

**Snavely King Majoros O'Connor & Lee, Inc.
National Study of U.S. Other Production Unit Lives
(Original)**

Snavely King Majoros O'Connor & Lee, Inc. ("Snavely King") performed a study of U.S. Other Production Units Lives using analytical techniques generally accepted in the utility industry and a database maintained by the U.S. Department of Energy ("DOE"). Snavely King concludes that U.S. Other Production Units are experiencing average life spans of approximately 46.5 years at a minimum, and that these spans have lengthened in recent years to as long as 56.5 years. Snavely King was unable to update this analysis due to a lack of data.

Database

The DOE's Energy Information Administration ("EIA") requires every owner of an electric utility generating plant to file a Form 860 describing the status of its generating facilities. From these reports, EIA maintains data on the installation and retirements of generating units around the country.

The data utilized in this study is available on the EIA's web site. The primary data used in Snavely King's study is located in the Form 860-A database files. The Form 860-B data is also used to check the current status of units that have been sold to Non-Utility Generators ("NUG's"). The data was downloaded in several steps into a single Microsoft Access file and developed into inputs for Snavely King's actuarial analysis program.

Various sorts were made to refine the data and to remove bad data. For example, plant with in-service dates of 1900 apparently had a Y2K problem. Some units listed as retired had no retirement dates indicated, etc.

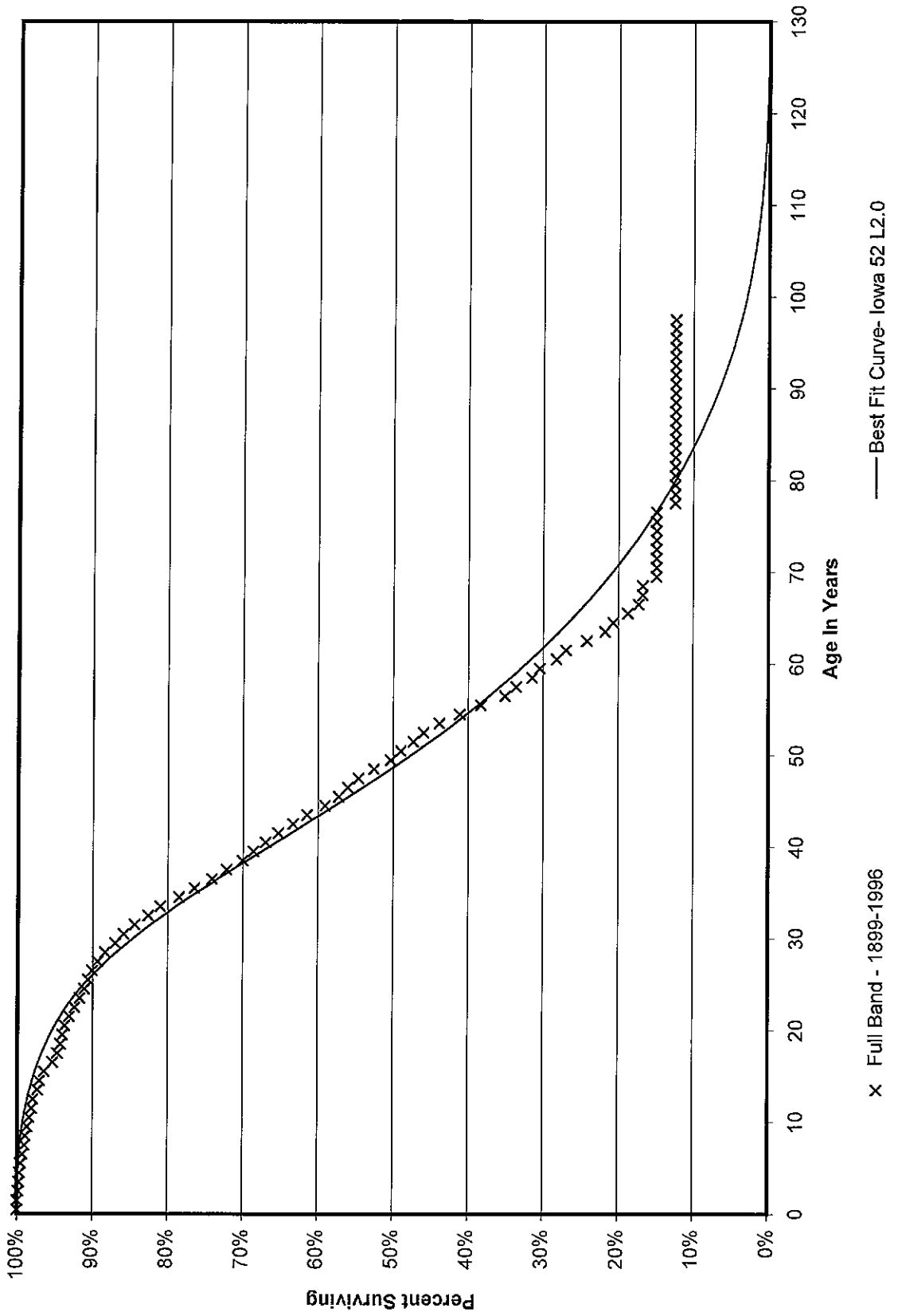
Analysis

Snavely King performed an analysis of the full band (1899-1996) and a "shrinking band" analysis, in which the final year (1996) was held constant and the bands were continually shrunk. The results are discussed and set forth in tabular form below.

Band	Width	Life	Curve Type
1899-96	Full	52.0	L2.0
1977-96	20 years	46.5	L1.5
1982-96	15 years	47.5	L1.5
1987-96	10 years	52.5	L1.5
1992-96	5 years	56.5	L2.0

As the analysis indicates, the average life span for Other Production Units has lengthened in recent years.

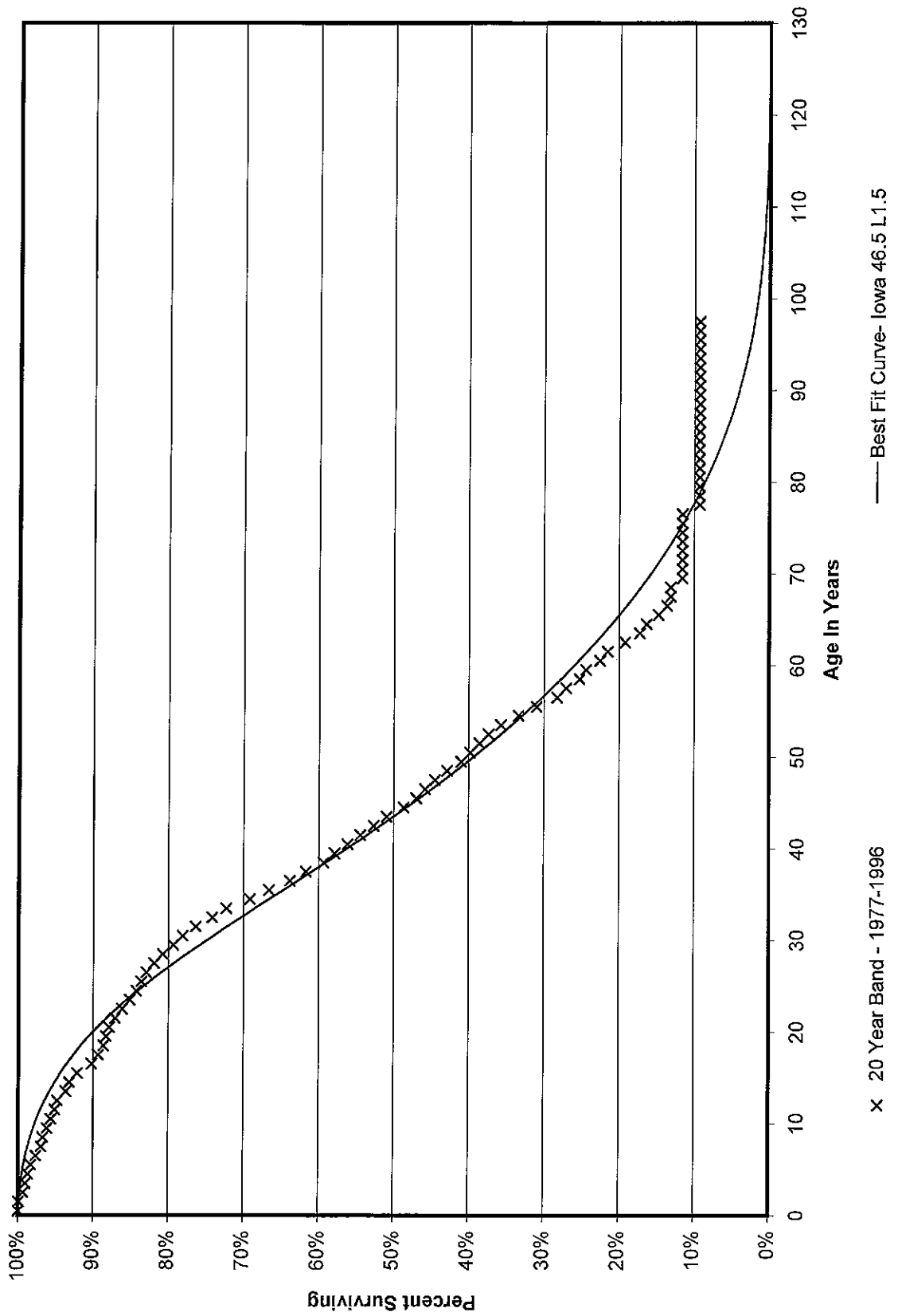
Observed Life Table and Best Fit Iowa Curve
All U.S. Other Production Units: Band 1899-1996



qqvqa1 ACTUARIAL ANALYSIS
 CURVE FITTING RESULTS
 ACCOUNT: 888000
 BAND: 1899,1996

	IOWA RANK CURVE	AVERAGE SERVICE LIFE	SUM OF SQUARED DEVIATIONS
1	L2	52.00	1121.66
2	L1.5	52.00	1749.96
3	S1	50.50	2419.96
4	S0.5	50.50	2669.22
5	S1.5	50.50	2698.74
6	L3	52.00	2749.26
7	R1.5	49.50	3195.03
8	L1	51.50	3379.00
9	R2	49.50	3507.07
10	S2	50.50	3825.60
11	S0	50.00	3863.70
12	R1	49.00	4179.53
13	R2.5	50.00	4402.90
14	L0.5	51.50	5336.07
15	R0.5	49.00	6092.86
16	S-0.5	49.50	6182.28
17	R3	50.00	6439.15
18	S3	50.50	7381.55
19	L0	52.00	8110.19
20	L4	51.00	8658.58
21	O1	49.00	10014.22
22	O2	52.50	10310.83
23	R4	50.50	11604.03
24	S4	50.50	14100.69
25	L5	51.00	16336.66
26	O3	64.50	19846.15
27	R5	50.50	19875.93
28	S5	50.50	22178.08
29	O4	84.50	24972.86
30	S6	50.50	30361.29
31	SQ	49.50	49189.21

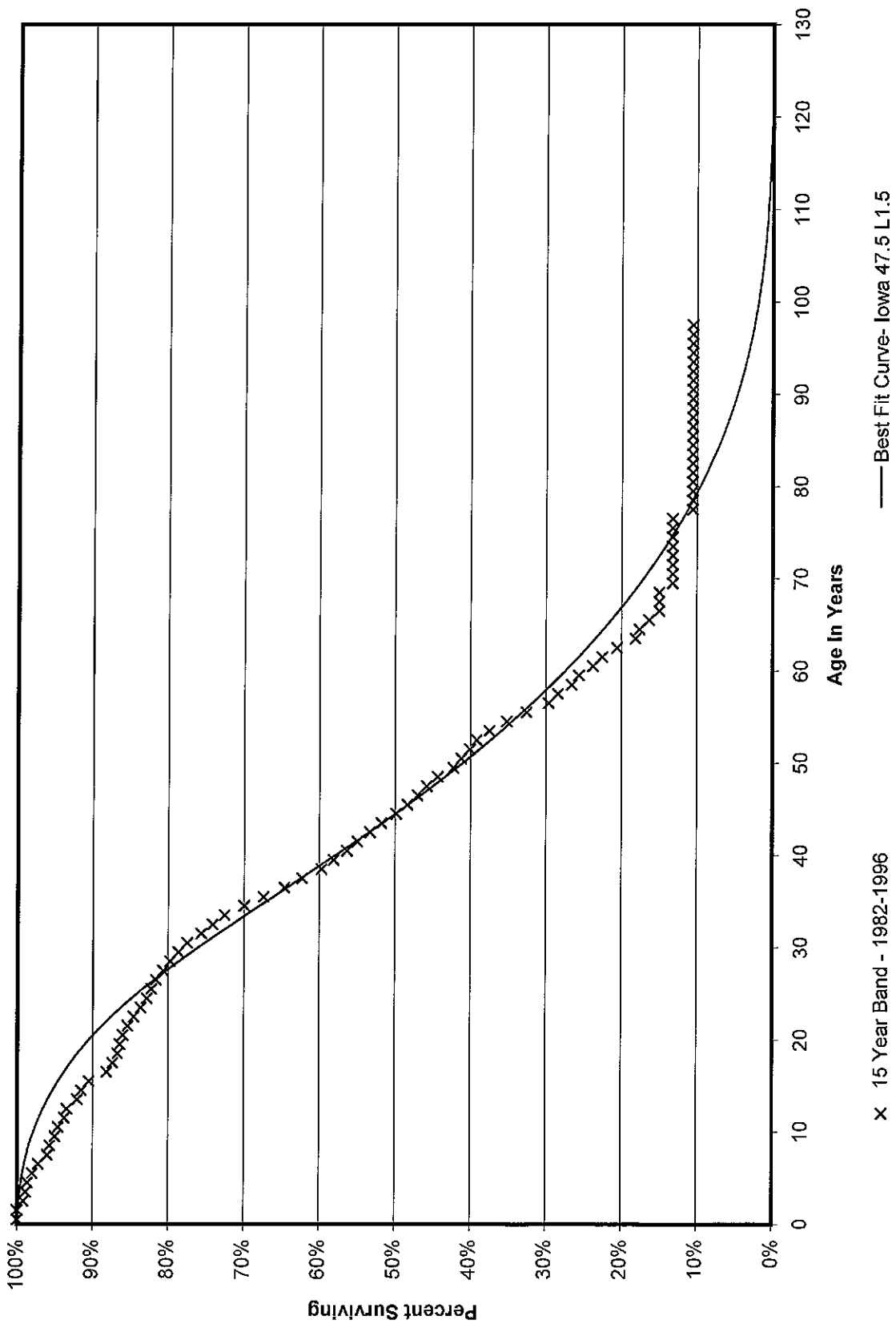
Observed Life Table and Best Fit Iowa Curve
All U.S. Other Production Units: Band 1977-1996



qqvqa1 ACTUARIAL ANALYSIS
 CURVE FITTING RESULTS
 ACCOUNT: 888000
 BAND: 1977,1996

RANK	IOWA CURVE	AVERAGE SERVICE LIFE	SUM OF SQUARED DEVIATIONS
1	L1.5	46.50	890.79
2	L2	47.00	1214.63
3	L1	46.50	1486.82
4	S0.5	45.50	1738.92
5	S0	45.00	2068.88
6	S1	45.50	2241.00
7	R1	44.50	2310.87
8	R1.5	45.00	2352.97
9	L0.5	46.50	2528.51
10	R0.5	44.00	3224.10
11	S1.5	46.00	3260.10
12	S-0.5	44.50	3341.13
13	R2	45.00	3538.36
14	L3	46.50	4347.48
15	L0	46.00	4364.76
16	S2	46.00	5031.07
17	R2.5	45.50	5342.66
18	O1	43.50	5904.40
19	O2	47.00	5941.92
20	R3	45.50	8187.31
21	S3	46.00	9683.67
22	L4	46.00	11527.50
23	R4	46.00	14611.97
24	O3	55.50	15077.92
25	S4	46.00	17390.95
26	L5	46.00	19723.73
27	O4	71.00	20738.40
28	R5	45.50	23700.81
29	S5	45.50	25950.52
30	S6	45.00	34082.54
31	SQ	43.50	51072.33

Observed Life Table and Best Fit Iowa Curve
All U.S. Other Production Units: Band 1982-1996



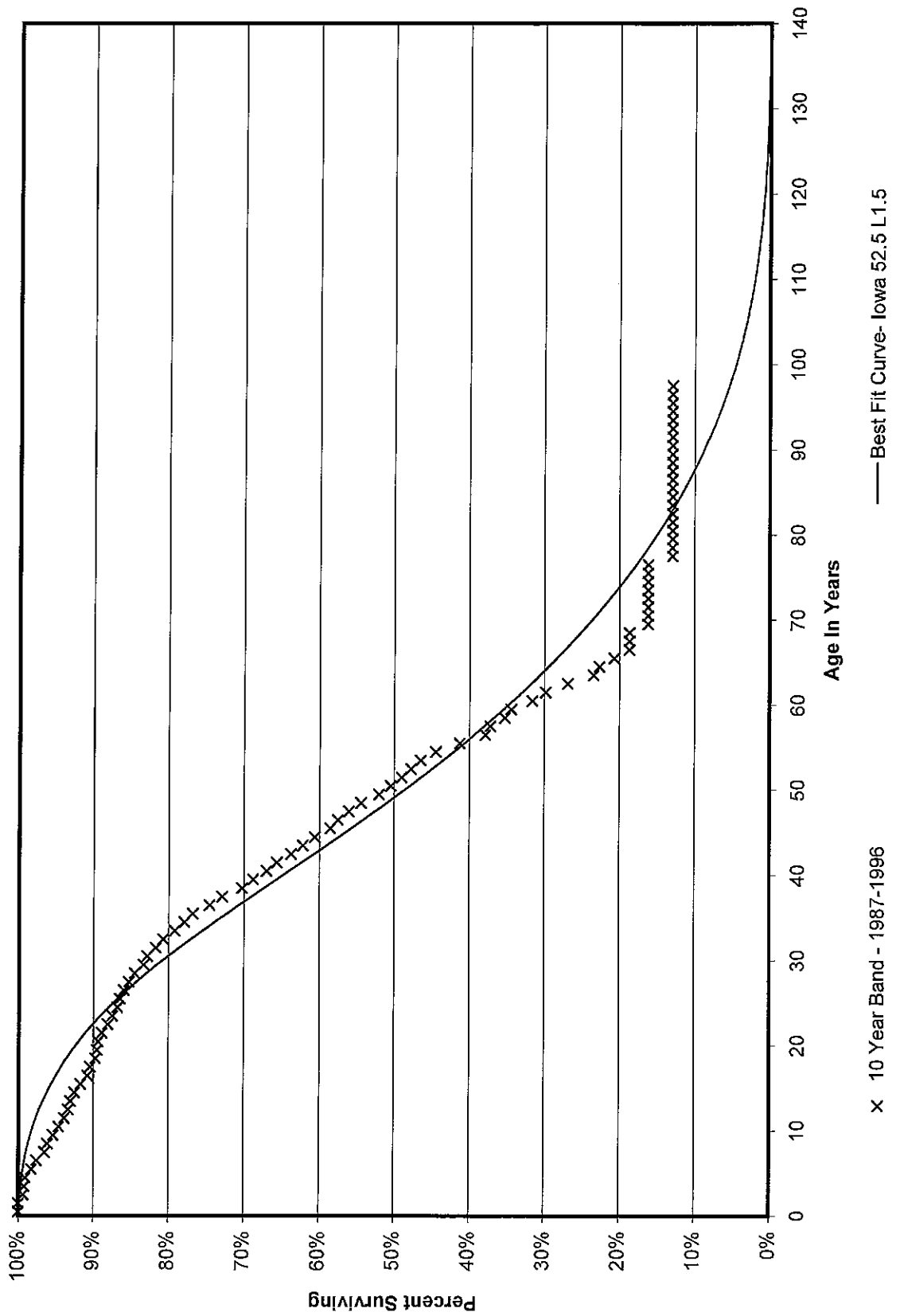
x 15 Year Band - 1982-1996

— Best Fit Curve- Iowa 47.5 L1.5

qqvqal ACTUARIAL ANALYSIS
 CURVE FITTING RESULTS
 ACCOUNT: 888000
 BAND: 1982,1996

	IOWA	AVERAGE	SUM OF
RANK	CURVE	SERVICE	SQUARED
		LIFE	DEVIATIONS
1	L1.5	47.50	1118.69
2	L1	47.00	1318.91
3	L2	47.50	1853.33
4	L0.5	47.00	1966.71
5	S0	45.50	2208.91
6	S0.5	46.00	2224.03
7	R1	45.00	2547.78
8	R0.5	45.00	2945.64
9	R1.5	45.50	2963.67
10	S-0.5	45.00	3009.49
11	S1	46.50	3108.92
12	L0	47.00	3414.09
13	S1.5	46.50	4424.84
14	R2	45.50	4572.63
15	O2	48.00	4679.77
16	O1	44.50	5155.09
17	L3	47.50	5743.41
18	S2	46.50	6521.74
19	R2.5	46.00	6682.54
20	R3	46.00	9867.68
21	S3	46.50	11638.85
22	O3	56.50	12805.77
23	L4	47.00	13606.64
24	R4	46.50	16728.92
25	O4	72.00	17949.21
26	S4	46.50	18745.52
27	L5	46.50	22185.46
28	R5	46.50	26233.52
29	S5	46.50	28609.65
30	S6	46.00	36996.22
31	SQ	43.50	54451.44

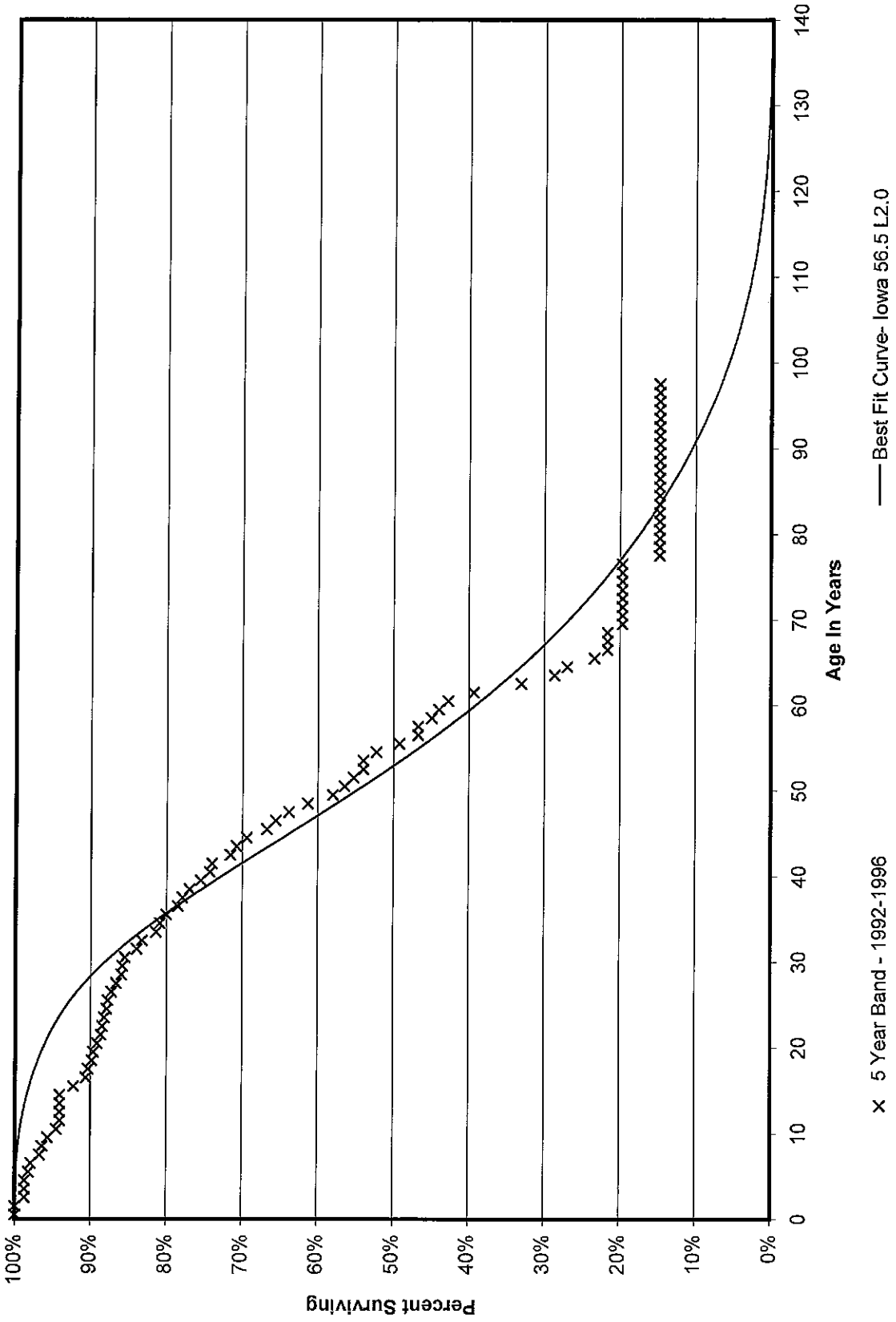
Observed Life Table and Best Fit Iowa Curve
All U.S. Other Production Units: Band 1987-1996



qqvqal ACTUARIAL ANALYSIS
 CURVE FITTING RESULTS
 ACCOUNT: 888000
 BAND: 1987,1996

RANK	IOWA CURVE	AVERAGE SERVICE LIFE	SUM OF SQUARED DEVIATIONS
1	L1.5	52.50	1425.50
2	L2	53.00	1586.31
3	S0.5	51.00	2147.43
4	L1	52.00	2278.64
5	S0	51.00	2621.18
6	S1	51.50	2637.51
7	R1.5	50.00	2640.16
8	R1	50.00	2825.25
9	L0.5	52.00	3495.25
10	S1.5	51.50	3519.27
11	R2	50.50	3766.24
12	R0.5	50.00	3818.13
13	S-0.5	50.00	3976.92
14	L3	52.50	4389.92
15	S2	51.50	5265.97
16	R2.5	50.50	5346.45
17	L0	52.50	5528.59
18	O1	49.50	6832.53
19	O2	53.50	7079.00
20	R3	51.00	8082.98
21	S3	51.50	9724.13
22	L4	52.00	11469.84
23	R4	51.50	14229.10
24	O3	65.00	15496.68
25	S4	51.50	17216.77
26	L5	52.00	19617.66
27	O4	84.50	20112.98
28	R5	51.50	23315.78
29	S5	51.50	25784.65
30	S6	51.50	34306.98
31	SQ	51.00	53468.24

Observed Life Table and Best Fit Iowa Curve
All U.S. Other Production Units: Band 1992-1996



qqvqa1 ACTUARIAL ANALYSIS
 CURVE FITTING RESULTS
 ACCOUNT: 888000
 BAND: 1992,1996

RANK	IOWA CURVE	AVERAGE SERVICE LIFE	SUM OF SQUARED DEVIATIONS
1	L2	56.50	1969.77
2	L1.5	56.50	2071.53
3	S0.5	54.50	2306.61
4	R1.5	54.00	2576.68
5	S1	55.00	2598.77
6	R1	53.50	2994.95
7	S0	54.50	2997.49
8	L1	56.00	3221.35
9	S1.5	55.50	3327.10
10	R2	54.00	3563.95
11	L3	56.50	4092.86
12	R0.5	53.00	4401.13
13	L0.5	56.50	4661.40
14	S-0.5	53.50	4690.56
15	R2.5	54.50	4934.77
16	S2	55.50	4969.21
17	L0	56.50	6913.56
18	R3	54.50	7577.41
19	O1	52.50	7870.18
20	O2	57.50	8545.85
21	S3	55.50	9191.79
22	L4	56.00	10671.21
23	R4	55.00	13409.13
24	S4	55.50	16328.33
25	O3	72.00	16639.12
26	L5	56.00	18620.55
27	O4	94.50	20709.27
28	R5	55.50	22110.83
29	S5	55.50	24596.04
30	S6	56.00	33193.13
31	SQ	55.00	52932.29