



Certificate of Actuarial Valuation as of January 1, 2023

**Produced by Cheiron** 

December 2023

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#### **CERTIFICATION**

December 20, 2023

This is to certify that Cheiron, Inc. ("Cheiron") has prepared an actuarial valuation of the CWA/ITU Negotiated Pension Plan ("Plan") as of January 1, 2023 in accordance with generally accepted actuarial principles and practices (see 2023 report dated December 20, 2023). It has been prepared at the request of the Board of Trustees for purposes of assisting in administering the Plan and meeting filing requirements of federal government agencies.

This certification includes summary exhibits from the actuarial valuation report provided to the Board of Trustees. Please refer to the 2023 actuarial valuation report for more information about the Plan, its funding, and an assessment and disclosure of risk. This certification may not otherwise be copied or reproduced in any form without the consent of the Board of Trustees and may only be provided to other parties in its entirety.

The results shown may not be applicable for other purposes. Future results may differ significantly from the results presented in this certification due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in Plan provisions or applicable law.

The valuation assumes that the Plan is qualified as a multiemployer plan for the year and is based on financial information supplied by the auditor with respect to contributions and assets and reliance on the Plan Administrator with respect to the participant data. Cheiron does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Cheiron does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results. Adjustments for incomplete or apparently inconsistent data were made as described in Appendix C.

We are members of the American Academy of Actuaries, and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. The information supplied in this actuarial valuation is complete and accurate. Each prescribed assumption for the determination of current liability was applied in accordance with applicable law and regulations. In our opinion, each other assumption is reasonable (taking into account the experience of the Plan and reasonable expectations) and such other assumptions, in combination, offer our best estimate of anticipated experience under the Plan.

Christian Benjaminson, FSA, EA, MAAA

Principal Consulting Actuary Enrolled Actuary No. 23-07015 Gregory A. Reardon, FSA, EA, MAAA

Principal Consulting Actuary Enrolled Actuary No. 23-06866



# **CERTIFICATION**

Summary of Principal Results	
Participant Counts	1/1/2023
Actives	1,537
Deferred Inactives	6,869
In Pay Status	 14,73 <u>4</u>
Total	23,140
Financial Information	
Market Value of Assets (MVA)	\$ 444,907,798
Actuarial Value of Assets (AVA)	\$ 444,907,798
Unit Credit Actuarial Liability (PPA Liability)	\$ 1,017,512,335
Unfunded Actuarial Liability (AVA Basis)	572,604,537
Funding Ratio (AVA Basis - PPA Liability)	43.7%
Accumulated Benefits (FASB ASC 960)	\$ 1,054,535,613
Unfunded Accumulated Benefits (MVA basis)	609,627,815
Funding Ratio (MVA Basis - FASB ASC 960)	42.2%
Minimum Funding and Cash Flows	
Total Normal Cost (including Admin. Expenses)	\$ 4,436,247
ERISA Minimum Funding before Funding Deficiency	48,978,347
ERISA Funding Deficiency (Beginning of Year)	(354,478,456)
Prior Year Contributions (net from all sources)	\$ 18,691,683
Prior Year Benefit Payments	80,369,408
Prior Year Administrative Expenses	2,364,264
Prior Year Investment Income (net of investment expenses)	(85,933,467)



## SECTION II - ACCOUNTING DISCLOSURES

Present Value of Accumulated Bendary In Accordance with FASB		3	
1. Actuarial Present Value of Vested Benefits	Amounts		Participants
For Retirees and Beneficiaries	\$ 733,652,518		14,734
Deferred Inactives	231,884,998		6,869
Active Participants	51,042,918		988
Vested Benefits	\$ 1,016,580,434		22,591
2. Non-vested Benefits	\$ 931,901		549
3. Present Value of Expected Administrative Expenses*	\$ 37,023,278		
4. Accumulated Benefits	\$ 1,054,535,613		23,140
5. Market Value of Assets	\$ 444,907,798		
6. Funded Ratios Vested Benefits (without Administrative Expenses) Accumulated Benefits (with Administrative Expenses)	43.8% 42.2%		
Reconciliation of Present Value o	f Accumulated Benefits		
1. Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value at Start of Prior Year (without Actuarial Present Value Actuaria Present Value Actuaria Present Value Actuaria Present Value Present Value Actuaria Present Value Present Value Actuaria Present Value Present Valu	ministrative Expenses)	\$	987,246,590
2. Increase / (decrease) over Prior Year due to:			
Accrual of Benefits		\$	1,970,312
Benefit Payments			(80,369,408)
Interest Accrual			56,977,052
Plan Amendment			0
Assumption Change*			10,749,785
Experience (Gains)/Losses**			40,938,004
Total		\$	30,265,745
3. Actuarial Present Value at End of Prior Year		\$ 1	,017,512,335
4. Present Value of Expected Administrative Expenses***		\$	37,023,278
5. Actuarial Present Value at End of Prior Year (with Admir	istrative Expenses)	\$ 1	,054,535,613

<sup>\*</sup> The change in assumptions for Terminated Vested Participants increased the Actuarial Liability by \$10,749,785; please see Appendix C for a summary of all the actuarial assumptions.

<sup>\*\*\*</sup> The present value of expected administrative expenses is estimated to be 3.64% of the Accrued Benefits liabilities.



<sup>\*\*</sup> Reflects a loss of \$57,358,003 due to the Voluntary Correction Program ("VCP") Filing and a demographic gain of (\$16,419,999).

## **SECTION III – CURRENT LIABILITY**

Liabilities/Net Surplus (Un	Liabilities/Net Surplus (Unfunded)										
		1/1/2023									
Current Liability (RPA '94)	\$	1,394,444,752									
Market Value of Assets		444,907,798									
Net Surplus (Unfunded)	\$	(949,536,954)									
Percent Funded		31.9%									
RPA '94 Prescribed Interest Rate		2.55%									

# **Allocation of Current Liability by Type**

The Plan's participants may qualify for a benefit on death, termination, or disability as well as on retirement. The value of the liabilities arising from each of these sources is shown in the following table.

	Allocation of Liabilities by Type												
January 1, 2023													
Benefit Type	R	Retirement	T	ermination		Death	Disability			Total			
RPA Current Liability Normal Cost	\$	2,396,345	\$	557,777	\$	47,693	\$	523,916	\$	3,525,731			
RPA Current Liability													
Actives	\$	70,754,938	\$	5,686,950	\$	949,462	\$	10,198,768	\$	87,590,118			
Terminated Vesteds		0		383,470,192		6,137,672		1,041,877		390,649,741			
Retirees and Beneficiaries		752,404,833		0		118,353,911		45,446,149		916,204,893			
Total	\$	823,159,771	\$	389,157,142	\$	125,441,045	\$	56,686,794	\$	1,394,444,752			
Vested RPA Current Liability													
Actives	\$	70,905,014	\$	4,535,124	\$	922,684	\$	9,882,983	\$	86,245,805			
Terminated Vesteds		0		383,470,192		6,137,672		1,041,877		390,649,741			
Retirees and Beneficiaries		752,404,833		0		118,353,911		45,446,149		916,204,893			
Total	\$	823,309,847	\$	388,005,316	\$	125,414,267	\$	56,371,009	\$	1,393,100,439			



#### SECTION IV - INFORMATION ON PLAN STATUS

As of January 1, 2023, the Plan was classified as being in Critical and Declining status under Code Section 432 as added by the Pension Protection Act of 2006 and amended by the Multiemployer Pension Reform Act of 2014. This determination was made on the basis of the following:

- The Plan was in Critical and Declining status for 2022;
- The Plan has an accumulated Funding Deficiency for the 2023 plan year, without regard to the use of the shortfall funding method but taking into account any extensions of the amortization periods under section 431(d) of the Code; and
- The Plan is projected to run out of assets during the 2029 plan year, prior to reflecting the ARPA provisions referenced below.

On March 11, 2021, the American Rescue Plan Act of 2021 (ARPA) was signed into law. The Act provides financial assistance to certain plans in order to pay full benefits through 2051. In addition, on July 8, 2022 the Pension Benefit Guaranty Corporation (PBGC) issued final regulations providing details on how the special financial assistance program will be administered. The Plan is eligible to receive financial assistance given its Critical and Declining PPA status and the financial assistance is expected to provide solvency through 2051. The Plan applied for financial assistance on July 11, 2023.

The Rehabilitation Period began January 1, 2012 and ended December 31, 2021. The Plan did not emerge from Critical status by the end of its Rehabilitation Period. However, the Trustees adopted a Rehabilitation Plan to forestall insolvency (within the meaning of ERISA Section 4245) as they have determined that based on reasonable actuarial assumptions and upon exhaustion of all reasonable measures, the Plan cannot be reasonably expected to emerge from Critical status by the end of its Rehabilitation Period. To that end, the Plan was certified as making scheduled progress in meeting the requirements of its Rehabilitation Plan.

A certification of the Plan's status for the 2023 plan year was submitted to the Board of Trustees and Secretary of the Treasury on March 31, 2023.

The Plan submitted a voluntary correction ("VCP") in April 2023 to correct operational failures with respect to late retirement adjustments. Participants were not provided suspension of benefits notices and did not receive actuarial adjustments for delayed commencement. The cost of the correction on the valuation date is estimated to be \$37.5 million for past payments and \$19.8 million for future payments.



# SECTION V – CONTRIBUTIONS

Funding Standard Account for 2023 Plan	Year	r
1. Charges for Plan Year		2023
(a) Prior Year Funding Deficiency	\$	354,478,456
(b) Normal Cost Plus Expenses		4,436,247
(c) Amortization Charges		85,729,026
(d) Interest on (a), (b), and (c) to Year End		26,678,624
(e) Total Charges	\$	471,322,353
2. Credits for Plan Year		
(a) Contributions and WL Payments ( <i>Expected</i> )		14,756,388
(b) Amortization Credits		43,959,285
(c) Interest on (a) and (b) to Year End		3,073,800
(d) Full Funding Limit Credit		0_
(e) Total Credits	\$	61,789,473
3. Credit Balance / (Funding Deficiency) at End of Year [2.(e) – 1.(e)]	\$	(409,532,880)



# **SECTION V – CONTRIBUTIONS**

Schedule of A	mortization Charge As	es Required for of January 1, 2		ired Contributi	on	
Type of Base	Date Established	Initial Amortization	1/1/2023 Outstanding Balance	Remaining Amortization Years	Am	ning of Year ortization Amount
1. Plan Amendment	1/1/2007	30.00	\$ 453,415	14.00	\$	46,019
2. Change in Assumptions	1/1/2007	30.00	17,550,441	14.00		1,781,286
3. Plan Amendment	1/1/2009	15.00	34,688	1.00		34,688
4. Actuarial Loss	1/1/2009	15.00	21,546,456	1.00		21,546,456
5. Actuarial Loss	1/1/2011	15.00	9,966,901	3.00		3,517,656
6. Plan Amendment	1/1/2012	15.00	97,143	4.00		26,447
7. Change in Assumptions	1/1/2012	15.00	10,254,128	4.00		2,791,749
8. Actuarial Loss	1/1/2012	15.00	24,131,303	4.00		6,569,895
9. Plan Amendment	1/1/2013	15.00	125,351	5.00		28,073
10. Actuarial Loss	1/1/2013	15.00	23,427,671	5.00		5,246,834
11. Plan Amendment	1/1/2014	15.00	88,732	6.00		17,023
12. Change in Assumptions	1/1/2015	15.00	24,777,413	7.00		4,187,266
13. Change in Asset Method	1/1/2017	10.00	12,784,778	4.00		3,480,734
14. Actuarial Loss	1/1/2019	15.00	60,067,088	11.00		7,184,984
15. Change in Assumptions	1/1/2019	15.00	50,659,197	11.00		6,059,650
16. Change in Assumptions	1/1/2020	15.00	58,593,113	12.00		6,593,220
17. Actuarial Loss	1/1/2023	15.00	160,322,441	15.00		15,572,869
18. Change in Assumptions	1/1/2023	15.00	10,749,785	15.00		1,044,177
Total Charges			\$ 485,630,044		\$	85,729,026



# **SECTION V – CONTRIBUTIONS**

Schedule of Am		ts Required for sof January 1, 2	Minimum Requi 2023	red Contributio	on	
Type of Base	Date Established	Initial Amortization	1/1/2023 Outstanding Balance	Remaining Amortization Years	An	nning of Year nortization Amount
1. Plan Amendment	5/1/2009	15.00	\$ 5,774,002	1.33	\$	4,372,281
2. Plan Amendment	1/1/2010	15.00	27,662	2.00		14,235
3. Actuarial Gain	1/1/2010	15.00	10,445,940	2.00		5,375,094
4. Plan Amendment	1/1/2011	15.00	10,244,241	3.00		3,615,539
5. Actuarial Gain	1/1/2014	15.00	20,742,771	6.00		3,979,532
6. Actuarial Gain	1/1/2015	15.00	13,863,629	7.00		2,342,888
7. Plan Amendment	1/1/2016	15.00	260,435	8.00		39,566
8. Actuarial Gain	1/1/2016	15.00	3,881,232	8.00		589,639
9. Change in Assumptions	1/1/2016	15.00	5,649,831	8.00		858,326
10. Actuarial Gain	1/1/2017	15.00	3,794,289	9.00		526,268
11. Change in Assumptions	1/1/2017	15.00	10,998,811	9.00		1,525,537
12. Change in Funding Method	1/1/2017	10.00	4,314,190	4.00		1,174,564
13. Actuarial Gain	1/1/2018	15.00	26,725,115	10.00		3,425,554
14. Actuarial Gain	1/1/2020	15.00	57,276,577	12.00		6,445,075
15. Actuarial Gain	1/1/2021	15.00	36,453,631	13.00		3,884,723
16. Actuarial Gain	1/1/2022	15.00	57,051,607	14.00		5,790,464
Total Credits			\$ 267,503,963		\$	43,959,285
Net Charge			\$ 218,126,081		\$	41,769,741



## **SECTION VI – EXPECTED BENEFIT PAYMENTS**

Plan Year	Expected Annual Benefit Payments
2023	\$ 86,363,993
2024	123,984,342
2025	83,352,110
2026	82,437,505
2027	81,296,061
2028	80,166,136
2029	78,712,166
2030	77,091,140
2031	75,433,110
2032	73,638,855

Expected Annual Benefit Payments are payable mid-year and do not include additional benefit accruals, new hires or expected administrative expenses. The expected payment for 2024 includes a retro-payment of \$40,138,014 to account for the voluntary correction ("VCP") submitted in April 2023 to correct operational failures with respect to late retirement adjustments.



# APPENDIX A – MEMBERSHIP INFORMATION

	Distribution of Active Members  By Age and Service as of January 1, 2023												
	Counts By Age/Service												
					Ser	vice							
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total		
Under 25	4	22	0	0	0	0	0	0	0	0	26		
25 to 29	5	47	18	0	0	0	0	0	0	0	70		
30 to 34	5	60	41	6	0	0	0	0	0	0	112		
35 to 39	1	45	44	14	13	1	0	0	0	0	118		
40 to 44	1	61	41	21	17	9	0	0	0	0	150		
45 to 49	2	39	46	27	18	20	7	0	0	0	159		
50 to 54	6	45	40	125	34	36	16	8	0	0	310		
55 to 59	2	55	44	22	39	24	20	10	10	2	228		
60 to 64	1	32	34	25	28	27	13	12	16	37	225		
65 to 69	0	8	18	9	16	19	5	6	3	15	99		
70 & up	0	6	8	7	3	7	3	0	1	5	40		
Total	27	420	334	256	168	143	64	36	30	59	1,537		

Average Age = 49.8

Average Service = 12.3



# **APPENDIX A – MEMBERSHIP INFORMATION**

	Age Distribution of Inactive Participants													
	Participants Entitled to Future Benefits as of January 1, 2023													
	Surviving Spouses													
	Terminated Terminal Disability with and Beneficiaries with													
	Vesteds Deferred Benefits Deferred Benefits Total													
		Average		Average		Average		Avei	rage					
Age	Number	Monthly	Number	Monthly	Number	Monthly	Number	Mon	thly					
		Benefit*		Benefit*		Benefit*		Bene	efit*					
Under 30	36	\$ 63	0	\$ 0	10	N/A	46	\$	125					
30-34	117	80	0	0	4	N/A	121		82					
35-39	221	126	0	0	3	N/A	224		130					
40-44	403	221	0	0	3	N/A	406		221					
45-49	594	331	0	0	8	N/A	602		332					
50-54	959	395	2	N/A	17	N/A	978		390					
55-59	1,448	426	7	N/A	36	239	1,491		420					
60-64	1,943	443	28	96	34	234	2,005		435					
65 & Over	936	260	41	105	19	N/A	996		254					
Total	6,657	\$ 364	78	\$ 99	134	\$ 255	6,869	\$	359					

<sup>\*</sup> Averages are not shown for groups with less than 20 participants.



# APPENDIX A – MEMBERSHIP INFORMATION

	Age Distribution of Inactive Participants Pensioners and Beneficiaries Receiving Benefits as of January 1, 2023													
	Normal, Early Surviving Spouses													
	Dis	ability		Defer	red Ve	ested,	and B	eneficia	aries					
	Retin	rements		& QDR	O Reti	rements	Receiv	ing Ber	nefits		Total			
		Aveı	rage		A	Average		A	verage		A	verage		
Age	Number	Mon	thly	Number	Monthly		Number	M	onthly	Number	N	Ionthly		
		Bene	efit*		F	Benefit*		Benefit*		Benefit*			В	enefit*
Under 55	1		N/A	0	\$	0	76	\$	320	77	\$	331		
55-59	9		N/A	3		N/A	28		266	40		350		
60-64	30	\$	545	136	\$	916	78		408	244		708		
65-69	124		502	1,323		657	173		361	1,620		613		
70-74	162		483	1,925		546	281		394	2,368		524		
75-79	147		456	2,273		529	478		394	2,898		503		
80 & Over	230		419	5,044		436	2,213		287	7,487		391		
Total	703	\$	464	10,704	\$	509	3,327	\$	319	14,734	\$	464		

<sup>\*</sup> Averages are not shown for groups with less than 20 participants.



#### APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

This summary of plan provisions provides an overview of the major provisions of the pension plan used in the actuarial valuation. It is not intended to replace the more precise language of the Plan document, and if there is any difference between the description of the plan herein and the actual text of the plan document, the Plan document will govern.

#### 1. Plan Year

January 1 through December 31

#### 2. Pension Credit Year

January 1 through December 31

#### 3. Normal Pension

Age Requirement: 65

Service Requirement: 10 years of service, or 5 years of service including one hour of service on January 1, 1989 or later.

Amount: 1.7% of all monies contributed to the Plan prior to January 1, 1977, 1% of all monies contributed to the Plan from January 1, 1977 to December 31, 1983, 1.3% of all monies contributed to the plan from January 1, 1984 to June 30, 1985, 1.7% of all monies contributed to the Plan from July 1, 1985 to June 30, 1987, 3.0% of all monies contributed to the Plan from July 1, 1987 to December 31, 1992, 3.0% of all monies credited to the Participant's account from January 1, 1993 to June 30, 1998, 3.25% of all monies credited to the Participant's account from July 1, 1998 to December 31, 2002, 2.50% of all monies credited to the Participant's account from January 1, 2003 to April 30, 2009 and 1.00% of all monies credited to the Participants' account on or after May 1, 2009.

Plus 1% of the average monthly contributions per year of past service from January 1, 1968 to December 31, 1976.

In addition, all benefits accrued through December 31, 1997 are increased by 12% and all benefits accrued through December 31, 1998 are increased by 10%.

## 4. Early Retirement

Age Requirement: 62

Service Requirement: 20 years of service (5 years of service for disabled participants)

Amount: Normal benefit accrued, reduced as follows:

<b>Commencement Age</b>	<b>Reduction Factor</b>
64	.9016
63	.8146
62	.7375

### 5. Vesting

Age Requirement: None

Service Requirement: 10 years of service, or 5 years of service including one hour of service on January 1, 1989 or later.

Normal Retirement Age: 65



#### APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

#### 6. Terminal Disability Lump Sum Benefit

Age Requirement: None

Service Requirement: Participants who are vested, have been awarded a Social Security Disability Pension with a date of entitlement prior to May 1, 2009, and provided two written statements from physicians stating that the disability will lead to the Participant's death within one year of application.

Amount: A lump-sum equal to the greater of 36 times the monthly Normal Pension Benefit or 100% of employer contributions. If the Participant is still alive at his Normal Retirement Age, he will receive a monthly pension equal to his Normal Pension Benefit minus the actuarial equivalent of the lump sum received.

#### 7. Pre-Retirement Death Benefit

Age Requirement: None

Service Requirement: Participants who are vested and have had at least \$250 of contributions made on their behalf.

Amount: Beneficiaries of married employees who die prior to retirement will receive a benefit under Option B on the date that the participant would have been eligible for a pension benefit. Beneficiaries of unmarried participants receive 100% of employer contributions payable in 60 equal monthly installments commencing at the participant's earliest retirement age.

#### 8. Post-Retirement Death Benefit

Husband and Wife: If married, pension benefits are paid in the form of a 50% joint and survivor annuity (Option B), unless this form is rejected by employee and spouse. If not rejected, the benefit amount otherwise payable is reduced to reflect the joint and survivor coverage. If Option B has been rejected by employee and spouse or is not applicable, benefits are payable for the life of the employee without reduction, or in any other available optional form elected by the employee in an actuarially equivalent amount.

## 9. Optional Forms of Pension

- Life only
- 100% joint and survivor (Option A)
- 50% joint and survivor (Option B)
- Life with 10-year certain (Option C)
- 75% joint and survivor (Option D)

### 10. Participation

The earlier of the first day of the month following the month:

- i) during which the total employer contributions exceed \$250, provided contributions were made during each of twelve or more calendar months, or
- ii) during which the employee worked 1,000 hours during any 12-month consecutive period.



#### APPENDIX B – SUMMARY OF MAJOR PLAN PROVISIONS

#### 11. Benefit Credit

Years of Past Service: The number of months prior to the employee's Applicable Effective Date provided such period of employment began prior to January 1, 1967, divided by 12.

Years of Future Service: In the fiscal year in which the Applicable Effective Date falls, an employee will be credited with the number of months between the Applicable Effective Date and the end of the fiscal year. Thereafter, a year of future service shall be granted at the rate of one year for each fiscal year during which employer contributions are made on his behalf or the Participant completed 1,000 hours of service.

### 12. Vesting Credit

The number of years of past service credit plus future service credit as outlined above.

#### 13. Contribution Rate

Varies by employer based on rate per hour, shift, or percent of salary.

#### 14. Changes in Plan Provisions since Last Valuation

None



#### APPENDIX C – ACTUARIAL ASSUMPTIONS AND MEHODS

## A. Actuarial Assumptions

#### 1. Valuation Date

January 1, 2023

#### 2. Investment Return (or Discount Rate)

6.00% for funding and ASC 960 disclosure purposes

2.55% for determining RPA '94 current liability

All investment returns are net of investment expenses.

## 3. Mortality

### **Funding**

*Healthy Lives:* RP-2014 Healthy Blue Collar Mortality Table, with full generational projection using Scale MP-2016.

Disabled Lives: RP-2014 Disabled Retiree Mortality Table, with full generational projection using Scale MP-2016.

In accordance with Actuarial Standard of Practice No. 35, we have considered the effect of mortality improvement prior to and subsequent to the measurement date in developing this assumption.

Terminated Vested participants over age 85 (as of the valuation date) are assumed to have died without a surviving spouse and are excluded from the valuation.

## RPA '94 Current Liability

IRS 2023 Static Mortality Table.

#### 4. Rates of Turnover

Terminations of employment for reasons other than death, disability or retirement are assumed to be in accordance with annual rates as shown below for illustrative ages.

Age	<b>Rate</b> (%)
20	11.91
25	11.59
30	10.83
35	9.41
40	7.73
45	5.96
50	3.84
55	1.41
60	0.14

Turnover rates do not apply on or after early retirement.

## 5. Rates of Disability

Illustrative rates of disablement are shown below:

Age	Rate (%)
20	0.08
25	0.08
30	0.08
35	0.09
40	0.14
45	0.27
50	0.60
55	1.28
60	2.61



#### APPENDIX C – ACTUARIAL ASSUMPTIONS AND MEHODS

#### 6. Rates of Retirement

Age*	Rate (%)
62	30
63-64	15
65-66	30
67-68	25
69-70	20
71	75
72	100

\*If eligible

#### 7. Rates of Retirement for Inactive Vested Participants

Age*	Rate (%)
62	50
63-64	25
65	55
66	25
67-71	10
72	100

\*If eligible

#### 8. Delayed Retirement Factors

Inactive vested Participants who are assumed to commence receipt of benefits after attaining Normal Retirement Age are increased 1% per month beyond Normal Retirement Age.

Terminated Vested Participants are assumed to receive an actuarially increased benefit for late retirement through their required beginning date ("RBD") and an accumulated lump-sum from their RBD until the date benefit payments commence.

#### 9. Annuitants

Annuitant records that have been reported as not being in pay status for the last 3 years are not included for valuation purposes.

#### 10. Definition of Active

Employees for whom contributions were made for 50 or more shifts, excluding those who have retired as of the valuation date and those who worked for an employer that withdrew prior to the valuation date.

#### 11. Future Benefit Accrual

Same as experienced during the plan year preceding the valuation date.

#### 12. Family Composition

65% assumed married with the male spouse three years older than his wife.

#### 13. Form of Benefit

65% of the active married population is assumed to elect the 100% joint and survivor form of payment. The remaining population is assumed to elect the life form of payment.

## 14. Unknown Data for Participants

Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

## 15. Administrative Expenses

\$2,758,000, payable mid-year, for the year beginning January 1, 2023 (or \$2,678,806 payable at the beginning of the year).



#### APPENDIX C – ACTUARIAL ASSUMPTIONS AND MEHODS

For financial disclosure under FASB ASC 960 the present value of future administrative expenses is assumed to be 3.64% of Accrued Liability. This assumes the expense assumption increases 2.5% per year.

#### 16. Changes in Assumptions since Last Valuation

- The RPA '94 current liability interest rate was changed from 2.22% to 2.55% to comply with appropriate guidance and remains within the required corridor as prescribed by the IRS, in accordance with §412(1)(7)(C) of the Internal Revenue Code.
- The mortality table used to determine RPA '94 current liability is the static mortality table as described under Regulation 1.430(h)(3)-1(a)(3). The 2022 table was updated to 2023 in accordance with IRS Notice 2022-22.
- The annual administrative expense assumption was increased from \$2,703,000 to \$2,758,000.
- For financial disclosure under FASB Topic ASC 960, the future administrative expense assumption was increased from 3.51% of the Present Value of Accrued Benefits to 3.64%. In addition, the annual rate at which administrative expenses were assumed to increase was changed from 2.0% to 2.5%.
- Last year, we assumed that 90% of Terminated Vested Participants past their required beginning date were either deceased or will not collect a benefit from this Plan. This year, we assume participants older than age 85 as of December 31, 2022 are deceased without a surviving spouse.

• Further, Terminated Vested Participants were previously assumed to receive an actuarially increased benefit for late retirement from normal retirement date through their date of commencement. This year, we assume they receive an actuarially increased benefit for late retirement through their required beginning date and an accumulated lump-sum from their required beginning date until the date benefit payments commence.

## 17. Justification of Assumptions

#### **Economic**

In accordance with Actuarial Standard of Practice No. 27, the justification for 6.00% discount rate is based on the Trustees risk preference, the Plan's current asset allocation, and the investment consultant's capital market outlook.

## Demographic

In accordance with Actuarial Standard of Practice No. 35, the demographic assumptions used in this report were most recently reviewed in conjunction with the Plan's SFA application. We annually check the assumptions against the sources of liability gains and losses resulting from recent valuations which are not producing significant deviations from actual plan experience. As such, the demographic assumptions continue to be reasonable and represent our best estimate.

For purposes of calculating current liability per IRC \$431(c)(6)-1, the static mortality table as described under Regulation \$1.430(h)(3)-1(a)(3) was used.



#### APPENDIX C – ACTUARIAL ASSUMPTIONS AND MEHODS

#### **B.** Actuarial Methods

#### **Funding Method: Unit Credit Cost Method**

The funding method for the valuation of liabilities used for this valuation is the Unit Credit method. This is one of a family of valuation methods known as accrued benefits methods. The chief characteristic of an accrued benefits method is that the funding pattern follows the pattern of benefit accrual.

Under the Unit Credit Funding Method, the normal cost for each participant is the present value of the benefit expected to be earned in the upcoming plan year. The Actuarial Liability, Accrued Liability, Present Value of Accrued Benefits, and the Present Value of Accumulated Benefits are the present value of each participant's current accrued benefit as of the valuation date.

One of the significant effects of this funding method is that, depending on the demographics of the population, the Unit Credit method tends to produce lower costs in the early years. There is a possibility that as the population ages, the annual cost could increase over time.

#### **Asset Valuation Method**

The Actuarial Value of Assets is equal to the Market Value of Assets.

#### **Changes in Method since Last Valuation**

None

#### **Modeling Disclosures**

In accordance with Actuarial Standard of Practice No. 56 (Modeling), the following disclosures are made regarding ProVal:

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities, normal costs and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal as it relates to the Plan and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in the output of ProVal that would affect the contents of this actuarial valuation report.





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