HEALTH WEALTH CAREER

CCRL PETROLEUM EMPLOYEES' PENSION PLAN

REPORT ON THE ACTUARIAL VALUATION FOR FUNDING PURPOSES AS AT DECEMBER 31, 2017

September 2018

Canada Revenue Agency Registration Number: 0358986

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To prepare the results in this report, actuarial assumptions are used to model a single scenario from a range of possibilities for each valuation basis. The results based on that single scenario are included in this report. However, the future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material. Different assumptions or scenarios within the range of possibilities may also be reasonable, and results based on those assumptions would be different. Furthermore, actuarial assumptions may be changed from one valuation to the next because of changes in regulatory and professional requirements, developments in case law, plan experience, changes in expectations about the future, and other factors.

The valuation results shown in this report also illustrate the sensitivity to one of the key actuarial assumptions, the discount rate. We note that the results presented herein rely on many assumptions, all of which are subject to uncertainty, with a broad range of possible outcomes, and the results are sensitive to all the assumptions used in the valuation.

Should the plan be wound up, the going concern funded status and solvency financial position, if different from the wind-up financial position, become irrelevant. The hypothetical wind-up financial position estimates the financial position of the plan assuming it is wound up on the valuation date. Emerging experience will affect the wind-up financial position of the plan assuming it is wound up in the future. In fact, even if the plan were wound up on the valuation date, the financial position would continue to fluctuate until the benefits are fully settled.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security, and/or benefit-related issues should not be made solely on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic, and societal factors, including financial scenarios that assume future sustained investment losses.

Funding calculations reflect our understanding of the requirements of the Pension Benefits Act, 1992 (Saskatchewan), the Pension Benefits Regulation, 1993 (Saskatchewan), the Income Tax Act, and related regulations that are effective as of the valuation date. Mercer is not a law firm, and the analysis presented in this report is not intended to be a legal opinion. You should consider securing the advice of legal counsel with respect to any legal matters related to this report.

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SUMMARY OF RESULTS

(000'S)	31.12.2017	31.12.2015
Going Concern Financial Status		
Market value of assets	$482,690	$336,146
Going concern funding target	$446,937	$425,454
Funding excess (shortfall)	$35,753	($89,308)
Hypothetical Wind-up Financial Position		
Wind-up assets	$482,340	$335,796
Wind-up liability	$567,233	$477,599
Wind-up excess (shortfall)	($84,893)	($141,803)
Funding Requirements in the Year Following the Valuation [1]		
Total current service cost	$17,976	$20,355
Expense allowance	$200	$130
Total	$18,176	$20,485
Employer's current service cost as a percentage of members' pensionable earnings	19.54%	22.69%

[1] Provided for reference purposes only. Contributions must be remitted to the Plan in accordance with the Minimum Funding Requirements and Maximum Eligible Contributions sections of this report.

(000'S)	31.12.2017	31.12.2015
Minimum special payments	$29,812	$33,426
Estimated minimum employer contribution	$47,988	$52,114
Estimated maximum eligible employer contribution[2]	$103,069	$162,288
Next required valuation date	31.12.2020	31.12.2018

[2] Should the Company elect to contribute the service cost on a plan termination basis instead of a going concern service cost, the maximum employer contribution for the period to December 31, 2020 is the three year hypothetical wind-up incremental cost of $128,076,000 plus the wind-up shortfall of $84,893,000.

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INTRODUCTION

TO FEDERATED CO-OPERATIVES LIMITED AND CONSUMERS' CO-OPERATIVE REFINERIES LIMITED

At the request of the Federated Co-operatives Limited and Consumers' Co-operative Refineries Limited, we have conducted an actuarial valuation of the CCRL Petroleum Employees' Pension Plan (the "Plan"), sponsored by Consumers' Co-operative Refineries Limited (the "Company"), as at the valuation date, December 31, 2017. We are pleased to present the results of the valuation.

PURPOSE

The purpose of this valuation is to determine:

- The funded status of the Plan as at December 31, 2017 on going concern, hypothetical wind-up, and solvency bases;
- The minimum required funding contributions from 2018, in accordance with the *Pension Benefits Act, 1992 (Saskatchewan)* (the "Act") and the *Pension Benefits Regulations, 1993 (Saskatchewan)* (the "Regulations"); and
- The maximum permissible funding contributions from 2018, in accordance with the *Income Tax Act.*

The information contained in this report was prepared for the internal use of the Company, and for filing with the Saskatchewan Financial and Consumer Affairs Authority and with the Canada Revenue Agency, in connection with our actuarial valuation of the Plan. This report will be filed with the Saskatchewan Financial and Consumes Affairs Authority and with the Canada Revenue Agency. This report is not intended or suitable for any other purpose.

In accordance with pension benefits legislation, the next actuarial valuation of the Plan will be required as at a date not later than December 31, 2020, or as at the date of an earlier amendment to the Plan.

TERMS OF ENGAGEMENT

In accordance with our terms of engagement with the Company, our actuarial valuation of the Plan is based on the following material terms:

- It has been prepared in accordance with applicable pension legislation and actuarial standards of practice in Canada.
- As instructed by the Company, the going concern discount rate reflects a margin for adverse deviations of 0.51% per year.
- We have reflected the Company decisions for determining the solvency funding requirements, summarized as follows:
  - The same plan wind-up scenario was hypothesized for both hypothetical wind-up and solvency valuations.
  - The solvency financial position was determined on a market value basis.

  See the Valuation Results - Solvency section of the report for more information.

EVENTS SINCE THE LAST VALUATION AT DECEMBER 31, 2015

Pension Plan

There have been no special events since the last valuation date.

This valuation reflects the provisions of the Plan as at December 31, 2017. The Plan has been amended since the date of the previous valuation to close the Plan to all employees hired on or after April 3, 2017 and to clarify other provisions of the Plan.

The target mix in the Statement of Investment Policies and Procedures was revised to incorporate, among other changes, a custom liability hedging bond portfolio as well as leveraged long term bonds. The discount rate used in the valuation reflects these changes.

The Plan provisions are summarized in Appendix F.

Assumptions

We have used the same going concern valuation assumptions and methods as were used for the previous valuation, except for the following:

	CURRENT VALUATION	PREVIOUS VALUATION
Discount rate:	5.50%	5.20%
Pensionable earnings increases:	3.00% + service-related merit and promotion	3.75% + service-related merit and promotion
Commuted value interest rate:	3.90%	4.00%
Allowance for non-investment expenses:	$200,000 per annum	$130,000 per annum

A summary of the going concern methods and assumptions is provided in Appendix C.

The hypothetical wind-up and solvency assumptions have been updated to reflect market conditions at the valuation date. A summary of the hypothetical wind-up and solvency methods and assumptions is provided in Appendix D.

Regulatory Environment and Actuarial Standards

There have been no changes to the Act or the relevant regulations which impact the funding of the Plan.

On July 20, 2017, the Canadian Institute of Actuaries released an Exposure Draft with proposed changes to the standards for pension commuted values ("CIA CV Standard"). The impact of any changes to the CIA CV Standard will be considered in a future actuarial valuation, once the amendments are finalized.

SUBSEQUENT EVENTS

In June 2018, it was announced that, effective December 31, 2019, the Plan will be terminated in respect of management employee members. For service on or after January 1, 2020, management employee members will participate in the Co-operative Superannuation Society Pension Plan. The terms of the termination of the Plan in respect of management employee members are being reviewed by the Saskatchewan Financial and Consumer Affairs Authority and as such, have not been reflected in this valuation.

After checking with representatives of the Company, to the best of our knowledge there have been no other events subsequent to the valuation date which, in our opinion, would have a material impact on the results of the valuation. Our valuation reflects the financial position of the Plan as of the valuation date and does not take into account any experience after the valuation date.

IMPACT OF CASE LAW

This report has been prepared on the assumption that all of the assets in the pension fund are available to meet all of the claims on the Plan. We are not in a position to assess the impact that the Ontario Court of Appeal's decision in Aegon Canada Inc. and Transamerica Life Canada versus ING Canada Inc. or similar decisions in other jurisdictions might have on the validity of this assumption.

We have assumed that all the Plan's assets are available to cover the Plan's liabilities presented in this report.

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VALUATION RESULTS – GOING CONCERN

FINANCIAL STATUS

A going concern valuation compares the relationship between the value of Plan assets and the present value of expected future benefit cash flows in respect of accrued service, assuming the Plan will be maintained indefinitely.

The results of the current valuation, compared with those from the previous valuation, are summarized as follows:

(000'S)	31.12.2017	31.12.2015
Assets		
Market value of assets	$478,258	$334,592
In-transit amounts	$4,432	$1,554
Market value of assets adjusted for In-transit amounts	$482,690	$336,146
Going concern funding target		
• Active members	$273,361	$307,024
• Pensioners and survivors	$170,674	$114,599
• Deferred pensioners	$2,902	$3,831
Total	$446,937	$425,454
Funding excess (shortfall)	$35,753	($89,308)

The going concern funding target includes a provision for adverse deviations. This provision for adverse deviations represents approximately $39,035,000 of the total funding target.

RECONCILIATION OF FINANCIAL STATUS

(000's)		
Funding excess (shortfall) as at previous valuation		($89,308)
Interest on funding excess (shortfall) at 5.20% per year		($9,530)
Employer's special payments, with interest		$70,189
Expected funding excess (shortfall)		($28,649)
Net experience gains (losses)		
• Investment return	$24,835	
• Increases in pensionable earnings, maximum pension and YMPE	$13,499	
• Indexation	$14	
• Mortality	($1,544)	
• Retirement	($3,042)	
• Termination	($3,626)	
• Expenses	($702)	
Total experience gains (losses)		$29,434
Employer's contributions different than expected		($4,503)
Impact of changes in assumptions		
• Discount rate	$24,466	
• Pensionable earnings increase	$14,174	
• Commuted value interest rate	($348)	
Total assumption changes impact		$38,292
Net impact of other elements of gains and losses		$1,179
Funding excess (shortfall) as at current valuation		$35,753

CURRENT SERVICE COST

The current service cost is an estimate of the present value of the additional expected future benefit cash flows in respect of pensionable service that will accrue after the valuation date, assuming the Plan will be maintained indefinitely.

The current service cost during the year following the valuation date, compared with the corresponding value determined in the previous valuation, is as follows:

(000'S)	2018	2016
Total current service cost	$17,976	$20,355
Expense allowance	$200	$130
Total	$18,176	$20,485
Estimated members' pensionable earnings	$93,034	$90,266
Employer's current service cost expressed as a percentage of members' pensionable earnings	19.54%	22.69%

The total current service cost includes a provision for adverse deviations of approximately $2,336,000.

The key factors that have caused a change in the employer's current service cost since the previous valuation are summarized in the following table:

Employer's current service cost as at previous valuation	22.69%
Demographic changes	(0.19%)
Changes in assumptions	(2.96%)
Employer's current service cost as at current valuation	19.54%

DISCOUNT RATE SENSITIVITY

The following table summarizes the effect on the going concern funding target and current service cost shown in this report of using a discount rate which is 1% lower than that used in the valuation.

SCENARIO (000'S)	VALUATION BASIS	REDUCE DISCOUNT RATE BY 1%
Going concern funding target	$446,937	$536,570
Current service cost		
Total current service cost	$17,976	$23,747
Expense allowance	$200	$200
Total	$18,176	$23,947

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VALUATION RESULTS – HYPOTHETICAL WIND-UP

FINANCIAL POSITION

When conducting a hypothetical wind-up valuation, we determine the relationship between the respective values of the Plan's assets and its liabilities assuming the Plan is wound up and settled on the valuation date, assuming benefits are settled in accordance with the Act and under circumstances consistent with the hypothesized scenario on the valuation date. More details on such scenario are provided in Appendix D.

The hypothetical wind-up financial position as of the valuation date, compared with that at the previous valuation, is as follows:

(000'S)	31.12.2017	31.12.2015
Assets		
Market value of assets	$478,258	$334,952
In-transits	$4,432	$1,554
Allowance for wind-up expenses	($350)	($350)
Wind-up assets	$482,340	$335,796
Present value of accrued benefits for:		
• Active members	$298,027	$302,035
• Pensioners and survivors	$264,067	$169,515
• Deferred pensioners	$5,139	$6,049
Total wind-up liability	$567,233	$477,599
Wind-up excess (shortfall)	($84,893)	($141,803)

WIND-UP INCREMENTAL COST

The wind-up incremental cost is an estimate of the present value of the projected change in the hypothetical wind-up liabilities from the valuation date until the next scheduled valuation date, adjusted for the benefit payments expected to be made in that period.

The hypothetical wind-up incremental cost determined in this valuation, compared with the corresponding value determined in the previous valuation, is as follows:

(000'S)	31.12.2017	31.12.2015
Number of years covered by report	3 years	3 years
Total hypothetical wind-up liabilities at the valuation date (A)	$567,233	$477,599
Present value at the valuation date of projected hypothetical wind-up liability at the next required valuation plus expected benefit payments until the next required valuation (B)	$695,309	$607,141
Hypothetical wind-up incremental cost (B – A)	$128,076	$129,542

The incremental cost is not an appropriate measure of the contributions that would be required to maintain the financial position of the Plan on a hypothetical wind-up basis unchanged from the valuation date to the next required valuation date, if actual experience is exactly in accordance with the going concern valuation assumptions. This is because it does not reflect the fact that the expected return on plan assets (based on the going concern assumptions) is greater than the discount rate used to determine the hypothetical wind-up liabilities.

DISCOUNT RATE SENSITIVITY

The following table summarizes the effect on the hypothetical wind-up liabilities shown in this report of using a discount rate which is 1% lower than that used in the valuation:

SCENARIO (000'S)	VALUATION BASIS	REDUCE DISCOUNT RATE BY 1%
Total hypothetical wind-up liability	$567,233	$697,305

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VALUATION RESULTS – SOLVENCY

OVERVIEW

The Act also requires the financial position of the Plan to be determined on a solvency basis. The financial position on a solvency basis is determined in a similar manner to the Hypothetical Wind-up Basis.

FINANCIAL POSITION

The financial position on a solvency basis, compared with the corresponding figures from the previous valuation, is as follows:

(000'S)	31.12.2017	31.12.2015
Assets		
Market value of assets	$478,258	$334,592
In-transits	$4,432	$1,554
Present value of special payments for the next five years	$48,940	$74,451
Allowance for Wind-up expenses	($350)	($350)
Net assets	$531,280	$410,247
Liabilities		
Total hypothetical wind-up liabilities	$567,233	$477,599
Difference in circumstances of assumed wind-up	$0	$0
Value of excluded benefits	($0)	($0)
Liabilities on a solvency basis	$567,233	$477,599
Surplus (shortfall) on a solvency basis	($35,953)	($67,352)
Solvency ratio	0.8503	0.7031

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MINIMUM FUNDING REQUIREMENTS

The Act prescribes the minimum contributions that Company must make to the Plan. The minimum contributions in respect of a defined benefit component of a pension plan are comprised of going concern current service cost and special payments to fund any going concern or solvency shortfalls.

On the basis of the assumptions and methods described in this report, the rule for determining the minimum required employer monthly contributions, as well as an estimate of the employer contributions, from the valuation date until the next required valuation are as follows:

	EMPLOYER'S CONTRIBUTION RULE (000'S)		ESTIMATED EMPLOYER'S CONTRIBUTIONS (000'S)	
Period beginning	**Monthly current service cost including expense allowance[3]**	**Minimum monthly special payments**	**Monthly current service cost including expense allowance**	**Total minimum monthly contributions**
January 1, 2018	19.54%	$2,484	$1,515	$3,999
January 1, 2019	19.54%	$1,846	$1,560	$3,406
January 1, 2020	19.54%	$1,846	$1,607	$3,453

The estimated contribution amounts above are based on projected members' pensionable earnings. Therefore, the actual employer's current service cost may be different from the above estimates and, as such, the contribution requirements should be monitored closely to ensure contributions are made in accordance with the Act.

The development of the minimum special payments is summarized in Appendix A.

[3] Expressed as a percentage of members' pensionable earnings.

OTHER CONSIDERATIONS

Differences Between Valuation Bases

There is no provision in the minimum funding requirements to fund the difference between the hypothetical wind-up and solvency shortfalls, if any.

In addition, although minimum funding requirements do include a requirement to fund the going concern current service cost, there is no requirement to fund the expected growth in the hypothetical wind-up or solvency liability after the valuation date, which could be greater than the going concern current service cost.

Timing of Contributions

Funding contributions must be made no less frequently than monthly, and must be made within 30 days following the end of the month to which they apply.

Retroactive Contributions

The Company must contribute the excess, if any, of the minimum contribution recommended in this report over contributions actually made in respect of the period following the valuation date. This contribution, along with an allowance for interest, is due no later than 30 days following the date this report is filed.

Payment of Benefits

The Act imposes certain restrictions on the payment of lump sums from the Plan when the solvency ratio revealed in an actuarial valuation is less than one. If the solvency ratio shown in this report is less than one, the plan administrator should ensure that the monthly special payments are sufficient to meet the requirements of the Act to allow for the full payment of benefits, and otherwise should take the prescribed actions.

Specifically, pursuant to the Act, transfers out of the Plan may be made in full provided an amount equal to the transfer deficiency has been remitted to the pension fund in addition to the minimum special payments. However, transfer deficiencies that are less than 5% of the Year's Maximum Pensionable Earnings ("YMPE") under the Canada/Québec Pension Plan can be paid in full until such time as the sum of all such transfer deficiencies paid since the date of the last actuarial valuation exceed 5% of the market value of the Plan assets at the time of the transfer, at which time, this exemption no longer applies.

As such, the administrator should monitor the solvency ratio of the Plan and, if necessary, take the prescribed actions.

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MAXIMUM ELIGIBLE CONTRIBUTIONS

The *Income Tax Act* (the "ITA") limits the amount of employer contributions that can be remitted to the defined benefit component of a registered pension plan.

In accordance with Section 147.2 of the ITA and *Income Tax Regulation* 8516, for a plan which is underfunded on either a going concern or on a hypothetical wind-up basis, the maximum permitted contributions are equal to the employer's current service cost (either on a going concern or plan termination basis), including the explicit expense allowance if applicable, plus the greater of the going concern funding shortfall and hypothetical wind-up shortfall.

For a plan which is fully funded on both going concern and hypothetical wind-up bases, the employer can remit a contribution equal to the employer's current service cost (either on a going concern or plan termination basis), including the explicit expense allowance if applicable, as long as the surplus in the plan does not exceed a prescribed threshold. Specifically, in accordance with Section 147.2 of the ITA, for a plan which is fully funded on both going concern and hypothetical wind-up bases, the plan may not retain its registered status if the employer makes a contribution while the going concern funding excess exceeds 25% of the going concern funding target.

Notwithstanding the above, any contributions that are required to be made in accordance with pension benefits legislation are eligible contributions in accordance with Section 147.2 of the ITA and can be remitted.

SCHEDULE OF MAXIMUM CONTRIBUTIONS

The Company is permitted to fully fund the greater of the going concern and hypothetical wind-up shortfalls ($84,893,000), as well as make current service cost contributions (either on a going concern or plan termination basis). The portion of this contribution representing the payment of the hypothetical wind-up shortfall can be increased with interest at 2.93% per year from the valuation date to the date the payment is made, and must be reduced by the amount of any deficit funding made from the valuation date to the date the payment is made.

Assuming the Company contributes the greater of the going concern and hypothetical wind-up shortfall of $84,893,000 as of the valuation date, the rule for determining the estimated maximum eligible annual contributions, as well as an estimate of the maximum eligible contributions until the next valuation, are as follows:

	EMPLOYER'S CONTRIBUTION RULE (000'S)		ESTIMATED EMPLOYER'S CONTRIBUTIONS (000'S)
Year beginning	Monthly current service cost including expense allowance[4]	Deficit Funding	Monthly current service cost including expense allowance
January 1, 2018	22.69%	n/a	$1,759
October 1, 2018	19.54%	n/a	$1,515
January 1, 2019	19.54%	n/a	$1,560
January 1, 2020	19.54%	n/a	$1,607

The employer's current service cost in the above table was estimated based on projected members' pensionable earnings. The actual employer's current service cost will be different from these estimates and, as such, the contribution requirements should be monitored closely to ensure compliance with the ITA.

The Company could elect to contribute the service cost on a plan termination basis instead of the going concern service cost. In such case, the maximum employer contribution for the period to December 31, 2020, is the hypothetical wind-up shortfall of $84,893,000, plus the three-year wind-up incremental cost of $128,076,000.

[4] Expressed as a percentage of members' pensionable earnings.

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ACTUARIAL OPINION

In our opinion, for the purposes of the valuations,

- The membership data on which the valuation is based are sufficient and reliable.
- The assumptions are appropriate.
- The methods employed in the valuation are appropriate.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in. It has also been prepared in accordance with the funding and solvency standards set by the *Pension Benefits Act, 1992 (Saskatchewan)*.

Jonathan Mossing
FCIA, FSA

28 September 2018

Date

Deanna (Dea) Napen
FCIA, FSA

28 September 2018

Date

APPENDIX A

PRESCRIBED DISCLOSURE

DEFINITIONS

The Act requires certain information to be included in the actuarial valuation report or cost certificate. This section of the report compiles most of the required numerical disclosure. The required disclosure under the Act that is not shown in this Appendix A can be located throughout the remainder of this report.

DEFINED TERM	DESCRIPTION	RESULT (000'S)
Going Concern Assets	The value of the assets of a plan as of the relevant review date, determined on the basis of a going concern valuation.	$482,690
Going Concern Liabilities	The actuarial present value of a plan's benefits as of the relevant review date, determined on the basis of a going concern valuation.	$446,937
Unfunded Liability	The amount, if any, by which a plan's going concern liabilities value exceed its going concern assets value.	$0
Solvency Ratio	The fraction obtained by dividing:	0.8503
	(a) the market value of the plan's assets including any cash balances and accrued and receivable income and reduced by the actuary's estimate of the expenses that would be incurred in winding-up the plan (hereafter referred to as Solvency Assets), and	$482,340
	(b) the liabilities of the plan calculated on a plan termination basis (hereafter referred to as Solvency Liabilities).	$567,233
Solvency Deficiency	The amount, if any, by which:	
	(a) the Solvency Liabilities	$567,233
	exceed the sum of:	
	(b) the Solvency Assets, and	$482,340
	(c) the present value of special payments payable over the next five years.	$48,940
		($35,953)

DEFINED TERM	DESCRIPTION	RESULT (000'S)
Special Payments	A monthly special payment established to amortize an unfunded liability is hereafter referred to as an unfunded liability special payment.	N/A
	A monthly special payment established to amortize a solvency deficiency is hereafter referred to as a solvency special payment.	$2,848,365

TIMING OF NEXT REQUIRED VALUATION

In accordance with the Act, an actuarial report must be prepared at intervals not exceeding three years. Accordingly, the next valuation of the Plan will be required no later than December 31, 2020.

SPECIAL PAYMENTS

Going Concern Basis

The present values, at the current valuation date, of the monthly unfunded liability special payments determined at the previous valuation, are as follows:

Present Value of Monthly Special Payments From the Previous Valuation

TYPE OF DEFICIT	EFFECTIVE DATE	SPECIAL PAYMENT	LAST PAYMENT	PRESENT VALUE AT THE CURRENT VALUATION DATE
Unfunded Liability	January 1, 2005	$52,000	December 31, 2019	$1,181,000
Unfunded Liability	February 1, 2007	$116,583	January 31, 2022	$5,120,000
Unfunded Liability	January 1, 2008	$130,007	December 31, 2022	$6,828,000
Unfunded Liability	January 1, 2011	$210,701	December 31, 2025	$16,416,000
Unfunded Liability	January 1, 2014	$346,077	December 31, 2028	$34,447,000
Unfunded Liability	January 1, 2016	$90,029	December 31, 2030	$10,095,000
Total		$945,397		$74,087,000

Due to the experience gain arising since the previous valuation, there is no unfunded liability as at the valuation date. In accordance with the Act, unfunded liability special payments are no longer required.

Solvency Basis

In accordance with the Act, the solvency deficiency must be eliminated by special payments within five years. The present value of the existing solvency special payments due in the next five years is determined as follows:

Present Value of Monthly Special Payments From the Previous Valuation

TYPE OF DEFICIT	EFFECTIVE DATE	SPECIAL PAYMENT	LAST PAYMENT	PRESENT VALUE AT THE CURRENT VALUATION DATE
Solvency	January 1, 2014	$638,029	December 31, 2018	$7,538,000
Solvency	January 1, 2016	$1,202,036	December 31, 2020	$41,402,000
Total		$1,840,065		$48,940,000

The present value of the special payments to be made over the next five years is less than the solvency deficiency. In accordance with the Act, this additional shortfall needs to be amortized over a period not exceeding 5 years. As such, solvency special payments must be increased by $644,300 per month, until December 31, 2022 to amortize this additional shortfall.

Total Special Payments

The following minimum monthly special payments must be made to the Plan to eliminate any unfunded liability and any solvency deficiency at the valuation date, within the periods prescribed by the Act.

TYPE OF PAYMENT	START DATE	END DATE	MONTHLY SPECIAL PAYMENT	PRESENT VALUE - SOLVENCY BASIS[5]
Solvency	January 1, 2014	December 31, 2018	$638,029	$7,538,000
Solvency	January 1, 2016	December 31, 2020	$1,202,036	$41,402,000
New solvency	January 1, 2018	December 31, 2022	$644,300	$35,953,000
Total			$2,484,365	$84,893,000

[5] Calculation considers all remaining scheduled payments and is based on the average solvency discount rate.

APPENDIX B

PLAN ASSETS

The pension fund is held by Co-operators Life Insurance Company. In preparing this report, we have relied upon fund information and cash flow information by Addenda Capital Inc. and CIBC Mellon without further audit. Customarily, this information would not be verified by a plan's actuary. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

RECONCILIATION OF MARKET VALUE OF PLAN ASSETS

The pension fund transactions since the last valuation are summarized in the following table:

(000'S)	2016	2017
January 1	$334,592	$402,743
PLUS		
Members' contributions	$0	$0
Company's contributions		
• Current service	$17,927	$21,288
• Special payments	$32,134	$33,420
Investment return net of investment management fees	$27,405	$37,332
	$77,466	$92,040
LESS		
Pensions paid	$7,925	$9,580
Lump-sums paid	$1,101	$6,298
Administration fees	$289	$647
	$9,315	$16,525
December 31	$402,743	$478,258
Rate of return net of investment management fees[6]	7.72%	8.85%

[6] Assuming mid-period cash flows.

The market value of assets shown in the above table is adjusted to reflect in-transit amounts as follows:

(000'S)	CURRENT VALUATION	PREVIOUS VALUATION
Market value of invested assets	$478,258	$334,592
In-transit amounts		
• Company's contributions	$4,432	$2,977
• Benefit payments	($0)	($1,423)
Market value of assets adjusted for in-transit amounts	$482,690	$336,146

We have tested the pensions paid, the lump-sums paid, and the contributions for consistency with the membership data for the Plan members who have received benefits or made contributions. The results of these tests were satisfactory.

INVESTMENT POLICY

The plan administrator has adopted a statement of investment policy and procedures ("SIPP). This policy is intended to provide guidelines for the manager(s) as to the level of risk that is consistent with the Plan's investment objectives. A significant component of this investment policy is the asset mix.

The plan administrator is solely responsible for selecting the plan's investment policies, asset allocations, and individual investments.

The constraints on the asset mix and the actual asset mix at the valuation date are provided for information purposes:

	INVESTMENT POLICY			ACTUAL ASSET MIX AS AT 31.12.2017
	Minimum	Target	Maximum	
Canadian Equity	20%	30%	35%	33.6%
Global Equity	20%	30%	35%	31.7%
Liability Hedging Bonds	10%	13.15%	16%	31.1%
Leveraged Long Term Bonds	20%	26.85%	35%	
Cash and cash equivalents	N/A	N/A	N/A	3.5%
		100%		100%

Because of the mismatch between the Plan's assets (which are invested in accordance with the above investment policy) and the Plan's liabilities (which tend to behave like long bonds) the Plan's financial position will fluctuate over time. These fluctuations could be significant and could cause the Plan to become underfunded or overfunded even if the Company contributes to the Plan based on the funding requirements presented in this report.

APPENDIX C

METHODS AND ASSUMPTIONS – GOING CONCERN

VALUATION OF ASSETS

For this valuation, we have used the market value of assets.

GOING CONCERN FUNDING TARGET

Over time, the real cost to the employer of a pension plan is the excess of benefits and expenses over member contributions and investment earnings. The actuarial cost method allocates this cost to annual time periods.

For purposes of the going concern valuation, we have continued to use the projected unit credit actuarial cost method. Under this method, we determine the present value of benefit cash flows expected to be paid in respect of service accrued prior to the valuation date, based on projected final average earnings. This is referred to as the funding target.

The funding excess or funding shortfall, as the case may be, is the difference between the market or smoothed value of assets and the funding target. A funding excess on a market value basis indicates that the current market value of assets and expected investment earnings are expected to be sufficient to meet the cash flows in respect of benefits accrued to the valuation date as well as expected expenses – assuming the plan is maintained indefinitely. A funding shortfall on a market value basis indicates the opposite – that the current market value of the assets is not expected to be sufficient to meet the plan's cash flow requirements in respect of accrued benefits, absent additional contributions.

As required under the Act, a funding shortfall must be amortized over no more than 15 years through special payments. A funding excess may, from an actuarial standpoint, be applied immediately to reduce required employer current service contributions unless precluded by the terms of the plan or by legislation.

The actuarial cost method used for the purposes of this valuation produces a reasonable matching of contributions with accruing benefits. Because benefits are recognized as they accrue, the actuarial cost method provides an effective funding target for a plan that is maintained indefinitely.

Current Service Cost

The current service cost is the present value of projected benefits to be paid under the plan with respect to service expected to accrue during the period until the next valuation.

The employer's current service cost has been expressed as a percentage of the members' pensionable earnings to provide an automatic adjustment in the event of fluctuations in membership and/or pensionable earnings.

Under the projected unit credit actuarial cost method, the current service cost for an individual member will increase each year as the member approaches retirement. However, the current service cost of the entire group, expressed as a percentage of the members' pensionable earnings, can be expected to remain stable as long as the average age distribution of the group remains constant.

ACTUARIAL ASSUMPTIONS – GOING CONCERN BASIS

The present value of future benefit payment cash flows is based on economic and demographic assumptions. At each valuation we determine whether, in our opinion, the actuarial assumptions are still appropriate for the purposes of the valuation, and we revise them, if necessary. Emerging experience will result in gains or losses that will be revealed and considered in future actuarial valuations.

The table below shows the various assumptions used in the current valuation in comparison with those used in the previous valuation.

ASSUMPTION	CURRENT VALUATION	PREVIOUS VALUATION
Discount rate:	5.50%	5.20%
Inflation (Canada and Saskatchewan):	2.00%	2.00%
Post-retirement indexing:		
• 50% indexed	1.00%	1.00%
• 75% indexed	1.50%	1.50%
ITA limit / YMPE increases:	2.50%	2.50%
Pensionable earnings increases:	3.00% + service related merit and promotion scale	3.75% + service related merit and promotion scale
Retirement rates:	Age-related table	Age-related table
Termination rates:	Age-related table	Age-related table
Mortality rates:	100% of the rates of the 2014 Private Sector Canadian Pensioners Mortality Table (CPM2014Priv)	100% of the rates of the 2014 Private Sector Canadian Pensioners Mortality Table (CPM2014Priv)
Mortality improvements:	Fully generational using CPM Improvement Scale B (CPM-B)	Fully generational using CPM Improvement Scale B (CPM-B)
Disability rates and allowance for recovery from disability:	None	None
Eligible spouse at retirement:	90%	90%
Spousal age difference:	Male spouse 4 years older than female spouse	Male spouse 4 years older than female spouse
Allowance for non-investment expenses:	$200,000 per annum	$130,000 per annum
Benefit settlement rates on Termination:	75% elect commuted value; remainder assumed to elect pension deferred to normal retirement date	75% elect commuted value; remainder assumed to elect pension deferred to normal retirement date
Commuted value interest rate:	3.90%	4.00%

The assumptions are best-estimate with the exception that the discount rate includes a margin for adverse deviations, as shown below.

AGE AND SERVICE RELATED TABLES

Sample rates from the age and service related tables are summarized in the following table:

AGE	TERMINATION	RETIREMENT
20	5.00%	0%
25	3.75%	0%
30	3.05%	0%
35	2.35%	0%
40	1.93%	0%
45	1.50%	0%
50	1.08%	0%
55	0%	50%
56	0%	10%
57	0%	10%
58	0%	10%
59	0%	10%
60	0%	50%
61	0%	5%
62	0%	5%
63	0%	5%
64	0%	5%
65	0%	100%

Sample rates from the service related tables are summarized in the following table:

CONTINOUS SERVICE[7]	MERIT / PROMOTION SCALE		CONTINOUS SERVICE	MERIT / PROMOTION SCALE	
	In-scope	**Management**		**In-scope**	**Management**
0	11.50%	1.00%	13	0.90%	1.00%
1	9.50%	1.00%	14	0.80%	1.00%
2	6.30%	1.00%	15	0.70%	1.00%
3	5.40%	1.00%	16	0.60%	1.00%
4	4.40%	1.00%	17	0.50%	1.00%
5	3.50%	1.00%	18	0.40%	1.00%
6	2.50%	1.00%	19	0.30%	1.00%
7	1.60%	1.00%	20	0.20%	1.00%
8	1.50%	1.00%	21	0.10%	1.00%
9	1.40%	1.00%	22	0.10%	1.00%
10	1.30%	1.00%	23	0.10%	1.00%
11	1.20%	1.00%	24	0.10%	1.00%
12	1.00%	1.00%	>=25	0.00%	1.00%

[7] Completed years at the beginning of the year.

Pensionable Earnings

The benefits ultimately paid will depend on each member's final average earnings. To calculate the pension benefits payable upon retirement, death, or termination of employment, we have taken 2017 pensionable earnings and assumed that such pensionable earnings will increase at the assumed rate and merit/promotion scale.

RATIONALE FOR ASSUMPTIONS

A rationale for each of the assumptions used in the current valuation is provided below.

DISCOUNT RATE

We have discounted the expected benefit payment cash flows using the expected investment return on the market value of the fund net of fees and less a margin for adverse deviations. Other bases for discounting the expected benefit payment cash flows may be appropriate, particularly for purposes other than those specifically identified in this valuation report.

The discount rate is comprised of the following:

- Estimated returns for each major asset class consistent with market conditions on the valuation date and the target asset mix specified in the Plan's investment policy.
- Implicit provision for the hypothetical fees that would be incurred for passive management of all assets.
- A margin for adverse deviations of 0.50%.

The discount rate was developed as follows:

Assumed investment return	5.60%
Diversification effect	0.45%
Fees for passive investment management	(0.04%)
Margin for adverse deviation	(0.51%)
Net discount rate (after rounding)	5.50%

INFLATION

The inflation assumption is based on the mid-point of the Bank of Canada's inflation target range of between 1% and 3%.

INCOME TAX ACT PENSION LIMIT AND YEAR'S MAXIMUM PENSIONABLE EARNINGS

The assumption is based on historical real economic growth and the underlying inflation assumption.

PENSIONABLE EARNINGS

The assumption is based on general wage growth assumptions increased by our best estimate of future merit and promotional increases over general wage growth considering current economic and financial market conditions and company expectations.

RETIREMENT RATES

Due to the size of the Plan, there is no meaningful retirement experience. The assumption is based on the Plan provisions and our experience with similar plans and employee groups.

TERMINATION RATES

Due to the size of the Plan, there is no meaningful termination experience. The assumption is based on the same table as was used in the previous valuation and is consistent with our experience with similar plans and employee groups.

MORTALITY RATES

The assumption for the mortality rates is based on the Canadian Pensioners' Mortality (CPM) study published by the Canadian Institute of Actuaries in February 2014.

Due to the size of the Plan, specific data on plan mortality experience is insufficient to determine the mortality rates. After considering plan-specific characteristics, such as the type of employment, the industry experience, pension and employment income for the plan members, and data in the CPM study, it was determined to use the CPM mortality rates from the private sector without adjustment.

There is broad consensus among actuaries and other longevity experts that mortality improvement will continue in the future, but the degree of future mortality improvement is uncertain. Two mortality improvement scales were recently published by the Canadian Institute of Actuaries (CIA) and may apply to Canadian pension valuations:

- The Canadian Pensioners Mortality (CPM) study published in February 2014 included CPM Improvement Scale B (CPM-B) which is also used for commuted value calculations.
- A report released by the Task Force on Mortality Improvement on September 20, 2017 includes an analysis of the rate of mortality improvement for the Canadian population and provides for mortality improvement scale MI-2017 to be considered for the purpose of reflecting future mortality improvement in Canadian actuarial work, while acknowledging that it might be appropriate to use alternative mortality improvement assumptions to reflect the nature of the work.

The CIA Committee on Pension Plan Financial Reporting published a revised version of the Educational Note on the Selection of Mortality Assumptions for Pension Plan Valuations on December 21, 2017. The Educational Note indicates that given the recent publication of the CPM-B and MI-2017 improvement scales and the similar data sets used in their development, it may be appropriate to use either scale in the absence of credible information to the contrary, such as the publication of a successor scale by the CIA.

For the present valuation, we have continued to use the CPM-B scale, which is a reasonable outlook for future mortality improvement.

Based on the assumption used, the life expectancy of a member age 65 at the valuation date is 21.7 years for males and 24.1 years for females.

DISABILITY RATES AND ALLOWANCE FOR RECOVERY FROM DISABILITY

Use of a different assumption would not have a material impact on the valuation.

ELIGIBLE SPOUSE

The assumption is based on an industry standard for non-retired members (actual status used for retirees).

SPOUSAL AGE DIFFERENCE

The assumption is based on an industry standard showing males are typically 4 years older than their spouse.

ALLOWANCE FOR NON-INVESTMENT EXPENSES

The assumption is based on an estimate of expected regular recurring non-investment expenses to be paid from the Plan assets over the next three years and future expectations.

APPENDIX D

METHODS AND ASSUMPTIONS – HYPOTHETICAL WIND-UP AND SOLVENCY

HYPOTHETICAL WIND-UP BASIS

The Canadian Institute of Actuaries requires actuaries to report the financial position of a pension plan on the assumption that the plan is wound up on the effective date of the valuation, with benefits determined on the assumption that the pension plan has neither a surplus nor a deficit.

To determine the actuarial liability on the hypothetical wind-up basis, we have valued those benefits that would have been paid had the Plan been wound up on the valuation date, with all members fully vested in their accrued benefits.

The Standards of Practice of the Canadian Institute of Actuaries require that the scenario upon which the hypothetical wind-up valuation is based be postulated. However, there are no benefits under the plan contingent upon the circumstances of the plan wind-up or contingent upon other factors. Therefore, it was not necessary to postulate a scenario upon which the hypothetical wind-up valuation is made. No benefits payable on plan wind-up were excluded from our calculations. The plan wind-up is assumed to occur in circumstances that maximize the actuarial liability.

Upon plan wind-up, members are given options for the method of settling their benefit entitlements. The options vary by eligibility and by province of employment, but in general, involve either a lump sum transfer or an immediate or deferred pension.

The value of benefits assumed to be settled through a lump sum transfer is based on the assumptions described in Section 3500 – *Pension Commuted Values* of the Canadian Institute of Actuaries' Standards of Practice applicable for December 31, 2017.

Benefits provided as an immediate or deferred pension are assumed to be settled through the purchase of annuities based on an estimate of the cost of purchasing annuities.

However, there is limited data available to provide credible guidance on the cost of a purchase of indexed annuities in Canada. In accordance with the *Canadian Institute of Actuaries Educational Note: Assumptions for Hypothetical Wind-up and Solvency Valuations with Effective Dates Between December 31, 2017 and December 30, 2018 (the "Educational Note")*, we have assumed that an appropriate proxy for estimating the cost of such purchase is using the yield on the long-term Government of Canada Real Return bonds, reduced by 0.7%.

The Educational Note provides guidance on estimating the cost of annuity purchases assuming a typical group of annuitants. That is, no adjustments for sub- or super-standard mortality are considered. However, it is expected that insurers will consider plan experience and certain plan-specific characteristics when determining the mortality basis for a particular group. The Educational Note states that the actuary would be expected to make an adjustment to the regular annuity purchase assumptions where there is demonstrated substandard or super-standard mortality or where an insurer might be expected to assume so. In such cases, the actuary would be expected to make an adjustment to the mortality assumption in a manner consistent with the underlying annuity purchase basis. Given the uncertainty surrounding the actual mortality basis that would be typical of a group annuity purchase, it is reasonable to assume that there is a range of bases that can be expected not to be materially different from the actual mortality basis. Therefore, an adjustment to the regular annuity purchase assumptions would be warranted when the plan's assumed basis falls outside that range.

In this context, we have determined that no adjustment to the mortality rates used in the regular annuity purchase assumptions is required.

We have not included a margin for adverse deviation in the solvency and hypothetical wind-up valuations.

The assumptions are as follows:

FORM OF BENEFIT SETTLEMENT ELECTED BY MEMBER	
Lump sum:	100% of active and deferred members under age 55 elect to receive their benefit entitlement in a lump sum
Annuity purchase:	All remaining members are assumed to elect to receive their benefit entitlement in the form of a deferred or immediate pension. These benefits are assumed to be settled through the purchase of deferred or immediate annuities from a life insurance company.
BASIS FOR BENEFITS ASSUMED TO BE SETTLED THROUGH A LUMP SUM	
Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B
Interest rate:	
• Non-indexed	2.60% per year for 10 years, 3.40% per year thereafter
• 50% inflation indexed	2.00% per year for 10 years, 2.50% per year thereafter
• 75% inflation indexed	1.70% per year for 10 years, 2.00% per year thereafter
BASIS FOR BENEFITS ASSUMED TO BE SETTLED THROUGH THE PURCHASE OF AN ANNUITY	
Mortality rates:	100% of the rates of the 2014 Canadian Pensioners Mortality Table (CPM2014) with fully generational improvements using CPM Scale B
Interest rate:	
• Non-indexed	3.08%
• 50% inflation indexed	1.48%
• 75% inflation indexed	0.67%
OTHER ASSUMPTIONS	
Special payments:	Discounted at the average interest rate of 2.93% per year
Final average earnings:	Based on actual pensionable earnings over the averaging period
Family composition:	Same as for going concern valuation
Maximum pension limit:	$2,944.44 increasing after 2018 at 2.25% per year for 9 years, 2.80% per year thereafter
Termination expenses:	$350,000

To determine the hypothetical wind-up position of the Plan, a provision has been made for estimated termination expenses payable from the Plan's assets in respect of actuarial and administration expenses that may reasonably be expected to be incurred in terminating the Plan and to be charged to the Plan.

Because the settlement of all benefits on wind-up is assumed to occur on the valuation date and is assumed to be uncontested, the provision for termination expenses does not include custodial, investment management, auditing, consulting, and legal expenses that would be incurred between the wind-up date and the settlement date or due to the terms of a wind-up being contested.

Expenses associated with the distribution of any surplus assets that might arise on an actual wind-up are also not included in the estimated termination expense provisions.

In determining the provision for termination expenses payable from the Plan's assets, we have assumed that the plan sponsor would be solvent on the wind-up date. We have also assumed, without analysis, that the Plan's terms as well as applicable legislation and court decisions would permit the relevant expenses to be paid from the Plan.

Although the termination expense assumption is a best estimate, actual fees incurred on an actual plan wind-up may differ materially from the estimates disclosed in this report.

INCREMENTAL COST

In order to determine the incremental cost, we estimate the hypothetical wind-up liabilities at the next valuation date. We have assumed that the cost of settling benefits by way of a lump sum or purchasing annuities remains consistent with the assumptions described above. Since the projected hypothetical wind-up liabilities will depend on the membership in the Plan at the next valuation date, we must make assumptions about how the Plan membership will evolve over the period until the next valuation.

We have assumed that the Plan membership will evolve in a manner consistent with the going concern assumptions as follows:

- Members terminate, retire, and die consistent with the termination, retirement, and mortality rates used for the going concern valuation.
- Pensionable earnings, the Income Tax Act pension limit, and the Year's Maximum Pensionable Earnings increase in accordance with the related going concern assumptions.
- Active members accrue pensionable service in accordance with the terms of the Plan.
- There are no new entrants to the Plan.
- Cost of living adjustments are consistent with the inflation assumption used for the solvency valuation.

SOLVENCY BASIS

In determining the financial position of the Plan on the solvency basis, we have used the same assumptions and methodology as were used for determining the financial position of the Plan on the hypothetical wind-up basis.

The solvency position is determined in accordance with the requirements of the Act.

APPENDIX E

MEMBERSHIP DATA

ANALYSIS OF MEMBERSHIP DATA

The actuarial valuation is based on membership data as at December 31, 2017, provided by the Company.

We have applied tests for internal consistency, as well as for consistency with the data used for the previous valuation. These tests were applied to membership reconciliation, basic information (date of birth, date of hire, date of membership, gender, etc.), pensionable earnings, credited service, and pensions to retirees and other members entitled to a deferred pension. Contributions, lump sum payments, and pensions to retirees were compared with corresponding amounts reported in financial statements. The results of these tests were satisfactory.

If the data supplied are not sufficient and reliable for its intended purpose, the results of our calculation may differ significantly from the results that would be obtained with such data. Although Mercer has reviewed the suitability of the data for its intended use in accordance with accepted actuarial practice in Canada, Mercer has not verified or audited any of the data or information provided.

Plan membership data are summarized below. For comparison, we have also summarized corresponding data from the previous valuation.

	31.12.2017	31.12.2015
Active Members		
Number	872	853
Total pensionable earnings	$88,549,944	$84,776,019
Average pensionable earnings	$101,548	$99,386
Average years of pensionable service	12.1	12.5
Average age	40.5	40.9
Deferred Pensioners[8]		
Number	19	23
Total monthly pension	$29,856	$33,193
Average monthly pension	$1,571	$1,509
Average age	50.1	47.1
Pensioners and Survivors		
Number	178	124
Total monthly lifetime pension	$859,168	$555,491
Total monthly temporary pension	$55,319	$33,952
Average monthly lifetime pension	$4,827	$4,480
Average age	63.6	63.3

[8] Counts include one member as at December 31, 2015 with a pending payout who is not included in the statistics.

The membership movement for all categories of membership since the previous actuarial valuation is as follows:

	ACTIVES	DEFERRED PENSIONERS	PENSIONERS AND BENEFICIARIES	TOTAL
Total at December 31, 2015	853	23	124	1,000
New entrants	87			87
Terminations:				
• Not vested	(1)			(1)
• Transfers/lump sums	(14)	(2)		(16)
• Deferred pensions	(1)	1		0
Deaths	(1)		(2)	(3)
Retirements	(53)	(1)	54	0
Beneficiaries			2	2
Rehires	2	(2)		0
Total at December 31, 2017	872	19	178	1,069

The distribution of the active members by age and pensionable service, along with average pensionable earnings in 2017, as at the valuation date is summarized as follows:

	YEARS OF PENSIONABLE SERVICE									
Age	**<5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40+**	**Total**
<25	39 $79,035	3 $93,523								42 $80,070
25 to 29	70 $83,448	45 $99,186	1 *							116 $89,746
30 to 34	71 $88,760	75 $98,531	22 $105,763							168 $95,349
35 to 39	35 $84,358	59 $100,237	34 $104,294	14 $115,213						142 $98,771
40 to 44	12 $84,261	28 $99,801	20 $108,697	37 $114,106	9 $111,272					106 $105,687
45 to 49	8 $88,975	10 $87,486	21 $99,027	18 $113,105	12 $129,713	12 $125,592	2 $119,597			83 $108,493
50 to 54	3 $92,905	7 $100,274	12 $101,047	14 $105,913	8 $112,469	42 $122,662	32 $124,766	2 $135,303		120 $116,589
55 to 59	4 $93,124	5 $87,552	9 $92,941	11 $121,870	1 *	15 $117,169	18 $118,646	6 $123,727		69 $111,946
60 to 64		6 $83,491	3 $117,684	3 $127,360		6 $115,674	3 $108,796		1 *	22 $105,801
65 to 69				1 *		2 $153,616			1 *	4 $120,531
Total	242 $84,927	238 $98,141	122 $103,558	98 $113,633	30 $118,639	77 $122,308	55 $121,704	8 $126,621	2 $93,124	872 $101,548

* Data suppressed for confidentiality purposes.

The distribution of the inactive members by age as at the valuation date is summarized as follows:

RETIREMENTS PRIOR TO FEBRUARY 1, 2007					
		Indexed at 50% CPI		Non Indexed	
Age	**Number**	**Total Monthly Lifetime Pensions**	**Total Monthly Temporary Pensions**	**Total Monthly Lifetime Pensions**	**Total Monthly Temporary Pensions**
65-69	6	$7,278	$0	$6,604	$0
>70	3	$4,464	$0	$3,516	$0
Total	9	$11,742	$0	$10,120	$0

RETIREMENTS ON AND AFTER FEBRUARY 1, 2007			
		Indexed at 75% CPI	
Age	**Number**	**Total Monthly Lifetime Pensions**	**Total Monthly Temporary Pensions**
55-59	44	$264,342	$21,694
60-64	71	$355,451	$33,625
65-69	41	$166,761	$0
>70	13	$50,753	$0
Total	169	$837,307	$55,319

APPENDIX F

SUMMARY OF PLAN PROVISIONS

Mercer has used and relied on the plan documents, including amendments and interpretations of plan provisions, supplied by the Company. If any plan provisions supplied are not accurate and complete, the results of any calculation may differ significantly from the results that would be obtained with accurate and complete information. Moreover, plan documents may be susceptible to different interpretations, each of which could be reasonable, and the results of estimates under each of the different interpretations could vary.

This valuation is based on the plan provisions in effect on December 31, 2017. Since the previous valuation, the Plan has been amended to close the Plan to all employees hired on or after April 3, 2017.

The following is a summary of the main provisions of the Plan in effect on December 31, 2017. This summary is not intended as a complete description of the Plan.

Eligibility for Membership	The plan is closed to employees hired after December 31, 2007 who were not members of collective bargaining unit at their date of hire. The plan is closed to all employees hired on or after April 3, 2017. Prior to April 3, 2017, full time eligible employees were required to join the plan after the completion of one year of service. Part time, temporary or construction employees could elect to join the plan after 24 months of service provided the employee had completed 700 hours of employment in each of the two preceding calendar years.
Employee Contributions	No employee contributions are required.
Retirement Dates	Normal Retirement Date • The normal retirement date is the first day of the month following the member's 65th birthday. Early Retirement Date • If a member has been in the Plan for at least two years, the member may choose to retire as early as age 55. Postponed Retirement Date • A member may postpone retirement until the first day of December of the year in which the member attains age 71.

Normal Retirement Pension	**Management Members** 2% of Highest Average Earnings multiplied by the years of pensionable service accrued on or after January 1, 1990 PLUS 1.8% of Highest Average Earnings multiplied by the years of pensionable service accrued before January 1, 1990 LESS 1.5% multiplied by the years of pensionable service to a maximum of 50%, multiplied by the maximum Canada Pension Plan[9] retirement pension payable (prorated if the member's earnings are less than the YMPE) if the member were age 65 at the earlier of the date of retirement or termination. **Union Member** 2% of Highest Average Earnings multiplied by the years of pensionable service LESS 1.5% multiplied by the years of pensionable service to a maximum of 50%, multiplied by the maximum Canada Pension Plan retirement pension payable (prorated if the member's earnings are less than the YMPE) if the member were age 65 at the earlier of the date of retirement or termination. Pensionable past service, if any, is included as part of the pensionable service prior to January 1, 1990, and the pension provided by member's total accumulated amount of matched contributions in the Co-operative Superannuation Society in respect of the pensionable past service is deducted from the formula pension above. Prior to August 1, 2005 annuities were purchased at retirement. For retirement after that date, pensions are paid from the fund.
Highest Average Earnings	The annual average of the best 36 months of the member's earnings.
Earnings	Regular pay including shift differentials.
Pensionable Service	Completed months of continuous employment commencing from the earlier of the date the employee joins the Plan or the date the employee is appointed to a permanent full-time position.

[9] Reflecting Canada Pension Plan provisions at the valuation date.

Early Retirement Pension	If a member retires early, the member will be entitled to a pension that is calculated the same way as for a normal retirement. The basic pension payable, however, will be reduced as follows: • A member may elect to retire on the first day of the month after age 55. • A member, other than a terminated vested member, may retire with an unreduced pension prior to age 65 upon completion of 30 years of continuous service or on the attainment of age 60 with ten years of continuous service. • A member, other than a terminated vested member, who retires prior to age 60 with 10 years of continuous service but less than 30 years of continuous service, is entitled to a pension reduced by 5% per year prior to age 60. • All other members, including terminated vested members, are subject to an actuarial equivalent reduction from normal retirement date.
Bridge Benefit	For a member, other than a terminated vested member, who retires early, the reduction applicable to the Canada Pension Plan (1.5% multiplied by the years of pensionable service to a maximum of 50%, multiplied by the maximum Canada Pension Plan retirement pension payable) will not commence until age 65.
Postponed Retirement	A member who retires at their normal retirement but elects to postpone the commencement of their pension shall have their pension actuarially increased to date of retirement. A member who elects to postpone the commencement of their pension but continues working after normal retirement date shall continue to accrue benefits.
Death Benefits	Pre-retirement: • If a member dies before the normal retirement date and before any pension payments have begun, the member's spouse, or beneficiary if there is no spouse, will receive a lump sum settlement equal to the value of the benefits to which the member would have been entitled had employment terminated on the date of death. Post retirement: • The normal form of payment for a member without a spouse at date of retirement is a lifetime pension guaranteed for five years. The normal form of payment for a member with a spouse at date of retirement is a pension payable for the member's lifetime with 30% of that pension payable to the spouse after the death of the member, but guaranteed for five years in any event. However, the member may elect to receive an optional form of pension on an actuarial equivalent basis subject to spousal waiver requirements pursuant to the Act.
Termination of Employment	Less than two years of continuous service: • No benefits. At least two years of continuous service: • A deferred lifetime pension, based on the member's earnings and credited service up to the date of termination. Deferred pensions are payable commencing at age 65. However, a member may elect to receive an actuarially reduced early retirement pension as early as age 55. Portability options are available provided the member is not eligible to retire at the date of termination.

Maximum Benefits	The total annual lifetime pension payable from the Plan upon retirement, death or termination of employment cannot exceed the lesser of: • 2% of the average of the best three consecutive years of total compensation paid to the member by the Company, multiplied by total pensionable service; and • $2,944.44 in 2018 or such other maximum permitted under the Income Tax Act, multiplied by the member's total credited service. The maximum pension is determined at the date of pension commencement.
Pension Increases	For retirements and terminations prior to February 1, 2007, benefits earned in respect of service after January 1, 1990 are increased annually at a rate of 50% of the percentage increase in the Canada Consumer Price Index for the previous year, commencing on the later of the member's 60th birthday or the member's retirement date. For retirements on or after February 1, 2007, benefits earned in respect of all years of pensionable service are increased annually at a rate of 75% of the percentage increase in the Saskatchewan Consumer Price Index for the previous year, commencing on the members' retirement date.

APPENDIX G

EMPLOYER CERTIFICATION

With respect to the Report on the Actuarial Valuation for Funding Purposes as at December 31, 2017 of the CCRL Petroleum Employees' Pension Plan, I hereby certify that, to the best of my knowledge and belief:

- The valuation reflects the terms of Federated Co-operatives Limited and Consumers' Co-operative Refineries Limited's engagement with the actuary described in Section 2 of this report, particularly the requirement to include a margin of 0.50% in the discount rate used to perform the going concern valuation and Federated Co-operatives Limited and Consumers' Co-operative Refineries Limited's decisions in regards to determining the going-concern and solvency funding requirements.

- A copy of the official plan documents and of all amendments made up to December 31, 2017 was provided to the actuary and is reflected appropriately in the summary of plan provisions contained herein.

- The asset information summarized in Appendix B is reflective of the Plan's assets.

- The membership data provided to the actuary included a complete and accurate description of every person who is entitled to benefits under the terms of the Plan for service up to December 31, 2017.

- All events subsequent to December 31, 2017 that may have an impact on the Plan have been communicated to the actuary.

September 28, 2018
Date

Signed

Shannan Corey, Director, Total Rewards FCL
Name

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