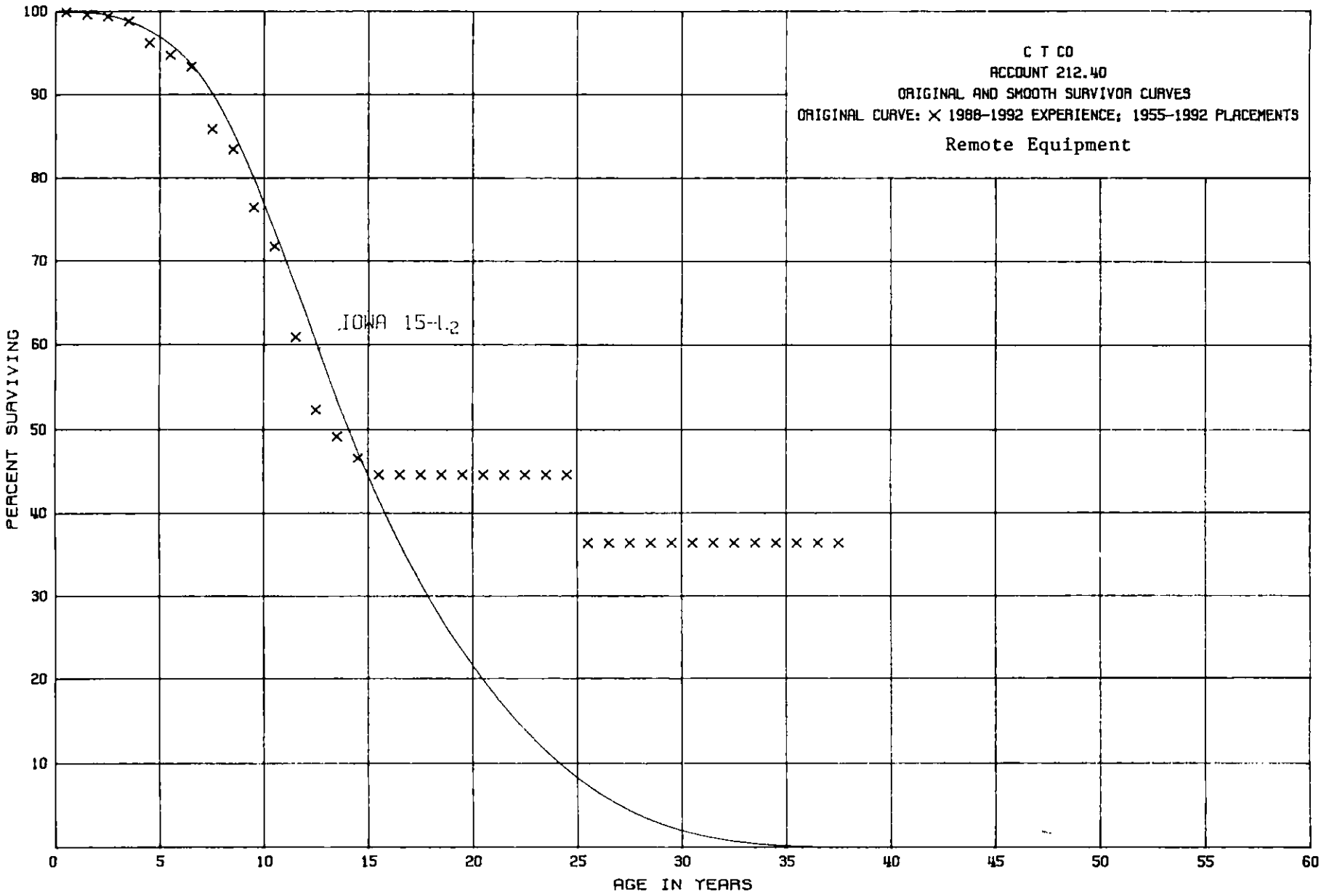
C T CO

ACCOUNT 212.31
Spares - Host
ORIGINAL LIFE TABLE

AVG AGE RET 4.5
PLACEMENT BAND 1963-1992

EXPERIENCE ANALYSIS
EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,189,000		0.0000	1.0000	100.00
0.5	793,164		0.0000	1.0000	100.00
1.5	527,146	27,400	0.0520	0.9480	100.00
2.5	643,003	19,858	0.0309	0.9691	94.80
3.5	492,003		0.0000	1.0000	91.87
4.5	440,816	372	0.0008	0.9992	91.87
5.5	308,922		0.0000	1.0000	91.80
6.5	257,399	2,820	0.0110	0.9890	91.80
7.5	239,372	45,952	0.1920	0.8080	90.79
8.5	112,727	27,633	0.2451	0.7549	73.36
9.5	145,820	12,764	0.0875	0.9125	55.38
10.5	119,260	22,501	0.1887	0.8113	50.53
11.5	133,349	23,927	0.1794	0.8206	40.99
12.5	104,234	10,165	0.0975	0.9025	33.64
13.5	94,069	60,463	0.6428	0.3572	30.36
14.5					10.84
TOTAL	5,600,284	253,855			

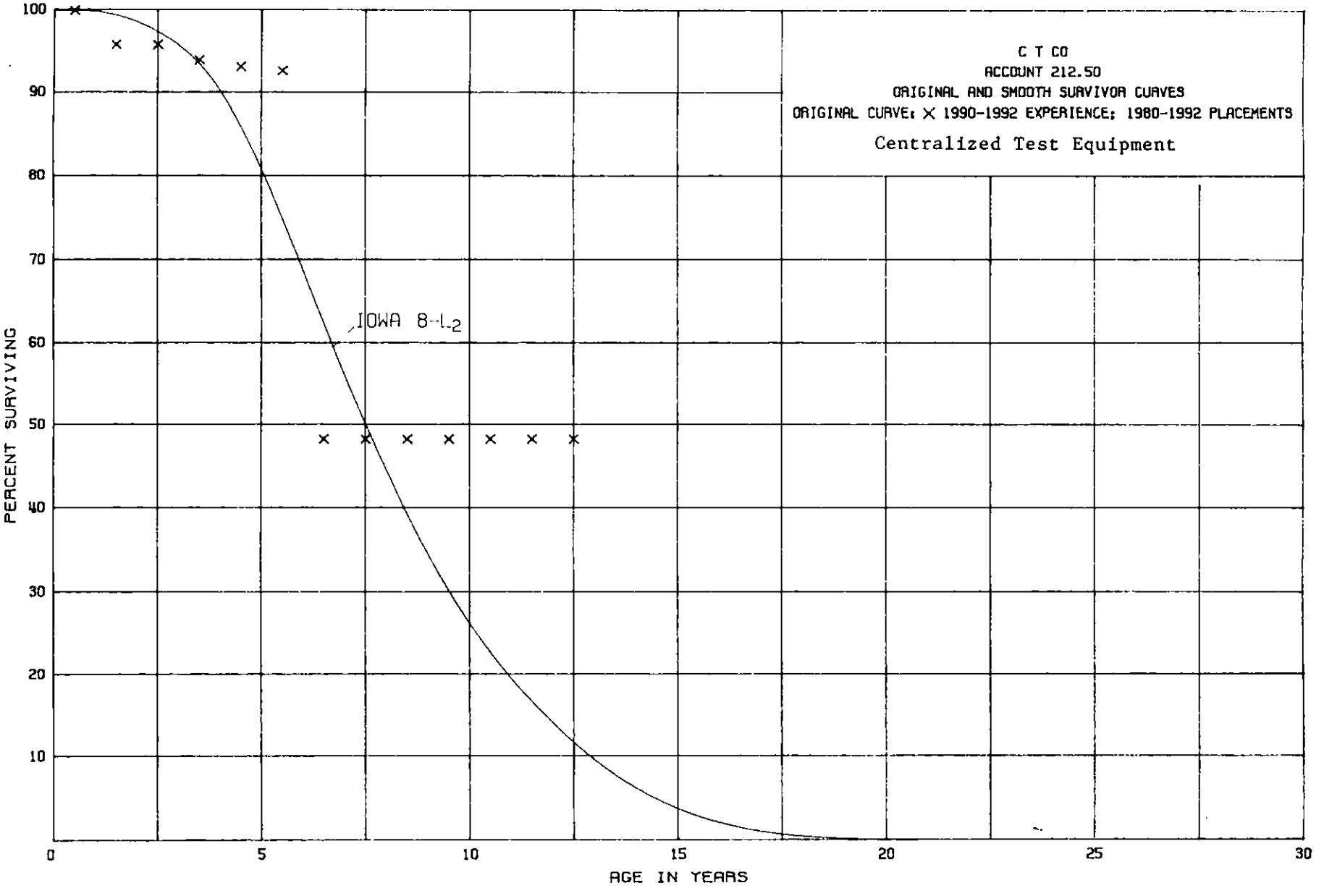

C T CO
ACCOUNT 212.40
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1988-1992 EXPERIENCE; 1955-1992 PLACEMENTS
Remote Equipment
IOWA 15-L2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 212.40
Remote Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 8.0 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1955-1992 — EXPERIENCE BAND 1988-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	32,817,362	26,470	0.0008	0.9992	100.00
0.5	23,194,833	81,581	0.0035	0.9965	99.92
1.5	17,535,152	27,044	0.0015	0.9985	99.57
2.5	16,371,647	110,160	0.0067	0.9933	99.42
3.5	14,423,789	372,110	0.0258	0.9742	98.75
4.5	13,599,981	216,337	0.0159	0.9841	96.20
5.5	9,794,981	143,486	0.0146	0.9854	94.67
6.5	6,709,844	531,932	0.0793	0.9207	93.29
7.5	5,782,403	160,440	0.0277	0.9723	85.89
8.5	4,876,686	408,694	0.0838	0.9162	83.51
9.5	4,220,956	260,337	0.0617	0.9383	76.51
10.5	3,427,566	518,077	0.1512	0.8488	71.79
11.5	2,340,124	326,871	0.1397	0.8603	60.94
12.5	1,107,184	69,345	0.0626	0.9374	52.43
13.5	888,711	45,889	0.0516	0.9484	49.15
14.5	67,513	2,891	0.0428	0.9572	46.61
15.5	15,758		0.0000	1.0000	44.62
16.5	11,162		0.0000	1.0000	44.62
17.5	1,748		0.0000	1.0000	44.62
18.5	1,748		0.0000	1.0000	44.62
19.5	1,748		0.0000	1.0000	44.62
20.5	5,809		0.0000	1.0000	44.62
21.5	11,204		0.0000	1.0000	44.62
22.5	11,057		0.0000	1.0000	44.62
23.5	5,787		0.0000	1.0000	44.62
24.5	7,677	1,413	0.1841	0.8159	44.62
25.5	2,991		0.0000	1.0000	36.41
26.5	130		0.0000	1.0000	36.41
27.5	30		0.0000	1.0000	36.41
28.5	270		0.0000	1.0000	36.41
29.5	340		0.0000	1.0000	36.41
30.5	142		0.0000	1.0000	36.41
31.5	383		0.0000	1.0000	36.41
32.5	355		0.0000	1.0000	36.41
33.5	355		0.0000	1.0000	36.41
34.5	355		0.0000	1.0000	36.41
35.5	283		0.0000	1.0000	36.41
36.5	43		0.0000	1.0000	36.41
37.5					36.41
TOTAL	157,238,107	3,303,077			

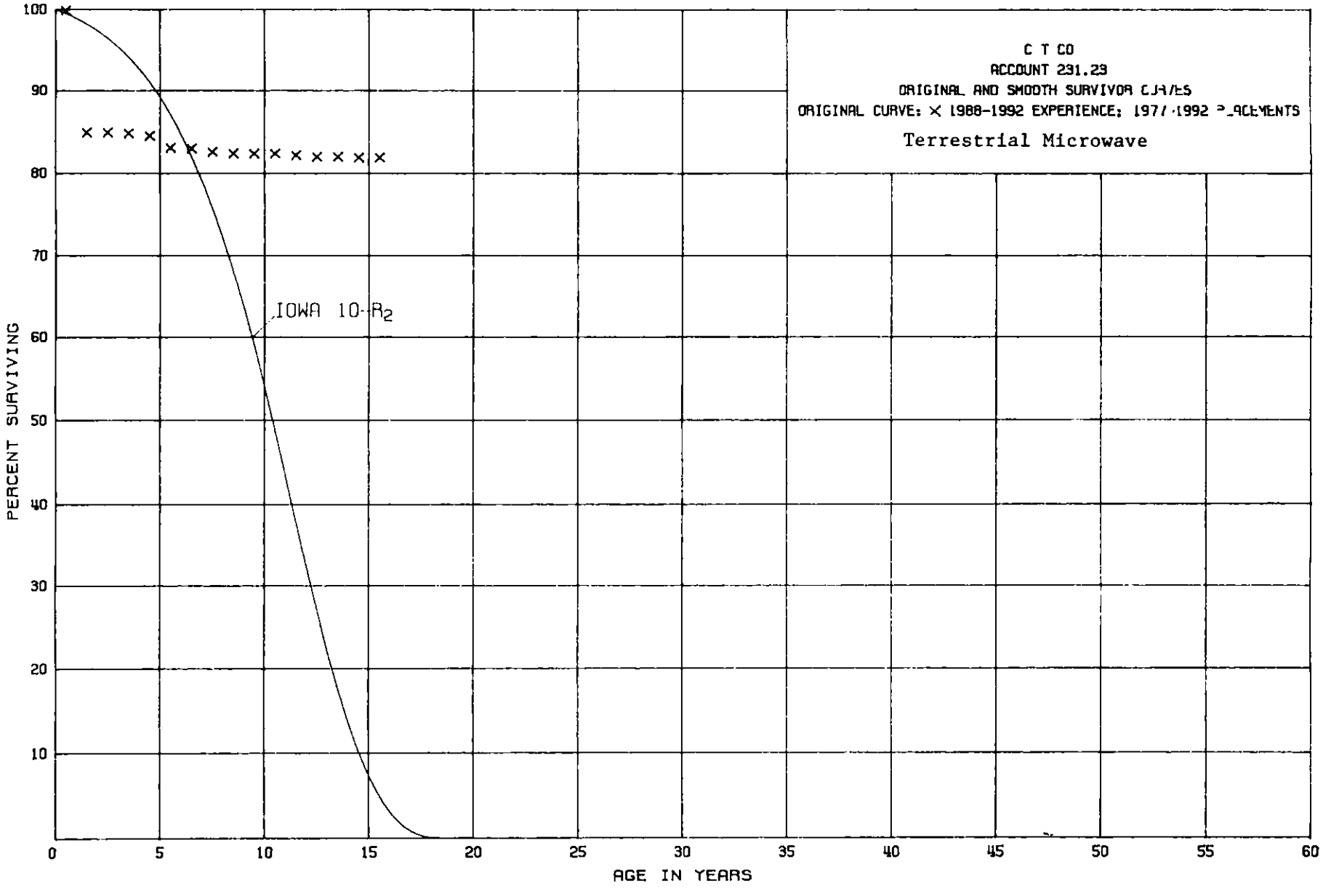

C T CO
ACCOUNT 212.50
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1980-1992 PLACEMENTS
Centralized Test Equipment
IOWA 8-L2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 212.50
Centralized Test Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 5.9 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1980-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	770,841		0.0000	1.0000	100.00
0.5	189,118	8,003	0.0423	0.9577	100.00
1.5	210,738		0.0000	1.0000	95.77
2.5	254,985	4,956	0.0194	0.9806	95.77
3.5	1,081,586	8,919	0.0082	0.9918	93.91
4.5	1,090,049	6,694	0.0061	0.9939	93.14
5.5	1,740,464	833,752	0.4790	0.5210	92.57
6.5	826,391		0.0000	1.0000	48.23
7.5	804,532		0.0000	1.0000	48.23
8.5	205,786		0.0000	1.0000	48.23
9.5	143,359		0.0000	1.0000	48.23
10.5	139,551		0.0000	1.0000	48.23
11.5	10,670		0.0000	1.0000	48.23
12.5					48.23
TOTAL	7,468,070	862,324			

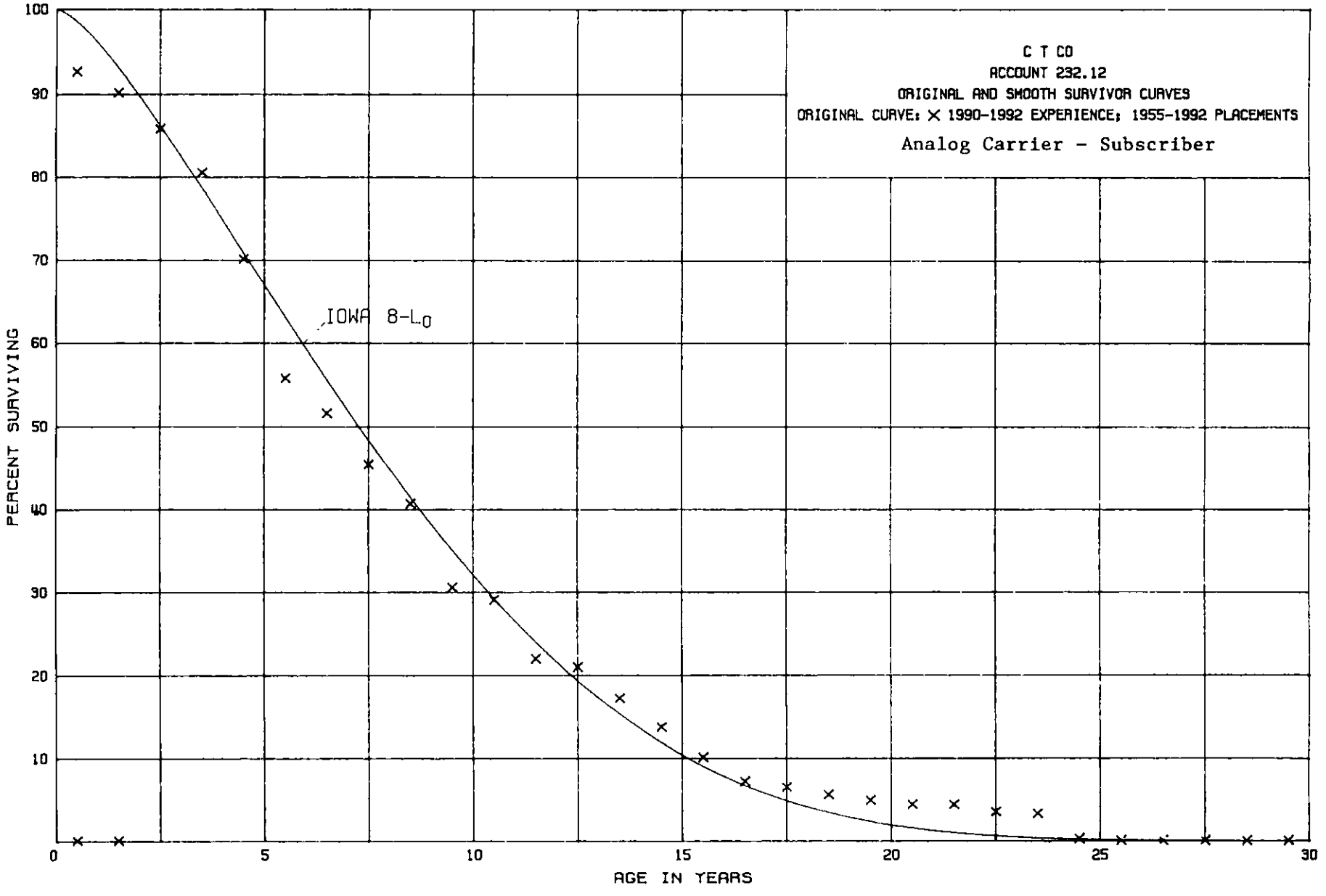

C T CO
ACCOUNT 231.23
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1988-1992 EXPERIENCE; 1977-1992 PLACEMENTS
Terrestrial Microwave
IOWA 10-R2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 231.23
Terrestrial Microwave
ORIGINAL LIFE TABLE

AVG AGE RET 5.8 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1977-1992 — EXPERIENCE BAND 1988-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	54,801		0.0000	1.0000	100.00
0.5	55,868	8,456	0.1514	0.8486	100.00
1.5	38,896		0.0000	1.0000	84.86
2.5	303,871	143	0.0005	0.9995	84.86
3.5	322,018	1,271	0.0039	0.9961	84.82
4.5	306,912	5,148	0.0168	0.9832	84.49
5.5	380,076	407	0.0011	0.9989	83.07
6.5	546,727	2,824	0.0052	0.9948	82.98
7.5	234,406	474	0.0020	0.9980	82.55
8.5	220,461		0.0000	1.0000	82.38
9.5	668,193	53	0.0001	0.9999	82.38
10.5	1,319,186	3,603	0.0027	0.9973	82.37
11.5	1,189,905	1,870	0.0016	0.9984	82.15
12.5	1,184,456		0.0000	1.0000	82.02
13.5	1,137,766	1,531	0.0013	0.9987	82.02
14.5	730,962		0.0000	1.0000	81.91
15.5					81.91
TOTAL	8,694,504	25,780			


C T CO
ACCOUNT 232.12
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1955-1992 PLACEMENTS
Analog Carrier - Subscriber
IOWA 8-L0
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

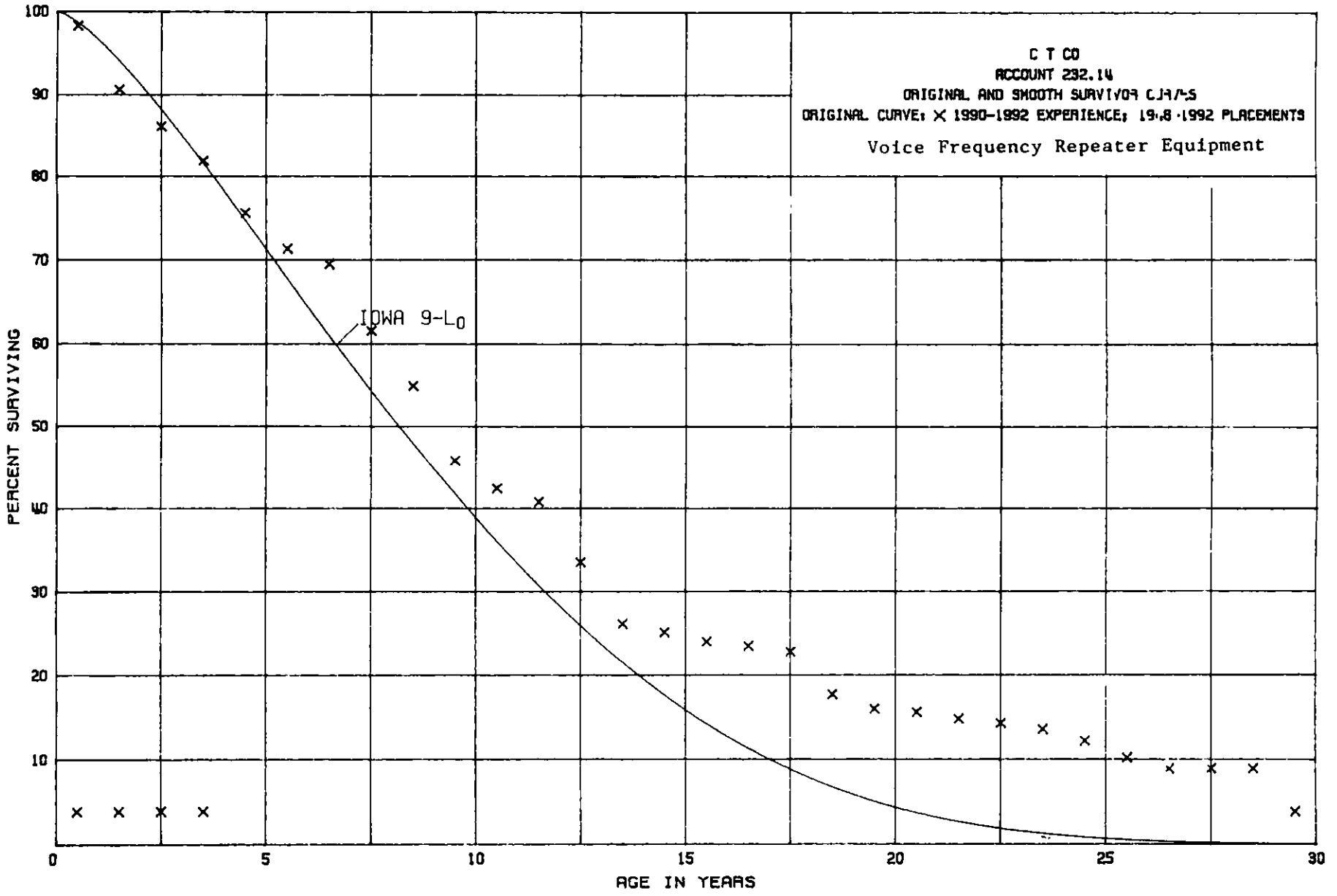
C T CO

ACCOUNT 232.12
Analog Carrier - Subscriber
ORIGINAL LIFE TABLE

AVG AGE RET 10.2
PLACEMENT BAND 1955-1992

EXPERIENCE ANALYSIS
EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	170,736	12,447	0.0729	0.9271	100.00
0.5	311,629	8,491	0.0272	0.9728	92.71
1.5	709,854	34,102	0.0480	0.9520	90.19
2.5	714,068	44,069	0.0617	0.9383	85.86
3.5	523,891	67,521	0.1289	0.8711	80.56
4.5	322,136	65,854	0.2044	0.7956	70.18
5.5	428,275	32,666	0.0763	0.9237	55.84
6.5	482,465	57,455	0.1191	0.8809	51.58
7.5	477,269	50,307	0.1054	0.8946	45.44
8.5	328,670	81,650	0.2484	0.7516	40.65
9.5	197,940	9,251	0.0467	0.9533	30.55
10.5	206,278	50,753	0.2460	0.7540	29.12
11.5	230,757	10,062	0.0436	0.9564	21.96
12.5	405,708	73,377	0.1809	0.8191	21.00
13.5	434,329	88,709	0.2042	0.7958	17.20
14.5	356,745	94,661	0.2653	0.7347	13.69
15.5	270,425	77,883	0.2880	0.7120	10.06
16.5	211,527	19,785	0.0935	0.9065	7.16
17.5	162,109	21,116	0.1303	0.8697	6.49
18.5	85,863	10,633	0.1238	0.8762	5.64
19.5	20,314	2,284	0.1124	0.8876	4.94
20.5	11,050		0.0000	1.0000	4.38
21.5	8,957	1,885	0.2104	0.7896	4.38
22.5	14,109	770	0.0546	0.9454	3.46
23.5	11,371	10,177	0.8950	0.1050	3.27
24.5	1,692	1,094	0.6466	0.3534	0.34
25.5	598		0.0000	1.0000	0.12
26.5	598		0.0000	1.0000	0.12
27.5	162		0.0000	1.0000	0.12
28.5	1,070		0.0000	1.0000	0.12
29.5	1,070	72	0.0673	0.9327	0.12
30.5	908		0.0000	1.0000	0.11
31.5					0.11
32.5	72		0.0000		
33.5	668		0.0000		
34.5	710	125	0.1761		
35.5	513		0.0000		
36.5	43		0.0000		
37.5					
TOTAL	7,104,579	927,199			


C T CO
ACCOUNT 232.14
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1988-1992 PLACEMENTS
Voice Frequency Repeater Equipment
IOWA 9-L0
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 232.14
Voice Frequency Repeater Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 8.0 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1946-1992 — EXPERIENCE BAND 1990-1992

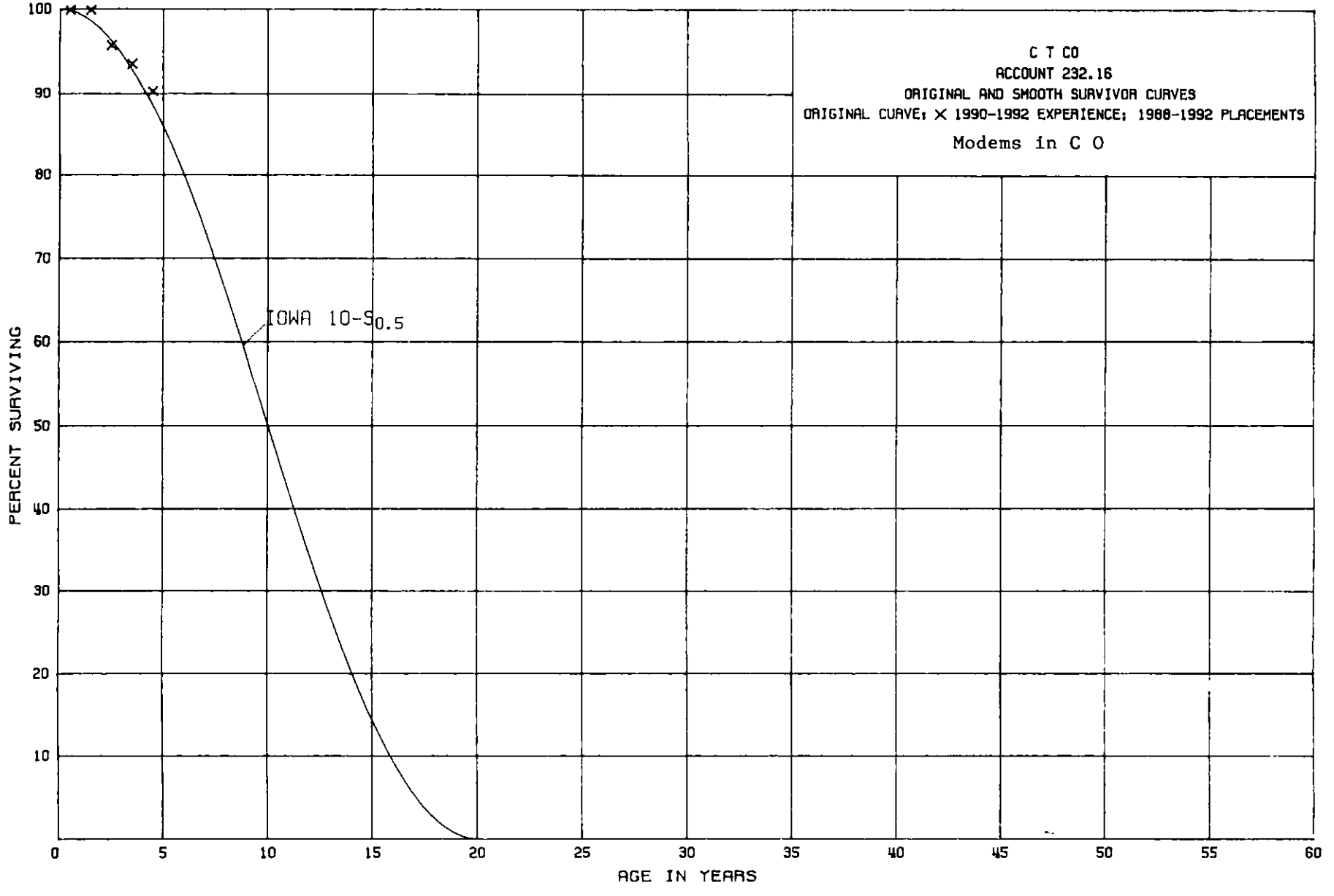
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	340,459	5,955	0.0175	0.9825	100.00
0.5	218,965	16,996	0.0776	0.9224	98.25
1.5	182,433	9,191	0.0504	0.9496	90.63
2.5	202,810	9,767	0.0482	0.9518	86.06
3.5	205,667	15,889	0.0773	0.9227	81.91
4.5	338,853	19,403	0.0573	0.9427	75.58
5.5	326,520	8,266	0.0253	0.9747	71.25
6.5	296,104	33,702	0.1138	0.8862	69.45
7.5	120,283	13,015	0.1082	0.8918	61.55
8.5	92,625	15,358	0.1658	0.8342	54.89
9.5	144,128	10,819	0.0751	0.9249	45.79
10.5	151,374	5,632	0.0372	0.9628	42.35
11.5	133,427	23,909	0.1792	0.8208	40.77
12.5	69,439	15,186	0.2187	0.7813	33.46
13.5	49,833	2,070	0.0415	0.9585	26.14
14.5	73,858	3,155	0.0427	0.9573	25.06
15.5	73,382	1,543	0.0210	0.9790	23.99
16.5	58,112	1,731	0.0298	0.9702	23.49
17.5	26,290	5,922	0.2253	0.7747	22.79
18.5	14,595	1,408	0.0965	0.9035	17.66
19.5	14,403	345	0.0240	0.9760	15.96
20.5	10,683	532	0.0498	0.9502	15.58
21.5	11,298	414	0.0366	0.9634	14.80
22.5	11,267	535	0.0475	0.9525	14.26
23.5	7,891	804	0.1019	0.8981	13.58
24.5	5,628	944	0.1677	0.8323	12.20
25.5	3,266	388	0.1188	0.8812	10.15
26.5	2,275		0.0000	1.0000	8.94
27.5	1,750	5	0.0029	0.9971	8.94
28.5	897	502	0.5596	0.4404	8.91
29.5	184		0.0000	1.0000	3.92
30.5	59		0.0000	1.0000	3.92
31.5	375		0.0000	1.0000	3.92
32.5	375		0.0000	1.0000	3.92
33.5					3.92
34.5					
35.5	25		0.0000		
36.5	25		0.0000		
37.5	25	25	1.0000		
38.5					

C T CO

ACCOUNT 232.14
Voice Frequency Repeater Equipment
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 8.0 EXPERIENCE ANALYSIS
PLACEMENT BAND 1946-1992 EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5					
40.5					
41.5					
42.5					
43.5	125		0.0000		
44.5	125		0.0000		
45.5	125		0.0000		
46.5					
TOTAL	3,189,958	223,411			

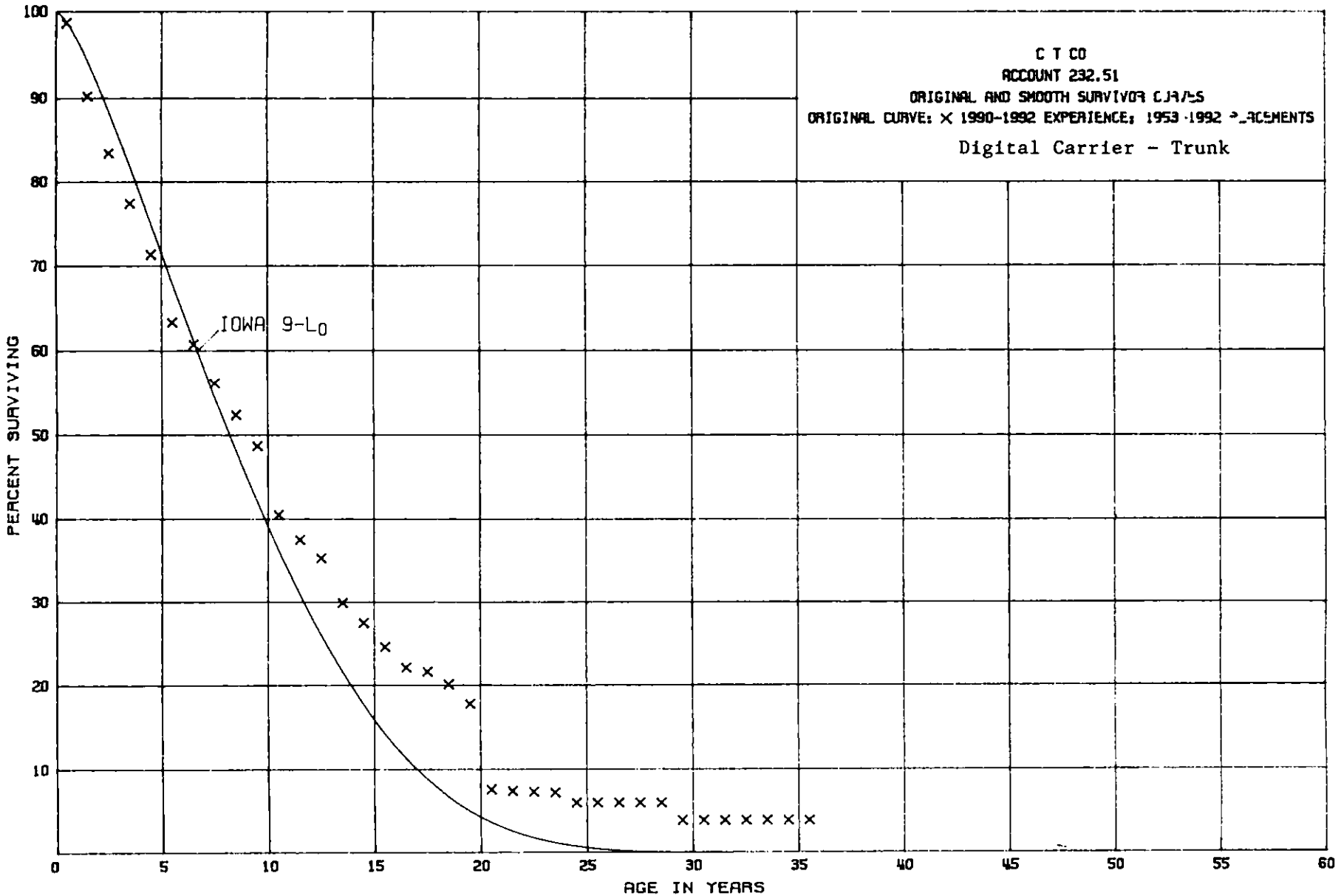

C T CO
ACCOUNT 232.16
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1988-1992 PLACEMENTS
Modems in C O
IOWA 10-S0.5
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 232.16
Modems in C O
ORIGINAL LIFE TABLE

AVG AGE RET 2.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1988-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	367,586		0.0000	1.0000	100.00
0.5	175,222		0.0000	1.0000	100.00
1.5	160,736	6,753	0.0420	0.9580	100.00
2.5	44,130	1,015	0.0230	0.9770	95.80
3.5	22,263	779	0.0350	0.9650	93.60
4.5					90.32
TOTAL	769,937	8,547			


C T CO
ACCOUNT 232.51
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1953-1992 PLACEMENTS
Digital Carrier - Trunk
IOWA 9-L0
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 232.51
Digital Carrier - Trunk
ORIGINAL LIFE TABLE

AVG AGE RET 8.8 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1953-1992 — EXPERIENCE BAND 1990-1992

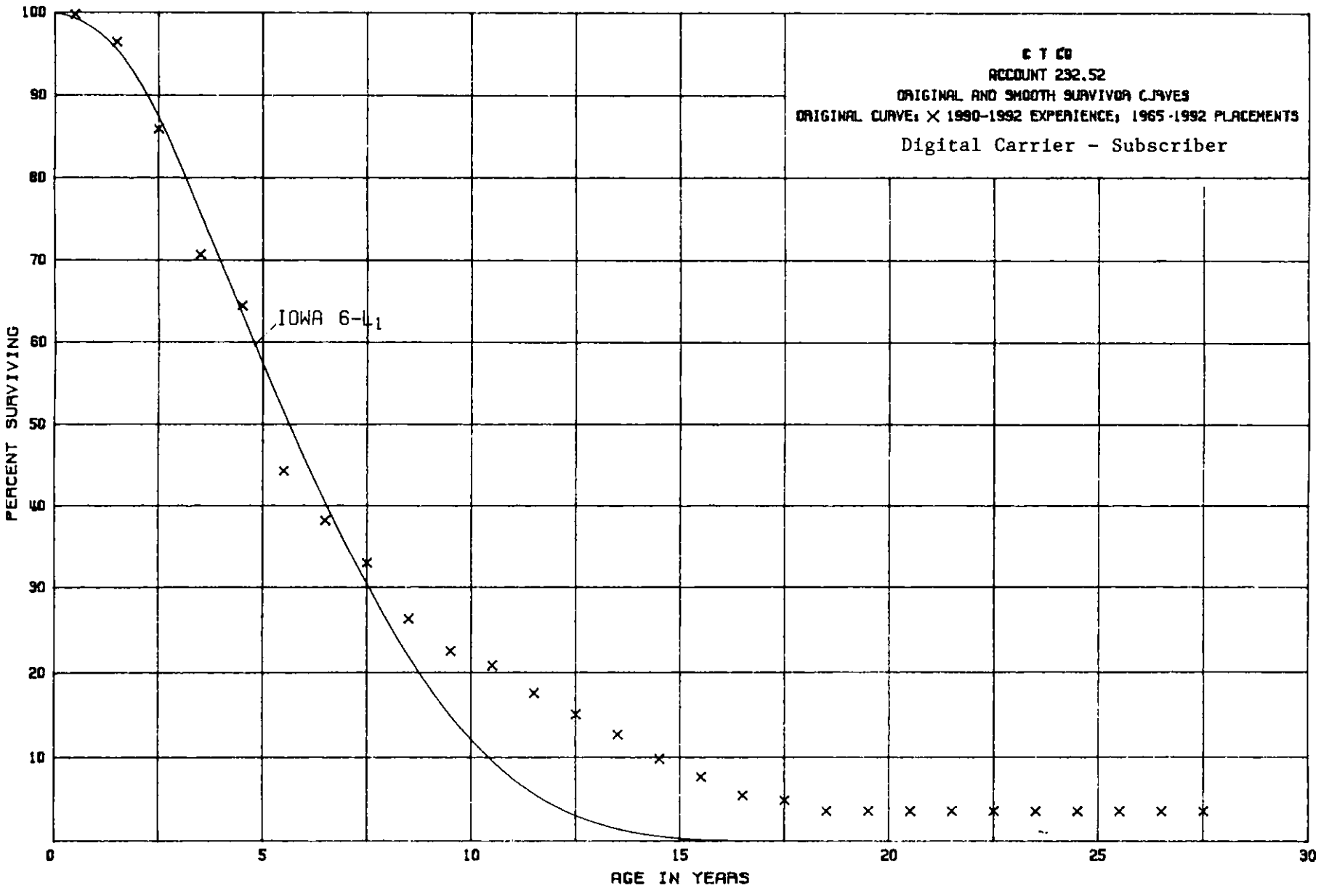
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,486,618	46,634	0.0134	0.9866	100.00
0.5	1,813,131	155,004	0.0855	0.9145	98.66
1.5	1,742,571	131,667	0.0756	0.9244	90.22
2.5	2,309,884	167,188	0.0724	0.9276	83.40
3.5	2,069,379	163,282	0.0789	0.9211	77.36
4.5	1,854,308	207,045	0.1117	0.8883	71.26
5.5	1,832,580	74,197	0.0405	0.9595	63.30
6.5	1,683,112	126,220	0.0750	0.9250	60.74
7.5	2,078,225	141,555	0.0681	0.9319	56.18
8.5	1,909,902	134,760	0.0706	0.9294	52.35
9.5	2,187,647	367,204	0.1679	0.8321	48.65
10.5	1,969,520	146,787	0.0745	0.9255	40.48
11.5	1,816,518	104,852	0.0577	0.9423	37.46
12.5	1,852,198	284,410	0.1536	0.8464	35.30
13.5	1,353,853	106,281	0.0785	0.9215	29.88
14.5	992,471	106,584	0.1074	0.8926	27.53
15.5	455,475	45,732	0.1004	0.8996	24.57
16.5	375,406	8,814	0.0235	0.9765	22.10
17.5	268,281	18,546	0.0691	0.9309	21.58
18.5	268,226	30,911	0.1152	0.8848	20.09
19.5	102,900	58,886	0.5723	0.4277	17.78
20.5	39,847	1,161	0.0291	0.9709	7.60
21.5	90,506	588	0.0065	0.9935	7.38
22.5	85,222	1,983	0.0233	0.9767	7.33
23.5	100,440	16,174	0.1610	0.8390	7.16
24.5	78,526		0.0000	1.0000	6.01
25.5	71,223		0.0000	1.0000	6.01
26.5	64,298		0.0000	1.0000	6.01
27.5	21,339		0.0000	1.0000	6.01
28.5	18,821	6,580	0.3496	0.6504	6.01
29.5	2,667		0.0000	1.0000	3.91
30.5	831		0.0000	1.0000	3.91
31.5	100		0.0000	1.0000	3.91
32.5	6,301		0.0000	1.0000	3.91
33.5	6,301		0.0000	1.0000	3.91
34.5	6,301		0.0000	1.0000	3.91
35.5					3.91
36.5	5,015		0.0000		
37.5	5,015		0.0000		
38.5	5,015		0.0000		

C T CO

ACCOUNT 232.51
Digital Carrier - Trunk
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 8.8 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1953-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5					
TOTAL	33,029,973	2,653,045			

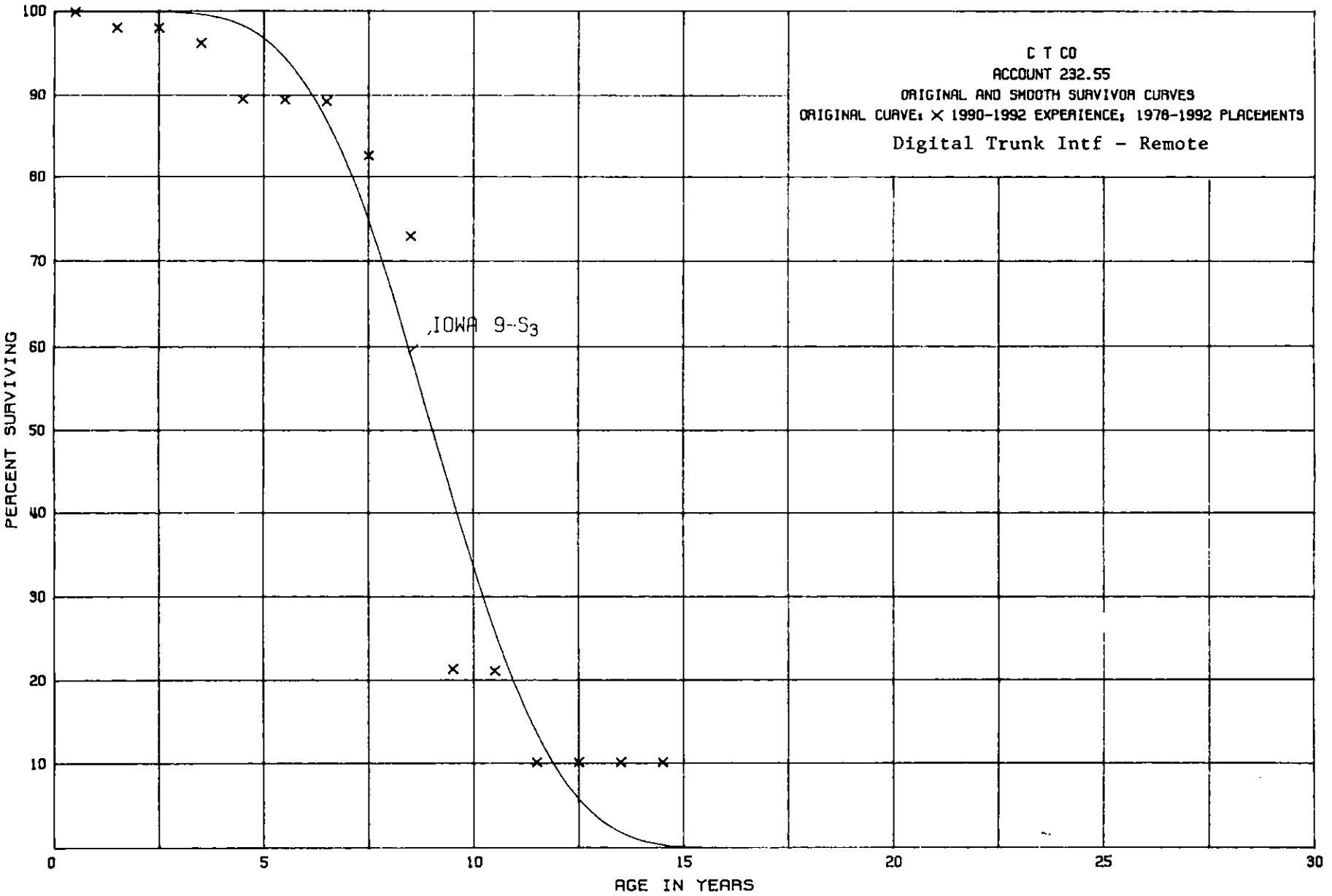

C T CO
ACCOUNT 232.52
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1965-1992 PLACEMENTS
Digital Carrier - Subscriber
IOWA 6-L1
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 232.52
Digital Carrier - Subscriber
ORIGINAL LIFE TABLE

AVG AGE RET 6.9 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1965-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,198,647	2,910	0.0024	0.9976	100.00
0.5	878,727	29,340	0.0334	0.9666	99.76
1.5	754,850	82,460	0.1092	0.8908	96.43
2.5	908,055	161,184	0.1775	0.8225	85.90
3.5	912,611	80,268	0.0880	0.9120	70.65
4.5	721,860	225,391	0.3122	0.6878	64.43
5.5	586,617	81,383	0.1387	0.8613	44.31
6.5	388,572	52,135	0.1342	0.8658	38.16
7.5	402,304	82,007	0.2038	0.7962	33.04
8.5	420,487	60,623	0.1442	0.8558	26.31
9.5	573,533	44,856	0.0782	0.9218	22.52
10.5	524,786	79,340	0.1512	0.8488	20.76
11.5	441,124	63,846	0.1447	0.8553	17.62
12.5	275,728	43,589	0.1581	0.8419	15.07
13.5	194,215	43,585	0.2244	0.7756	12.69
14.5	77,475	17,032	0.2198	0.7802	9.84
15.5	44,464	12,910	0.2903	0.7097	7.68
16.5	30,960	3,026	0.0977	0.9023	5.45
17.5	19,686	5,383	0.2734	0.7266	4.92
18.5	5,696		0.0000	1.0000	3.57
19.5	2,760		0.0000	1.0000	3.57
20.5	1,004		0.0000	1.0000	3.57
21.5	822		0.0000	1.0000	3.57
22.5	215		0.0000	1.0000	3.57
23.5	1,992		0.0000	1.0000	3.57
24.5	2,042		0.0000	1.0000	3.57
25.5	2,042		0.0000	1.0000	3.57
26.5	50		0.0000	1.0000	3.57
27.5					3.57
TOTAL	9,371,324	1,171,268			

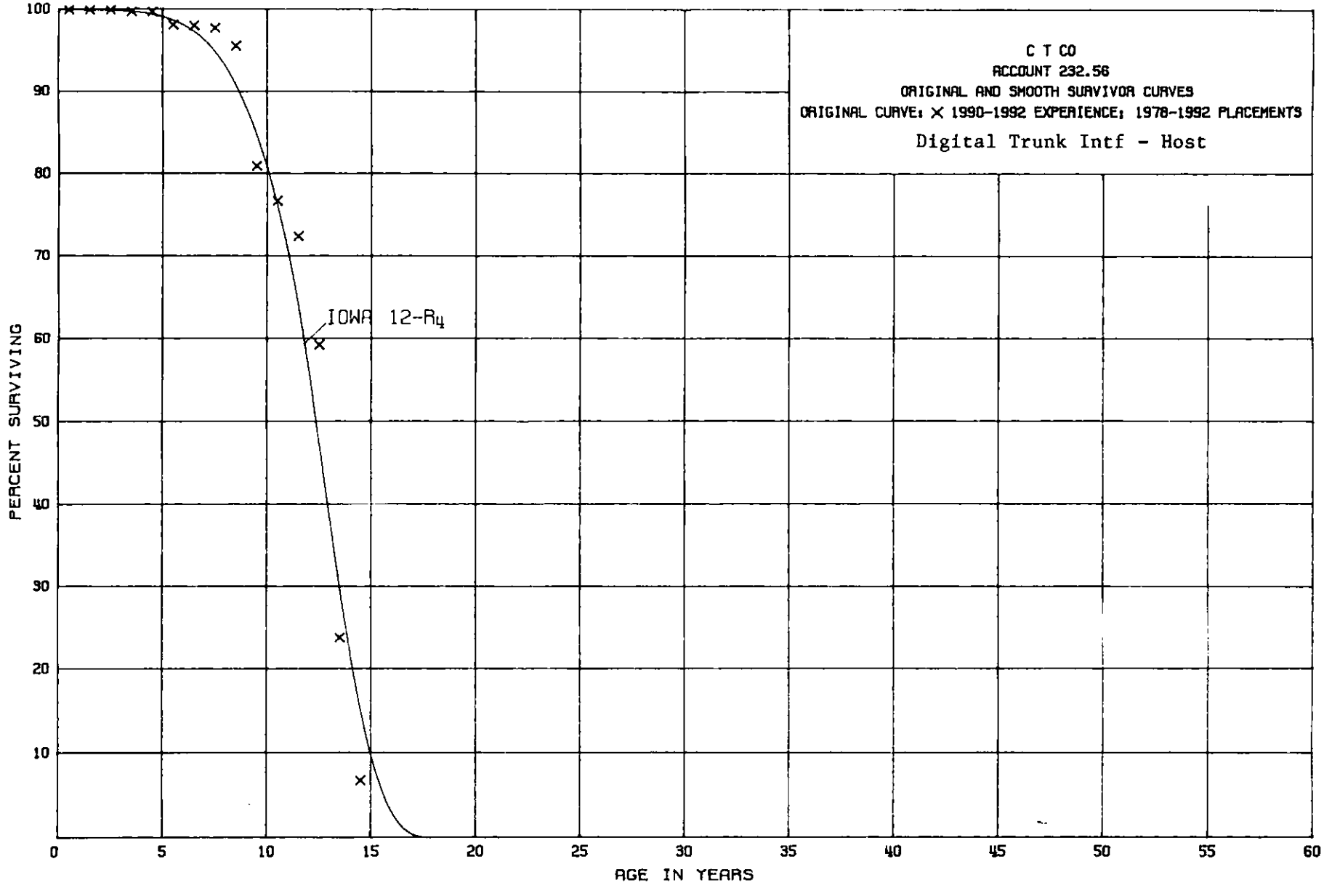

C T CO
ACCOUNT 232.55
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: × 1990-1992 EXPERIENCE; 1978-1992 PLACEMENTS
Digital Trunk Intf - Remote
IOWA 9-S3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 232.55
Digital Trunk Intf - Remote
ORIGINAL LIFE TABLE

AVG AGE RET 5.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1978-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	793,509		0.0000	1.0000	100.00
0.5	462,653	9,124	0.0197	0.9803	100.00
1.5	307,620	13	0.0000	1.0000	98.03
2.5	749,899	14,038	0.0187	0.9813	98.03
3.5	905,667	63,093	0.0697	0.9303	96.20
4.5	850,362	1,352	0.0016	0.9984	89.49
5.5	512,246	744	0.0015	0.9985	89.35
6.5	244,214	18,111	0.0742	0.9258	89.22
7.5	103,188	11,939	0.1157	0.8843	82.60
8.5	8,661	6,139	0.7088	0.2912	73.04
9.5	27,658	242	0.0087	0.9913	21.27
10.5	23,053	12,033	0.5220	0.4780	21.08
11.5	16,974		0.0000	1.0000	10.08
12.5	2,555		0.0000	1.0000	10.08
13.5	1,520		0.0000	1.0000	10.08
14.5					10.08
TOTAL	5,009,779	136,828			

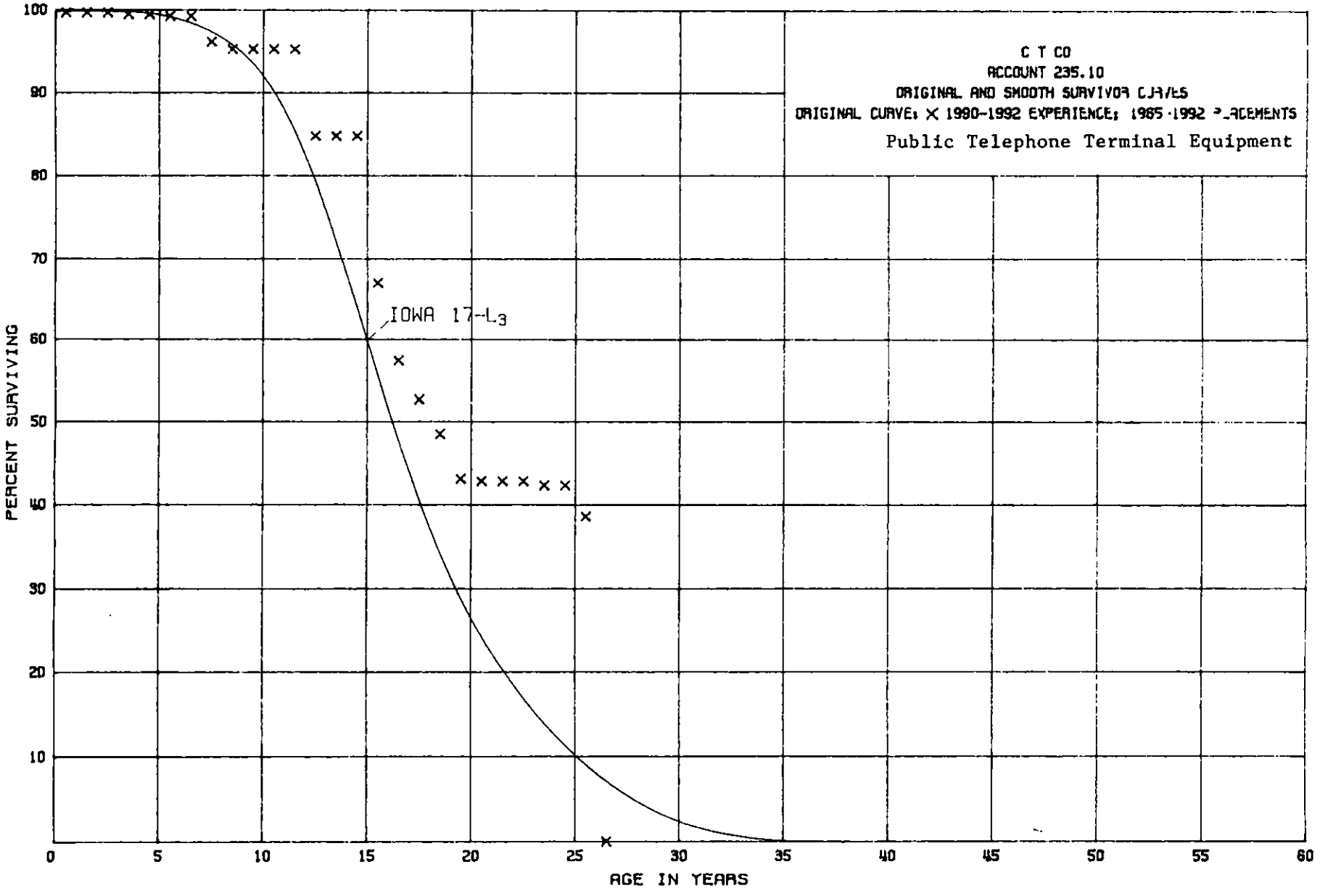

C T CO
ACCOUNT 232.56
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1978-1992 PLACEMENTS
Digital Trunk Intf - Host
IOWA 12-R4
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 232.56
Digital Trunk Intf - Host
ORIGINAL LIFE TABLE

AVG AGE RET 9.5 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1978-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,031,771		0.0000	1.0000	100.00
0.5	2,216,570	1,439	0.0006	0.9994	100.00
1.5	1,458,309	95	0.0001	0.9999	99.94
2.5	1,497,271	3,050	0.0020	0.9980	99.93
3.5	1,141,174	567	0.0005	0.9995	99.73
4.5	1,707,530	26,909	0.0158	0.9842	99.68
5.5	1,824,206	1,863	0.0010	0.9990	98.11
6.5	1,673,494	5,285	0.0032	0.9968	98.01
7.5	1,363,882	31,428	0.0230	0.9770	97.70
8.5	1,046,395	159,507	0.1524	0.8476	95.45
9.5	1,089,070	56,380	0.0518	0.9482	80.90
10.5	572,163	31,934	0.0558	0.9442	76.71
11.5	176,829	32,381	0.1831	0.8169	72.43
12.5	42,229	25,295	0.5990	0.4010	59.17
13.5	16,934	12,134	0.7165	0.2835	23.73
14.5					6.73
TOTAL	18,857,827	388,267			

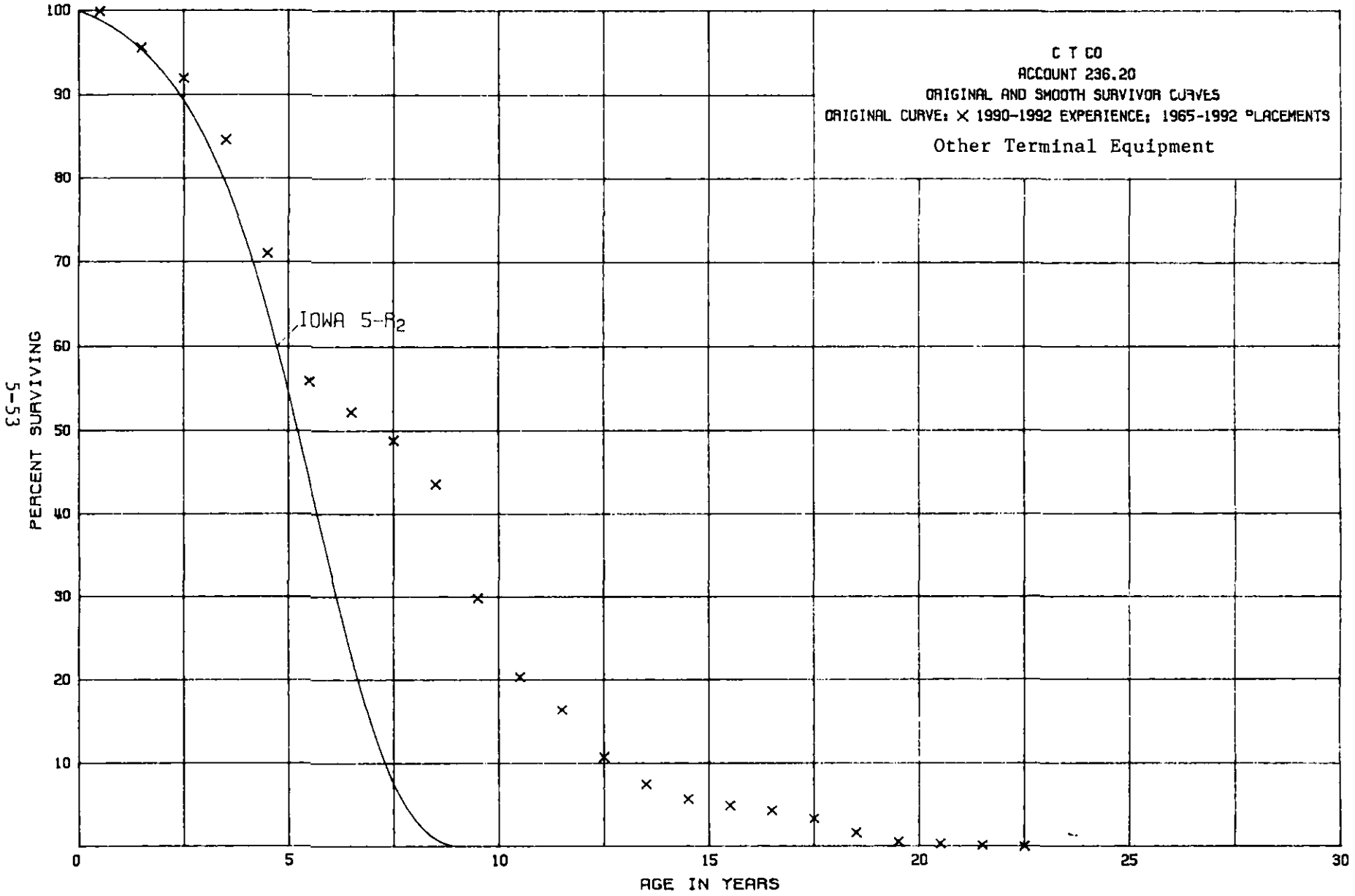

C T CO
ACCOUNT 235.10
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1985-1992 PLACEMENTS
Public Telephone Terminal Equipment
IOWA 17-L3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 235.10
Public Telephone Terminal Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 14.8 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1965-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	231,854	593	0.0026	0.9974	100.00
0.5	217,580		0.0000	1.0000	99.74
1.5	327,286		0.0000	1.0000	99.74
2.5	293,803	786	0.0027	0.9973	99.74
3.5	245,808		0.0000	1.0000	99.47
4.5	130,704	290	0.0022	0.9978	99.47
5.5	177,218		0.0000	1.0000	99.25
6.5	179,756	5,524	0.0307	0.9693	99.25
7.5	136,338	1,280	0.0094	0.9906	96.20
8.5	181,250		0.0000	1.0000	95.30
9.5	395,671		0.0000	1.0000	95.30
10.5	522,765		0.0000	1.0000	95.30
11.5	399,485	43,862	0.1098	0.8902	95.30
12.5	146,869		0.0000	1.0000	84.84
13.5	80,866		0.0000	1.0000	84.84
14.5	113,870	24,006	0.2108	0.7892	84.84
15.5	137,519	19,611	0.1426	0.8574	66.96
16.5	122,287	9,986	0.0817	0.9183	57.41
17.5	106,894	8,627	0.0807	0.9193	52.72
18.5	69,500	7,751	0.1115	0.8885	48.47
19.5	49,997	339	0.0068	0.9932	43.07
20.5	36,388		0.0000	1.0000	42.78
21.5	23,715		0.0000	1.0000	42.78
22.5	19,361	202	0.0104	0.9896	42.78
23.5	11,996		0.0000	1.0000	42.34
24.5	11,959	1,059	0.0886	0.9114	42.34
25.5	6,356	6,356	1.0000	0.0000	38.59
26.5					0.00
TOTAL	4,377,095	130,272			

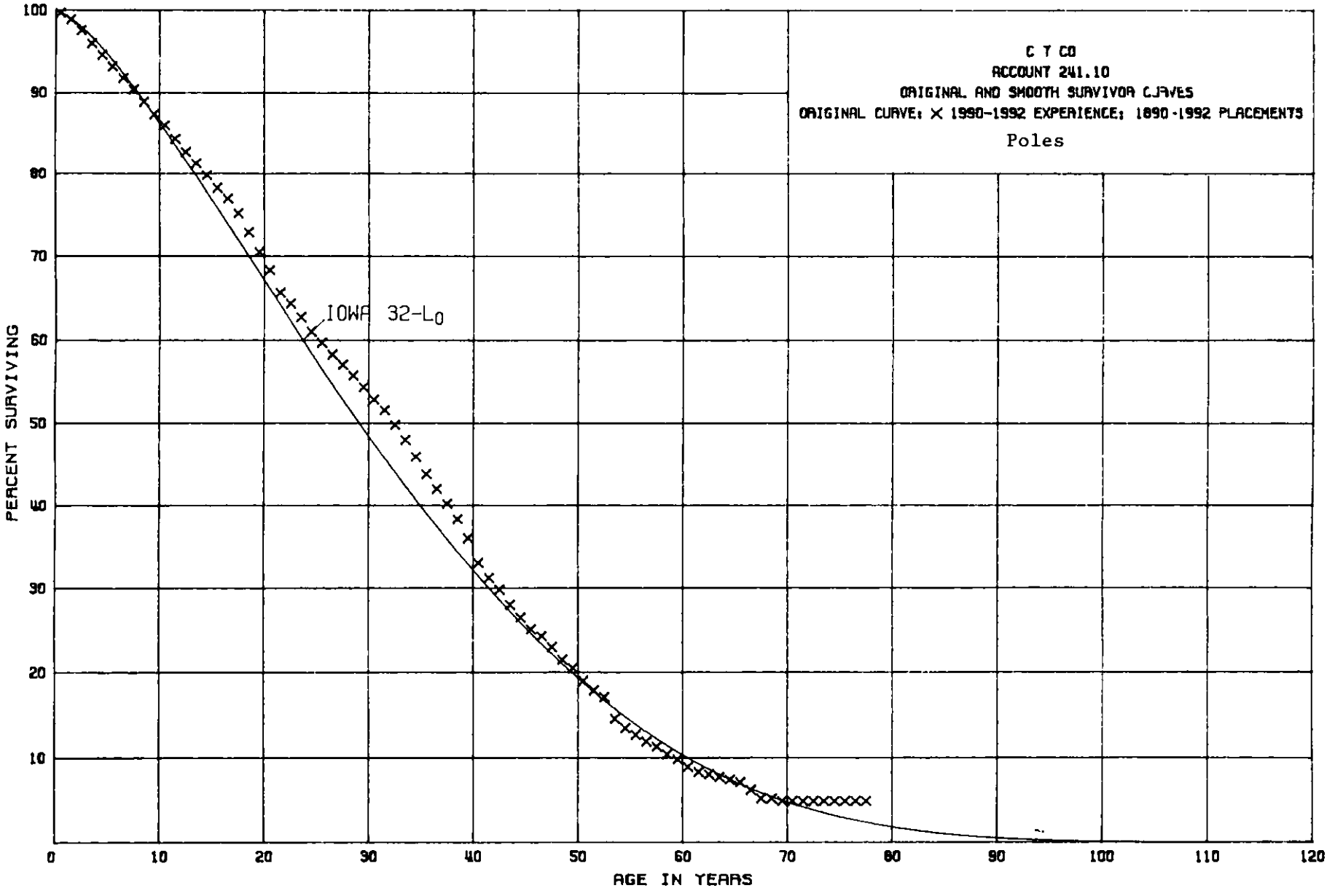

C T CO
ACCOUNT 236.20
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1965-1992 PLACEMENTS
Other Terminal Equipment
IOWA 5-R2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30

C T CO

ACCOUNT 236.20
Other Terminal Equipment
ORIGINAL LIFE TABLE

AVG AGE RET 11.5 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1965-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	220,282		0.0000	1.0000	100.00
0.5	142,317	6,238	0.0438	0.9562	100.00
1.5	138,809	5,295	0.0381	0.9619	95.62
2.5	189,487	15,202	0.0802	0.9198	91.98
3.5	194,062	31,129	0.1604	0.8396	84.60
4.5	124,345	26,703	0.2147	0.7853	71.03
5.5	288,523	18,640	0.0646	0.9354	55.78
6.5	336,812	21,784	0.0647	0.9353	52.18
7.5	229,180	24,851	0.1084	0.8916	48.80
8.5	360,190	113,486	0.3151	0.6849	43.51
9.5	432,630	137,717	0.3183	0.6817	29.80
10.5	512,454	101,648	0.1984	0.8016	20.31
11.5	467,930	161,528	0.3452	0.6548	16.28
12.5	254,189	74,504	0.2931	0.7069	10.66
13.5	194,661	48,645	0.2499	0.7501	7.54
14.5	161,059	21,099	0.1310	0.8690	5.66
15.5	98,894	13,463	0.1361	0.8639	4.92
16.5	88,663	19,352	0.2183	0.7817	4.25
17.5	77,073	40,635	0.5272	0.4728	3.32
18.5	40,903	28,523	0.6973	0.3027	1.57
19.5	20,842	8,305	0.3985	0.6015	0.48
20.5	24,704	12,561	0.5085	0.4915	0.29
21.5	14,156	12,143	0.8578	0.1422	0.14
22.5	2,711	2,014	0.7429	0.2571	0.02
23.5	2,942	698	0.2373	0.7627	0.01
24.5	5,214	2,244	0.4304	0.5696	0.01
25.5	8,401	2,970	0.3535	0.6465	0.01
26.5	5,430		0.0000	1.0000	0.01
27.5					0.01
TOTAL	4,636,863	951,377			


C T CO
ACCOUNT 241.10
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1890-1992 PLACEMENTS
Poles
IOWA 32-L0
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120

C T CO

ACCOUNT 241.10
Poles
ORIGINAL LIFE TABLE

AVG AGE RET 19.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1890-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	5,702,798	17,070	0.0030	0.9970	100.00
0.5	4,754,206	40,535	0.0085	0.9915	99.70
1.5	3,799,092	49,931	0.0131	0.9869	98.85
2.5	3,776,052	60,488	0.0160	0.9840	97.56
3.5	3,490,301	49,732	0.0142	0.9858	96.00
4.5	3,458,849	53,071	0.0153	0.9847	94.64
5.5	3,028,285	45,375	0.0150	0.9850	93.19
6.5	2,569,525	38,763	0.0151	0.9849	91.79
7.5	2,027,508	34,948	0.0172	0.9828	90.40
8.5	1,750,603	28,258	0.0161	0.9839	88.85
9.5	1,722,979	27,694	0.0161	0.9839	87.42
10.5	1,810,734	35,947	0.0199	0.9801	86.01
11.5	1,741,918	33,119	0.0190	0.9810	84.30
12.5	1,608,199	26,690	0.0166	0.9834	82.70
13.5	1,337,408	26,007	0.0194	0.9806	81.33
14.5	1,146,850	21,238	0.0185	0.9815	79.75
15.5	987,589	16,220	0.0164	0.9836	78.27
16.5	928,668	21,130	0.0228	0.9772	76.99
17.5	856,684	26,829	0.0313	0.9687	75.23
18.5	810,024	27,092	0.0334	0.9666	72.88
19.5	730,470	22,023	0.0301	0.9699	70.45
20.5	723,279	28,861	0.0399	0.9601	68.33
21.5	768,939	15,821	0.0206	0.9794	65.60
22.5	785,120	19,109	0.0243	0.9757	64.25
23.5	696,925	18,679	0.0268	0.9732	62.69
24.5	588,600	12,785	0.0217	0.9783	61.01
25.5	596,000	14,207	0.0238	0.9762	59.69
26.5	623,066	12,714	0.0204	0.9796	58.27
27.5	715,811	16,671	0.0233	0.9767	57.08
28.5	600,426	14,541	0.0242	0.9758	55.75
29.5	566,680	15,206	0.0268	0.9732	54.40
30.5	505,367	13,045	0.0258	0.9742	52.94
31.5	573,528	19,405	0.0338	0.9662	51.57
32.5	563,963	20,453	0.0363	0.9637	49.83
33.5	573,991	25,541	0.0445	0.9555	48.02
34.5	562,626	26,079	0.0464	0.9536	45.88
35.5	694,030	28,036	0.0404	0.9596	43.75
36.5	618,315	25,968	0.0420	0.9580	41.98
37.5	520,786	25,573	0.0491	0.9509	40.22
38.5	263,273	15,652	0.0595	0.9405	38.25

C T CO

ACCOUNT 241.10
Poles
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 19.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1890-1992 — EXPERIENCE BAND 1990-1992

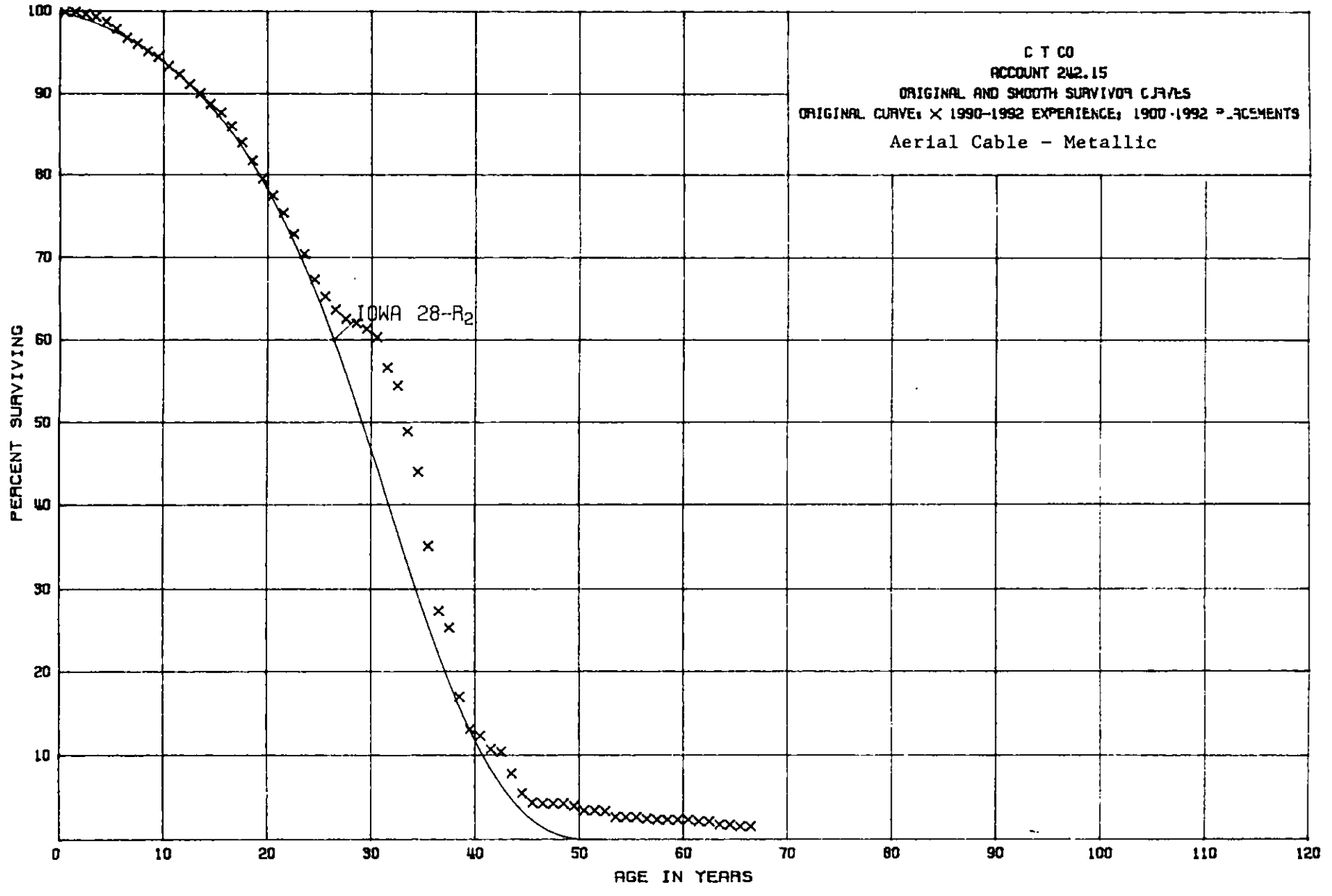
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	204,500	16,887	0.0826	0.9174	35.97
40.5	150,576	8,321	0.0553	0.9447	33.00
41.5	163,794	7,438	0.0454	0.9546	31.18
42.5	129,290	7,527	0.0582	0.9418	29.76
43.5	102,862	5,682	0.0552	0.9448	28.03
44.5	69,213	3,506	0.0507	0.9493	26.48
45.5	68,653	2,432	0.0354	0.9646	25.14
46.5	80,616	4,221	0.0524	0.9476	24.25
47.5	95,006	6,242	0.0657	0.9343	22.98
48.5	109,181	4,871	0.0446	0.9554	21.47
49.5	103,028	7,550	0.0733	0.9267	20.51
50.5	84,674	4,819	0.0569	0.9431	19.01
51.5	64,268	3,003	0.0467	0.9533	17.93
52.5	77,230	11,502	0.1489	0.8511	17.09
53.5	70,186	5,252	0.0748	0.9252	14.55
54.5	69,685	3,990	0.0573	0.9427	13.46
55.5	54,745	3,508	0.0641	0.9359	12.69
56.5	41,921	2,101	0.0501	0.9499	11.88
57.5	34,447	2,717	0.0789	0.9211	11.28
58.5	20,754	1,222	0.0589	0.9411	10.39
59.5	16,225	1,533	0.0945	0.9055	9.78
60.5	13,488	823	0.0610	0.9390	8.86
61.5	16,254	571	0.0351	0.9649	8.32
62.5	28,853	1,302	0.0451	0.9549	8.03
63.5	23,980	925	0.0386	0.9614	7.67
64.5	15,177	552	0.0364	0.9636	7.37
65.5	670	84	0.1254	0.8746	7.10
66.5	413	65	0.1574	0.8426	6.21
67.5	137		0.0000	1.0000	5.23
68.5	150	10	0.0667	0.9333	5.23
69.5	236		0.0000	1.0000	4.88
70.5	376		0.0000	1.0000	4.88
71.5	341		0.0000	1.0000	4.88
72.5	244		0.0000	1.0000	4.88
73.5	17		0.0000	1.0000	4.88
74.5	58		0.0000	1.0000	4.88
75.5	41		0.0000	1.0000	4.88
76.5	41		0.0000	1.0000	4.88
77.5					4.88
78.5					

C T CO

ACCOUNT 241.10
Poles
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 19.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1890-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5					
80.5					
81.5					
82.5	29		0.0000		
83.5	258		0.0000		
84.5	329		0.0000		
85.5	300	125	0.4167		
86.5	71		0.0000		
87.5					
88.5	215		0.0000		
89.5	511		0.0000		
90.5	511	17	0.0333		
91.5	280		0.0000		
92.5					
93.5					
94.5					
95.5					
96.5					
97.5					
98.5					
99.5	87		0.0000		
100.5	87	58	0.6667		
101.5	29		0.0000		
102.5					
TOTAL	61,493,504	1,189,362			


C T CO
ACCOUNT 242.15
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1900-1992 PLACEMENTS
Aerial Cable - Metallic
IOWA 28-R2
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120

C T CO

ACCOUNT 242.15
Aerial Cable - Metallic
ORIGINAL LIFE TABLE

AVG AGE RET 20.9 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1900-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	24,234,940	3,741	0.0002	0.9998	100.00
0.5	21,049,523	20,745	0.0010	0.9990	99.98
1.5	16,501,090	53,536	0.0032	0.9968	99.88
2.5	17,026,154	42,895	0.0025	0.9975	99.56
3.5	14,905,672	84,824	0.0057	0.9943	99.31
4.5	15,130,080	145,027	0.0096	0.9904	98.74
5.5	13,043,168	150,549	0.0115	0.9885	97.79
6.5	11,439,147	80,575	0.0070	0.9930	96.67
7.5	9,224,166	83,298	0.0090	0.9910	95.99
8.5	7,730,440	61,168	0.0079	0.9921	95.13
9.5	7,237,122	80,111	0.0111	0.9889	94.38
10.5	8,496,809	90,520	0.0107	0.9893	93.33
11.5	9,151,762	121,448	0.0133	0.9867	92.33
12.5	10,433,156	122,304	0.0117	0.9883	91.10
13.5	9,820,762	139,978	0.0143	0.9857	90.03
14.5	9,186,103	120,264	0.0131	0.9869	88.74
15.5	7,810,627	151,946	0.0195	0.9805	87.58
16.5	7,592,580	174,999	0.0230	0.9770	85.87
17.5	7,051,931	187,418	0.0266	0.9734	83.89
18.5	6,634,861	179,315	0.0270	0.9730	81.66
19.5	5,677,522	139,219	0.0245	0.9755	79.46
20.5	5,116,461	137,959	0.0270	0.9730	77.51
21.5	5,053,939	177,019	0.0350	0.9650	75.42
22.5	4,772,922	156,766	0.0328	0.9672	72.78
23.5	3,906,355	170,709	0.0437	0.9563	70.39
24.5	2,544,087	78,716	0.0309	0.9691	67.31
25.5	2,288,955	56,296	0.0246	0.9754	65.23
26.5	2,302,520	39,336	0.0171	0.9829	63.63
27.5	3,742,411	32,354	0.0086	0.9914	62.54
28.5	3,037,516	36,399	0.0120	0.9880	62.00
29.5	3,155,639	49,912	0.0158	0.9842	61.26
30.5	1,654,625	100,910	0.0610	0.9390	60.29
31.5	1,662,587	64,150	0.0386	0.9614	56.61
32.5	1,180,531	119,356	0.1011	0.8989	54.42
33.5	1,292,593	133,796	0.1035	0.8965	48.92
34.5	1,159,798	231,440	0.1996	0.8004	43.86
35.5	688,703	153,548	0.2230	0.7770	35.11
36.5	667,486	49,644	0.0744	0.9256	27.28
37.5	446,401	146,827	0.3289	0.6711	25.25
38.5	285,951	64,319	0.2249	0.7751	16.95

C T CO

ACCOUNT 242.15
Aerial Cable - Metallic
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 20.9 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1900-1992 — EXPERIENCE BAND 1990-1992

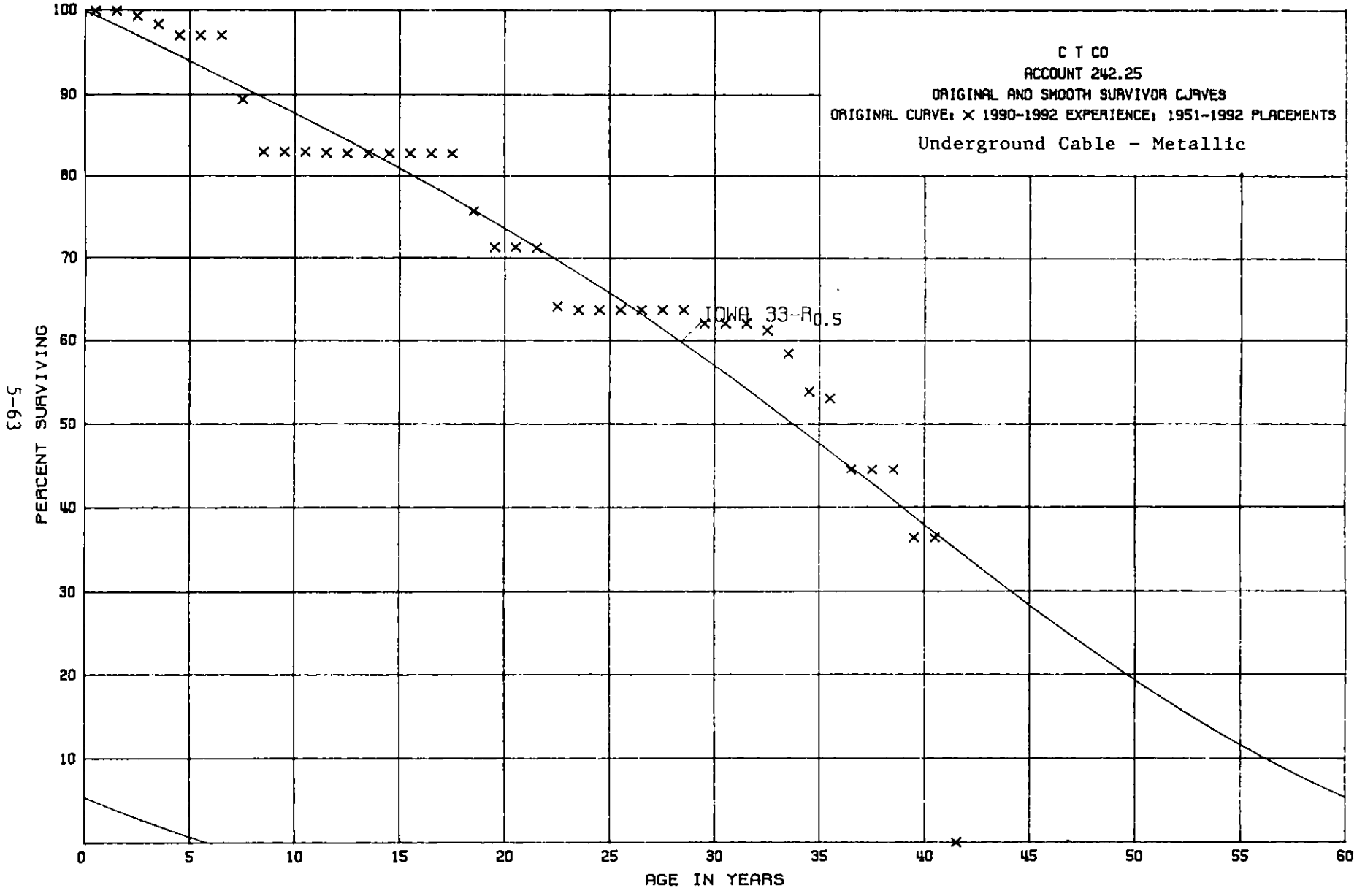
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	113,727	6,927	0.0609	0.9391	13.14
40.5	113,886	15,561	0.1366	0.8634	12.34
41.5	105,062	3,008	0.0286	0.9714	10.65
42.5	79,767	19,621	0.2460	0.7540	10.35
43.5	28,820	8,595	0.2982	0.7018	7.80
44.5	9,167	1,825	0.1991	0.8009	5.47
45.5	2,938	40	0.0136	0.9864	4.38
46.5	4,864	19	0.0039	0.9961	4.32
47.5	4,263		0.0000	1.0000	4.30
48.5	8,552	515	0.0602	0.9398	4.30
49.5	10,373	1,284	0.1238	0.8762	4.04
50.5	11,030	193	0.0175	0.9825	3.54
51.5	8,699	212	0.0244	0.9756	3.48
52.5	5,093	1,006	0.1975	0.8025	3.40
53.5	3,042		0.0000	1.0000	2.73
54.5	4,114	32	0.0078	0.9922	2.73
55.5	3,785	274	0.0724	0.9276	2.71
56.5	3,324	109	0.0328	0.9672	2.51
57.5	975		0.0000	1.0000	2.43
58.5	1,268	30	0.0237	0.9763	2.43
59.5	1,446		0.0000	1.0000	2.37
60.5	3,803	352	0.0926	0.9074	2.37
61.5	2,637		0.0000	1.0000	2.15
62.5	2,443	425	0.1740	0.8260	2.15
63.5	2,123		0.0000	1.0000	1.78
64.5	2,106	195	0.0926	0.9074	1.78
65.5	1,897	27	0.0142	0.9858	1.62
66.5					1.60
67.5					
68.5					
69.5					
70.5					
71.5					
72.5					
73.5	274		0.0000		
74.5	274		0.0000		
75.5	274	113	0.4124		
76.5					
77.5					
78.5					

C T CO

ACCOUNT 242.15
Aerial Cable - Metallic
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 20.9 EXPERIENCE ANALYSIS
PLACEMENT BAND 1900-1992 EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5					
80.5					
81.5					
82.5					
83.5	255		0.0000		
84.5	255		0.0000		
85.5	255		0.0000		
86.5	31		0.0000		
87.5	31		0.0000		
88.5	31		0.0000		
89.5	266		0.0000		
90.5	266		0.0000		
91.5	266		0.0000		
92.5					
TOTAL	284,878,777	4,293,699			


C T CO
ACCOUNT 242.25
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: × 1990-1992 EXPERIENCE: 1951-1992 PLACEMENTS
Underground Cable - Metallic
IOWA 33-R0.5
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 242.25
Underground Cable - Metallic
ORIGINAL LIFE TABLE

AVG AGE RET 18.0 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1951-1992 — EXPERIENCE BAND 1990-1992

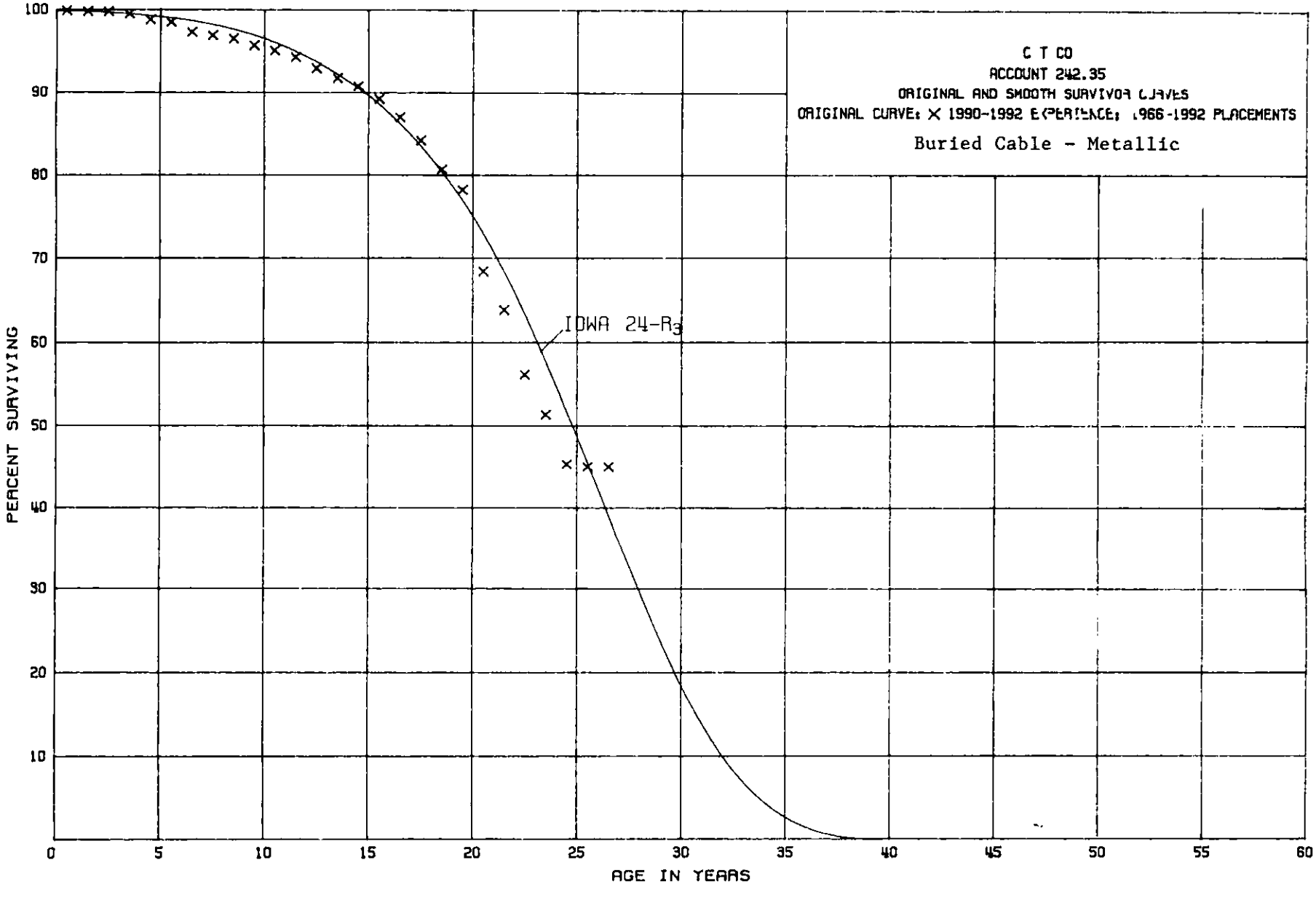
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	555,095		0.0000	1.0000	100.00
0.5	391,019		0.0000	1.0000	100.00
1.5	469,632	3,291	0.0070	0.9930	100.00
2.5	465,284	4,674	0.0100	0.9900	99.30
3.5	368,467	4,788	0.0130	0.9870	98.31
4.5	153,916		0.0000	1.0000	97.03
5.5	31,541		0.0000	1.0000	97.03
6.5	51,433	4,028	0.0783	0.9217	97.03
7.5	102,546	7,497	0.0731	0.9269	89.43
8.5	143,843		0.0000	1.0000	82.89
9.5	166,239		0.0000	1.0000	82.89
10.5	196,687	201	0.0010	0.9990	82.89
11.5	179,884	287	0.0016	0.9984	82.81
12.5	246,731		0.0000	1.0000	82.68
13.5	332,278		0.0000	1.0000	82.68
14.5	383,779		0.0000	1.0000	82.68
15.5	378,932		0.0000	1.0000	82.68
16.5	300,791		0.0000	1.0000	82.68
17.5	261,019	22,017	0.0844	0.9156	82.68
18.5	235,871	13,800	0.0585	0.9415	75.70
19.5	165,385		0.0000	1.0000	71.27
20.5	203,658	115	0.0006	0.9994	71.27
21.5	170,050	17,234	0.1013	0.8987	71.23
22.5	143,557	859	0.0060	0.9940	64.01
23.5	55,720		0.0000	1.0000	63.63
24.5	7,269		0.0000	1.0000	63.63
25.5	6,579		0.0000	1.0000	63.63
26.5	10,335		0.0000	1.0000	63.63
27.5	36,052		0.0000	1.0000	63.63
28.5	32,464	822	0.0253	0.9747	63.63
29.5	67,185		0.0000	1.0000	62.02
30.5	45,966		0.0000	1.0000	62.02
31.5	61,151	836	0.0137	0.9863	62.02
32.5	29,599	1,339	0.0452	0.9548	61.17
33.5	32,998	2,622	0.0795	0.9205	58.41
34.5	16,971	243	0.0143	0.9857	53.77
35.5	8,856	1,444	0.1631	0.8369	53.00
36.5	82		0.0000	1.0000	44.36
37.5	18,422		0.0000	1.0000	44.36
38.5	19,920	3,570	0.1792	0.8208	44.36

C T CO

ACCOUNT 242.25
Underground Cable - Metallic
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 18.0 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1951-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	16,268		0.0000	1.0000	36.41
40.5	1,498	1,498	1.0000	0.0000	36.41
41.5					0.00
TOTAL	6,564,972	91,165			

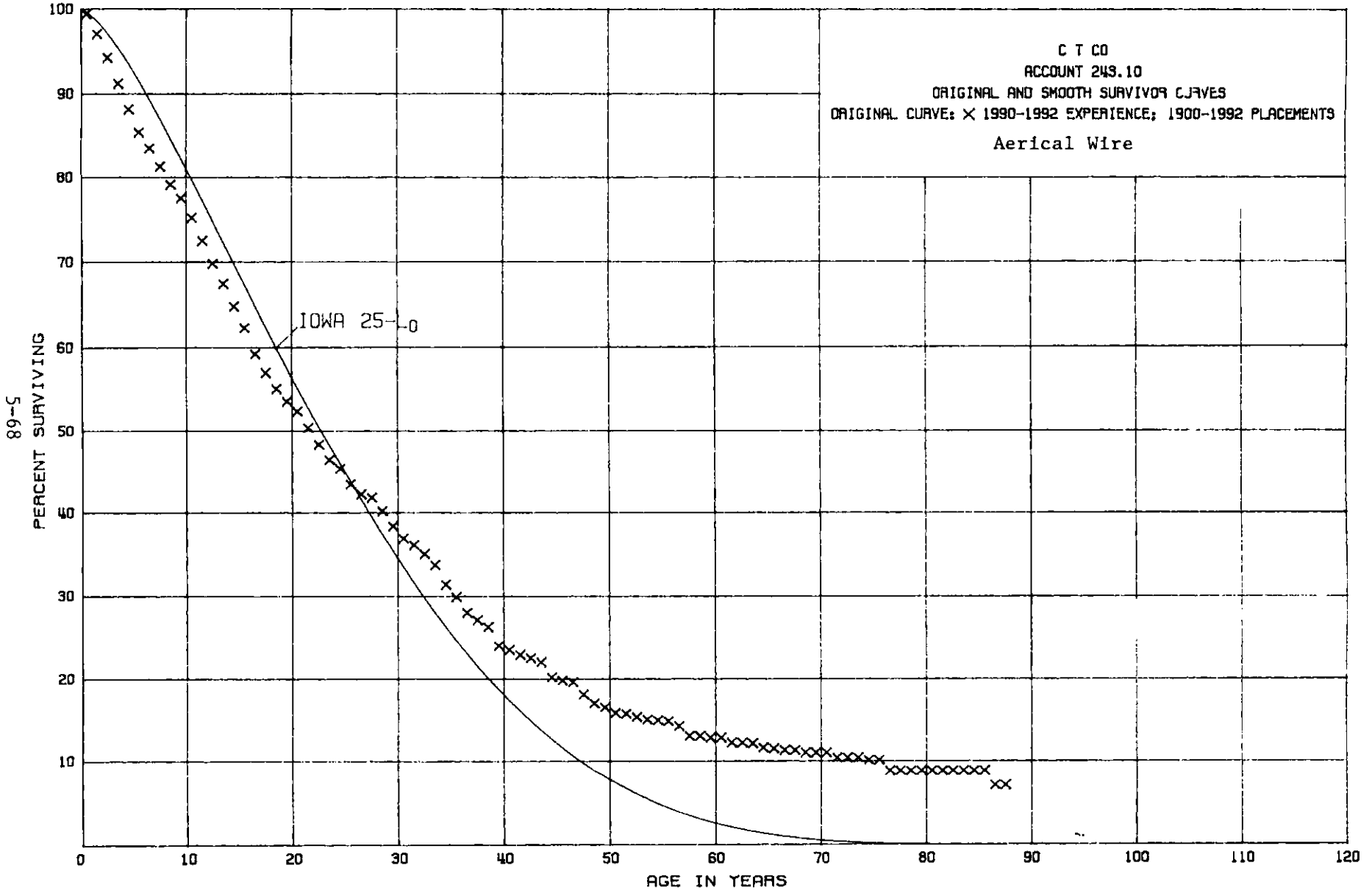

C T CO
ACCOUNT 242.35
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1966-1992 PLACEMENTS
Buried Cable - Metallic
IOWA 24-R3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
5
10
15
20
25
30
35
40
45
50
55
60

C T CO

ACCOUNT 242.35
Buried Cable - Metallic
ORIGINAL LIFE TABLE

AVG AGE RET 16.3 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1966-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	8,957,123	7,150	0.0008	0.9992	100.00
0.5	7,147,949	5,747	0.0008	0.9992	99.92
1.5	5,800,560	5,323	0.0009	0.9991	99.84
2.5	5,231,220	13,433	0.0026	0.9974	99.75
3.5	4,642,357	33,763	0.0073	0.9927	99.49
4.5	4,607,896	12,524	0.0027	0.9973	98.76
5.5	4,252,360	49,738	0.0117	0.9883	98.49
6.5	3,868,223	15,993	0.0041	0.9959	97.34
7.5	3,327,452	15,791	0.0047	0.9953	96.94
8.5	3,433,397	27,471	0.0080	0.9920	96.48
9.5	3,699,012	24,063	0.0065	0.9935	95.71
10.5	3,896,183	34,240	0.0088	0.9912	95.09
11.5	3,602,017	46,362	0.0129	0.9871	94.25
12.5	2,904,834	39,936	0.0137	0.9863	93.03
13.5	2,511,268	25,138	0.0100	0.9900	91.76
14.5	2,623,153	47,569	0.0181	0.9819	90.84
15.5	2,949,543	71,820	0.0243	0.9757	89.20
16.5	3,079,455	99,026	0.0322	0.9678	87.03
17.5	2,553,291	107,976	0.0423	0.9577	84.23
18.5	2,414,905	74,628	0.0309	0.9691	80.67
19.5	1,904,325	238,753	0.1254	0.8746	78.18
20.5	1,350,152	90,456	0.0670	0.9330	68.38
21.5	827,701	98,579	0.1191	0.8809	63.80
22.5	469,695	39,791	0.0847	0.9153	56.20
23.5	224,018	26,683	0.1191	0.8809	51.44
24.5	43,509	329	0.0076	0.9924	45.31
25.5	4,955		0.0000	1.0000	44.97
26.5					44.97
TOTAL	86,326,553	1,252,282			


C T CO
ACCOUNT 243.10
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE: X 1990-1992 EXPERIENCE; 1900-1992 PLACEMENTS
Aerical Wire
IOWA 25-L0
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
110
120

C T CO

ACCOUNT 243.10
Aerial Wire
ORIGINAL LIFE TABLE

AVG AGE RET 10.6 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1900-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,156,143	7,084	0.0061	0.9939	100.00
0.5	1,010,630	24,766	0.0245	0.9755	99.39
1.5	1,005,795	28,821	0.0287	0.9713	96.95
2.5	1,039,475	33,165	0.0319	0.9681	94.17
3.5	938,306	31,117	0.0332	0.9668	91.17
4.5	929,186	29,022	0.0312	0.9688	88.14
5.5	798,921	17,558	0.0220	0.9780	85.39
6.5	740,969	19,876	0.0268	0.9732	83.51
7.5	648,619	17,172	0.0265	0.9735	81.27
8.5	607,462	12,668	0.0209	0.9791	79.12
9.5	606,527	17,828	0.0294	0.9706	77.47
10.5	621,106	22,673	0.0365	0.9635	75.19
11.5	607,145	22,586	0.0372	0.9628	72.45
12.5	607,436	20,579	0.0339	0.9661	69.75
13.5	574,384	22,367	0.0389	0.9611	67.39
14.5	477,126	18,003	0.0377	0.9623	64.77
15.5	366,604	18,249	0.0498	0.9502	62.33
16.5	263,135	10,129	0.0385	0.9615	59.23
17.5	220,823	6,991	0.0317	0.9683	56.95
18.5	184,089	5,205	0.0283	0.9717	55.14
19.5	161,181	3,659	0.0227	0.9773	53.58
20.5	134,758	5,173	0.0384	0.9616	52.36
21.5	120,095	4,914	0.0409	0.9591	50.35
22.5	106,450	4,228	0.0397	0.9603	48.29
23.5	85,655	1,920	0.0224	0.9776	46.37
24.5	68,423	2,903	0.0424	0.9576	45.33
25.5	55,742	1,566	0.0281	0.9719	43.41
26.5	57,609	591	0.0103	0.9897	42.19
27.5	55,674	2,116	0.0380	0.9620	41.76
28.5	55,007	2,412	0.0438	0.9562	40.17
29.5	48,961	1,888	0.0386	0.9614	38.41
30.5	52,321	1,216	0.0232	0.9768	36.93
31.5	47,453	1,378	0.0290	0.9710	36.07
32.5	49,793	1,866	0.0375	0.9625	35.02
33.5	45,582	3,196	0.0701	0.9299	33.71
34.5	43,740	2,055	0.0470	0.9530	31.35
35.5	40,064	2,589	0.0646	0.9354	29.88
36.5	31,289	981	0.0314	0.9686	27.95
37.5	25,835	774	0.0300	0.9700	27.07
38.5	14,201	1,204	0.0848	0.9152	26.26

C T CO

ACCOUNT 243.10
Aerial Wire
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 10.6 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1900-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	10,168	236	0.0232	0.9768	24.03
40.5	7,849	196	0.0250	0.9750	23.47
41.5	6,751	122	0.0181	0.9819	22.88
42.5	5,243	112	0.0214	0.9786	22.47
43.5	3,383	280	0.0828	0.9172	21.99
44.5	2,392	42	0.0176	0.9824	20.17
45.5	1,958	24	0.0123	0.9877	19.82
46.5	1,614	120	0.0743	0.9257	19.58
47.5	1,853	120	0.0648	0.9352	18.13
48.5	2,182	54	0.0247	0.9753	16.96
49.5	2,832	136	0.0480	0.9520	16.54
50.5	2,863	14	0.0049	0.9951	15.75
51.5	3,170	78	0.0246	0.9754	15.67
52.5	5,825	92	0.0158	0.9842	15.28
53.5	6,058	51	0.0084	0.9916	15.04
54.5	6,015	57	0.0095	0.9905	14.91
55.5	2,825	114	0.0404	0.9596	14.77
56.5	1,763	148	0.0839	0.9161	14.17
57.5	1,174		0.0000	1.0000	12.98
58.5	1,575	18	0.0114	0.9886	12.98
59.5	2,533	16	0.0063	0.9937	12.83
60.5	2,596	117	0.0451	0.9549	12.75
61.5	6,739	6	0.0009	0.9991	12.17
62.5	7,828	44	0.0056	0.9944	12.16
63.5	7,657	316	0.0413	0.9587	12.09
64.5	2,473	21	0.0085	0.9915	11.59
65.5	777	13	0.0167	0.9833	11.49
66.5	239		0.0000	1.0000	11.30
67.5	229	6	0.0262	0.9738	11.30
68.5	34		0.0000	1.0000	11.00
69.5	230		0.0000	1.0000	11.00
70.5	264	14	0.0530	0.9470	11.00
71.5	250		0.0000	1.0000	10.42
72.5	411		0.0000	1.0000	10.42
73.5	918	33	0.0359	0.9641	10.42
74.5	2,036		0.0000	1.0000	10.05
75.5	1,767	212	0.1200	0.8800	10.05
76.5	990		0.0000	1.0000	8.84
77.5	130		0.0000	1.0000	8.84
78.5	123		0.0000	1.0000	8.84

C T CO

ACCOUNT 243.10
Aerial Wire
ORIGINAL LIFE TABLE, CONT.

AVG AGE RET 10.6 — EXPERIENCE ANALYSIS
PLACEMENT BAND 1900-1992 — EXPERIENCE BAND 1990-1992

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	244		0.0000	1.0000	8.84
80.5	224		0.0000	1.0000	8.84
81.5	239		0.0000	1.0000	8.84
82.5	126		0.0000	1.0000	8.84
83.5	97		0.0000	1.0000	8.84
84.5	94		0.0000	1.0000	8.84
85.5	76	16	0.2105	0.7895	8.84
86.5	30		0.0000	1.0000	6.98
87.5					6.98
88.5					
89.5	100		0.0000		
90.5	100		0.0000		
91.5	100		0.0000		
92.5					
TOTAL	14,820,861	435,316			