Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation



# **Ironworkers Local Union No. 16 Pension Fund**

Actuarial Valuation Report for Plan Year Beginning January 1, 2016 and Ending December 31, 2016

June, 2017

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation



June 19, 2017

Board of Trustees of Ironworkers Local Union No. 16 Pension Fund c/o GEMGroup L.P. 8600 LaSalle Road Oxford Building – Suite 624 Towson, MD 21286

Dear Trustees:

This report presents the results of the actuarial valuation of the Ironworkers Local Union No. 16 Pension Fund as of January 1, 2016. The primary purposes of the report are to:

- Determine the minimum funding requirements of ERISA and Sections 412 and 431 of the Internal Revenue Code for the Plan Year ending December 31, 2016.
- Estimate the limitation on maximum deductible contributions.
- Compare the minimum funding requirement to the contributions expected to be paid by the contributing employers.
- Develop information required to be disclosed in accordance with Accounting Standards Codification (ASC) Topic 960 and Schedule MB (Form 5500).
- Calculate the Unfunded Vested Benefit Liability (UVB) for withdrawal liability purposes under the Multiemployer Pension Plan Amendments Act of 1980.
- Report on the Plan's status with respect to the Pension Protection Act of 2006 ("PPA '06"), as amended.

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This valuation has been prepared on an ongoing plan basis and the use of this report for purposes other than those enumerated above may be inappropriate.

To the best of our knowledge and belief, all Plan participants as of January 1, 2016 and all Plan provisions in effect on that date have been reflected in the valuation. Participant data were furnished by the Plan Administrator and financial information was taken from the Plan's audited financial statements.

We hereby certify that all of our calculations have been in conformity with generally accepted actuarial principles and practices, and that the actuarial assumptions which are not mandated by federal law and regulations are reasonable and represent our best estimate of the anticipated experience under the Plan.

We will be pleased to review this report at your convenience.

Respectfully submitted,



James J. McKeogh, F.S.A.

Boris Vaynblat, F.S.A.

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## PART I

DISCUSSION OF PRINCIPAL VALUATION RESULTS

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### Section 1.1

### Valuation Highlights

Minimum Funding Requirement	The minimum funding requirement was \$0 for the Plan Year ending December 31, 2015. The minimum funding requirement for the Plan Year ending December 31, 2016 is also \$0.
Contribution Level	Projections indicate that the current level of contribution rates (\$9.70 per hour) in combination with the projected covered employment hours, are not sufficient to fully fund the Plan over the projection period. In fact, the plan is projected to become insolvent during 2035 (see Section 1.7).
Covered Employment	Contribution hours for the 2015 Plan Year were about 402,000, including incoming reciprocated hours of about 62,000. Contribution hours for the 2016 Plan Year were about 354,000, including incoming reciprocated hours of about 87,000.
PPA '06	The Plan was certified to be in critical & declining status for the Plan Year beginning January 1, 2016. See Section 1.7 for PPA'06 projections.
Rehabilitation Plan	The Trustees adopted an amended Rehabilitation Plan effective October 1, 2015 to eliminate any future increases in employer contribution rates and to indicate that the Trustees were exploring whether suspension of benefits for certain participants could enable the Fund to potentially avoid insolvency.
	An application for suspension of benefits was submitted to the U.S. Treasury in March 2016. That application was denied in November 2016 on the basis of assumptions regarding future hours and mortality.
Investments	The return on the actuarial value of assets (net of investment expenses) for the year ending December 31, 2015 was 8.84%, which is above the 7.00% assumption. The return on the market value of assets (net of investment expenses) for the year ending December 31, 2015 was 4.04%.
Withdrawal Liability	Withdrawal liability is based, in part, on the unfunded vested benefit liability and the value of affected benefits. Affected benefits are reductions in non-forfeitable benefits made in accordance with a Rehabilitation Plan.
	The unfunded vested benefit liability increased from \$38.8 million as of December 31, 2014 to \$41.3 million as of December 31, 2015. The unamortized balance of affected benefits decreased from \$5.6 million as of December 31, 2014 to \$5.4 million as of December 31, 2015.

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Section 1.2

Comparison of Key Valuation Results With Those of Prior Valuations

	Plan Year Beginning January 1,										
		2016			2015		2014		2013		2012*
Contributions				П							
Minimum Funding Requirement	\$	0		\$	0	\$	0	\$	0	\$	0
Actual Employer Contributions		3,279,000	**		3,829,054		4,039,977		3,942,119		3,651,961
Maximum Deductible Contribution (Estimated)		192,886,289			191,837,444		199,488,457		202,113,108		181,794,677
Liabilities and Normal Cost											
Actuarial Accrued Liability	\$	124,369,630		\$	127,843,692	\$	132,111,460	\$	135,913,896	\$	141,260,205
Normal Cost		555,450			586,863		909,111		1,111,941		1,248,185
Present Value of Accumulated Plan Benefits		124,369,630			127,843,692		132,111,460		135,913,896		141,260,205
Present Value of Vested Plan Benefits		122,618,327			125,031,800		127,122,248		128,099,706		130,942,916
RPA '94 Current Liability		194,297,552			194,275,554		198,570,648		199,752,266		192,833,366
Assets											
Market Value	\$	81,295,236		\$	86,225,376	\$	88,229,274	\$	82,519,260	\$	82,304,757
Actuarial Value		79,123,179			80,612,110		80,647,479		81,384,100		91,841,977
Participant Counts											
Active		233			261		278		284		325
Persons with Deferred Benefits		213			191		181		209		181
Disabled Persons in Pay Status		34			35		37		34		34
Retirees and Beneficiaries		604			619		623		610	_	600
Total		1,084			1,106		1,119		1,137		1,140
PPA '06 Certification Results											
Plan Status	Cr	itical & Decl.		Cr	itical & Decl.		Critical		Critical		Critical
Funded Percentage (Actuarial Value Basis)		63.6%			62.1%		61.4%		60.2%		64.6%

<sup>\*</sup> Reflects the changes to the plan of benefits under the Rehabilitation Plan, effective May 1, 2012, which were recognized on a pro rata basis for 2012 funding requirements.

<sup>\*\*</sup> Estimated.

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#### Section 1.3

#### Plan Experience During Prior Year

The plan had mixed investment experience during the year ended December 31, 2015 as it earned 4.04% on a market value basis and 8.84% on an actuarial value basis as compared to the valuation interest rate assumption of 7.00%.

That "excess" return of 1.84% on an actuarial basis represents a gain in dollars of \$1,400,672 which is combined with a net loss from liabilities of \$339,091. A 5-year history of actuarial gains/(losses) is shown below.

			Plan Ye	ar I	Ending Decemb	er 31,	
		2015	 2014		2013	2012	2011
Investment Gain/(Loss) on an Actuarial V	alue	Basis					
In dollars	\$	1,400,672	\$ 2,671,725	\$	1,970,745 \$	(7,939,091) \$	(9,220,942)
As a percentage of assets		1.8%	3.5%		2.5%	-9.1%	-9.4%
Net Gains/(Losses) from Other Sources							
In dollars	\$	(339,091)	\$ 699,347	\$	(888,420) \$	(1,215,942) \$	515,148
As a percentage of actuarial liability	/	-0.3%	0.5%		-0.7%	-0.9%	0.4%
Total Experience Gain/(Loss)	\$	1,061,581	\$ 3,371,072	\$	1,082,325 \$	(9,155,033) \$	(8,705,794)

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# Section 1.4 Funded Status Under ASC Topic 960 and PPA '06

During the Plan Year ended December 31, 2015, the plan's funded status for purposes of Accounting Standards Codification Topic 960 (defined as the ratio of the market value of plan assets to the present value of accumulated plan benefits) decreased from 67.4% to 65.4%. In that same year, the plan's funded status for purposes of the Pension Protection Act of 2006 (defined as the ratio of the actuarial value of plan assets to the present value of accumulated plan benefits) increased from 63.1% to 63.6%. A 12-year history of these measures is shown below.

						Actuarial _	Funded 1	Percentage
		As	sets		P	resent Value		(PPA '06)
		Market		Actuarial		Accumulated	Market	Actuarial
January 1	Sanuary 1 Value			Value		lan Benefits	Value	Value
2016	\$	81,295,236	\$	79,123,179	\$	124,369,630	65.4%	63.6%
2015		86,225,376		80,612,110		127,843,692	67.4%	63.1%
2014		88,229,274		80,647,479	,	132,111,460	66.8%	61.0%
2013		82,519,260		81,384,100		135,913,896	60.7%	59.9%
2012		82,304,757		91,841,977		141,260,205	58.3%	65.0%
2011		89,220,278		102,602,580		142,696,200	62.5%	71.9%
2010		89,918,019		107,901,622		145,028,413	62.0%	74.4%
2009		92,869,795		111,443,754		145,275,205	63.9%	76.7%
2008		128,329,061		124,708,399		141,251,264	90.9%	88.3%
2007		128,034,557		118,899,595		138,872,165	92.2%	85.6%
2006		120,587,669		116,156,093		133,344,781	90.4%	87.1%
2005		118,949,769		115,920,520		130,123,209	91.4%	89.1%

Note: Values shown prior to January 1, 2007 were determined by the prior actuary and are shown here for comparison purposes only.

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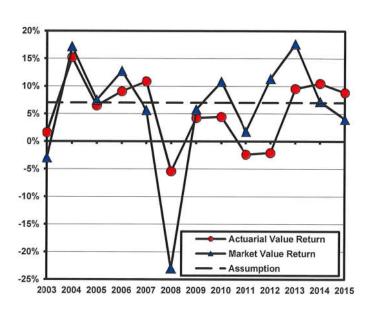
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## Section 1.5

### **Summary of Investment Performance**

A summary of the investment returns during the 13 years preceding the valuation date are shown below.

Plan Year		Single-Ye	ar Return	Average Return * Over 5-Year Period					
Ending Dec 31,	Valuation Assumption	Actuarial Value	Market Value	Actuarial Value	Market Value				
2015	7.00%	8.84%	4.04%	4.73%	8.26%				
2014	7.00%	10.49%	7.21%	3.87%	9.64%				
2013	7.00%	9.56%	17.63%	2.67%	9.35%				
2012	7.00%	-2.06%	11.37%	-0.30%	0.46%				
2011	7.00%	-2.37%	1.78%	2.20%	-0.59%				
2010	7.00%	4.45%	10.81%	4.49%	1.47%				
2009	7.00%	4.24%	5.79%	4.89%	0.85%				
2008	7.00%	-5.39%	-23.00%	7.01%	2.94%				
2007	7.00%	10.88%	5.66%	8.55%	7.81%				
2006	7.00%	9.07%	12.75%	N/A	N/A				
2005	7.00%	6.47%	7.52%	N/A	N/A				
2004	7.00%	15.21%	17.19%	N/A	N/A				
2003	7.00%	1.61%	-2.95%	N/A	N/A				



Note: Values shown prior to January 1, 2007 were determined by the prior actuary and are shown here for comparison purposes only.

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<sup>\*</sup> Time-Weighted Basis

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#### Section 1.6

#### **Statement of Changes from Prior Valuation**

Actuarial Basis -- The following changes in the actuarial basis were made from the prior year:

- 1. The interest rate for RPA '94 Current Liability purposes was changed from 3.51% to 3.28% effective January 1, 2016, for statutory compliance,
- 2. The mortality assumption for RPA '94 Current Liability purposes was updated for statutory compliance, from the RP-2000 Tables for 2015 large plan valuations to the RP-2000 Tables for 2016 large plan valuations, with separate rates for annuitants and non-annuitants.
- 3. The form of payment assumption for active and terminated vested participants was changed from a Straight Life Annuity, loaded by the value of the pop-up provision for all married and non-married participants, to a Straight Life Annuity for non-married participants and a 50% Joint and Survivor with pop-up annuity for married participants, to produce a more refined projection of expected benefit payments.

<u>Plan of Benefits</u> -- The following changes to the plan of benefits were made in connection with the Rehabilitation Plan and reflected as of January 1, 2016:

- 1. For retirements occurring after December 31, 2015, the 6% per year early retirement reduction will be increased to 6 2/3% per year.
- 2. Service Pension for Grandfathered Participants (i.e., those who have completed at least 25 Service Credits as of June 1, 2012) retiring after December 31, 2015 will be reduced 2% per year prior to age 60, with a maximum reduction of 10%.
- 3. The \$1,500 death benefit has been eliminated for deaths occurring after December 31, 2015.

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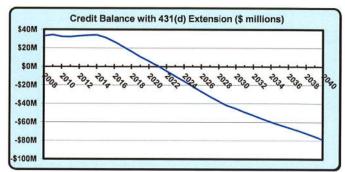
#### Section 1.7

#### **Projections**

#### Credit Balance Projection

The Funding Standard Account Credit Balance is a measure of compliance with ERISA's minimum funding standards. A non-negative Credit Balance indicates that minimum funding standards have been met. A negative Credit Balance indicates that minimum funding standards have not been met.

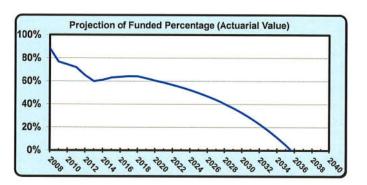
The graph to the right shows an anticipated funding deficiency (negative credit balance) by the end of the 2021 Plan Year. The graph reflects the amortization extension under Section 431(d)(1) of the Internal Revenue Code.



This graph is based on the Projection Assumptions shown below. Actual future credit balance values will differ from those projected to the extent that future experience deviates from the Projection Assumptions.

#### **Funded Percentage Projection**

The funded percentage is an important concept under funding reform. Under the Pension Protection Act of 2006, a plan is generally considered "critical" (in the Red Zone) if there is a funding deficiency projected within 4 years if the funded percentage exceeds 65%, or within 5 years if the funded percentage falls below 65% (other factors may apply). The funded percentage is measured by the actuarial value of assets divided by the present value of accrued benefits (determined using funding assumptions). The graph to the right illustrates that the Plan's funded percentage is currently below 65% (63%) and is anticipated to significantly decrease resulting in plan insolvency in 2035.



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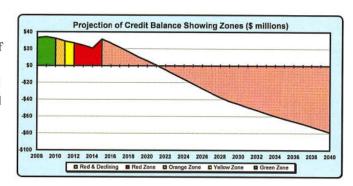
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Section 1.7

Projections (Continued)

#### Zone Projections

As shown by the red checkered area on the graph to the right, the plan is in critical and declining status beginning in 2016. A plan is generally in critical and declining status if it is in critical status and is projected to become insolvent within 15-20 years. In accordance with the Multiemployer Pension Reform Act of 2014, the Section 431(d)(1) amortization extension has been reflected for Plan Years beginning January 1, 2015 and later, although the extension will not improve the Plan's funded status nor affect the Plan's projected insolvency date. Actual future credit balance values will differ from those projected to the extent that future experience deviates from the Projection Assumptions. Again, this graph is based on the Projection Assumptions shown below.



#### Projection Assumptions

The Plan's assets, liabilities and funding standard account credit balance were projected forward from the January 1, 2016 valuation based on the following assumptions:

- All valuation assumptions, other than investment return, are met during the projection period. The Plan's investment return (net of investment expenses) reflects the preliminary unaudited 2016 investment return on the market value of assets of 7.7% and the assumption of 7.00% per year from January 1, 2017 forward.
- 2016 Plan Year contributions of approximately \$3.3 million, from unaudited contribution information provided by the fund administrator.
- Expected benefit payments of \$11.5 million during the 2017 plan year, gradually decreasing to \$10.6 million during 2021, to \$9.5 million during 2026, to \$8.4 million during 2031, and to \$6.2 million during 2039. These benefit payments are based on an open group projection, reflecting the January 1, 2016 actuarial valuation and assuming the active population remains level in future years. Future new hires were assumed to have demographics equal to new hires from the 2015 plan year.

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#### Section 1.7

## Projections (Continued)

- The active plan participant count is assumed to remain level from year to year. The demographic characteristics of the active population as a whole are dependent on the demographic characteristics of the assumed future new hires.
- Administrative expenses of \$320,000 per year starting January 1, 2017 and increasing 3% per year thereafter.
- Current differences between the market value of assets and the actuarial value of assets are phased in during the projection period in accordance with the regular operation of the asset valuation method.
- Contributions assumed to be made on the following hours of covered employment and the following effective contribution rates:

Plan Year	<u>Hours</u>	Effective Contribution Rate
2017	336,000	\$9.46
2018	319,000	\$9.51
2019	303,000	\$9.54
2020+	303,000	\$9.56

The effective contribution rate is a weighted average of the Local 16 contribution rate and the average contribution rate for hours which are expected to be reciprocated to the Plan (i.e., hours worked by Local 16 members outside of Local 16's geographic area).

• The automatic 5-year extension of amortization periods pursuant to Section 431(d) of the Internal Revenue Code is reflected effective January 1, 2010.

Actual future valuation results will differ from those projected to the extent that future experience deviates from these projection assumptions.

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## PART II

## **VALUATION RESULTS**

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

## Section 2.1

### **Summary Statistics**

Plan Year Beginning January 1,

				Plan Ye	ar l	Beginning Jan	uar	y 1,	 
		2016		2015		2014		2013	2012
Number of Plan Participants									
Active		233		261		278		284	325
Persons with Deferred Benefits		213		191		181		209	181
All Persons In Pay Status	_	638		654		660	_	644	634
Total		1,084		1,106		1,119		1,137	1,140
Assets									
Market Value	\$	81,295,236		\$ 86,225,376	\$	88,229,274	\$	82,519,260	\$ 82,304,757
Actuarial Value		79,123,179		80,612,110		80,647,479		81,384,100	91,841,977
Liabilities and Normal Cost									
Funding Method		Unit Credit		Unit Credit		Unit Credit		Unit Credit	Unit Credit
Actuarial Accrued Liability	\$	124,369,630		\$ 127,843,692	\$	132,111,460	\$	135,913,896	\$ 141,260,205
Normal Cost		555,450		586,863		909,111		1,111,941	1,248,185
RPA '94 Current Liability		194,297,552		194,275,554		198,570,648		199,752,266	192,833,366
<b>Unfunded Actuarial Accrued Liability</b>									
Market Value Basis	\$	43,074,394		\$ 41,618,316	\$	43,882,186	\$	53,394,636	\$ 58,955,448
Actuarial Value Basis		45,246,451		47,231,582		51,463,981		54,529,796	49,418,228
Contributions									
Minimum Funding Requirement	\$	0		\$ 0	\$	0	\$	0	\$ 0
Actual Employer Contributions		3,279,000	*	3,829,054		4,039,977		3,942,119	3,651,961
Maximum Deductible Contribution (Estimated)		192,886,289		191,837,444		199,488,457		202,113,108	181,794,677

<sup>\*</sup> Estimated.

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# Section 2.2 Actuarial Accrued Liability and Current Liability as of January 1, 2016

Num	<u>ber</u>	 Actuarial Accrued Liability	RPA '94 Current Liability			
Liabilities						
Active	233	\$ 12,891,511	\$	25,616,703 *		
Inactive Vested	213	8,971,582		20,242,587		
All Persons in Pay Status	638	102,506,537		148,438,262		
Total	1,084	\$ 124,369,630	\$	194,297,552		
Expected Changes in Liabilities						
Expected Increase in Liability Due to Benefits Accruing During	g Year	\$ 555,450	\$	901,603		
Expected Disbursements During Year		\$ 12,087,213	\$	12,087,213		
Assumptions						
Assumed Interest Rate		7.00%		3.28%		
Assumed Mortality		GAM '83		2000, for 2016 plan valuations		
Assets and RPA '94 Funded Percentage						
Actuarial Value of Assets as of January 1, 2016 RPA '94 Funded Current Liability Percentage			\$	79,123,179 40.7%		

<sup>\*</sup> Vested portion of RPA '94 Current Liability for Actives is \$23,277,501.

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# Section 2.3 Development of Minimum Required Contribution - Summary

Plan Year Ending December 31, 2016 2015 2014 2012 2013 Normal Cost 555,450 \$ 586,863 \$ 909,111 \$ 1,111,941 \$ 1,248,185 Net Amortization 9,165,767 9,366,653 7,829,206 4,562,916 3,827,333 3. Interest 680,485 696,746 611,682 397,240 355,286 Total Net Charges 10,401,702 \$ 9,349,999 \$ 10,650,262 \$ 6,072,097 \$ 5,430,804 Credit Balance with Interest 28,791,282 \$ \$ 33,596,446 \$ 36,568,772 \$ 36,169,988 \$ 35,456,198 Full Funding Credit (See Section 2.5) \$ 0 \$ 0 \$ 0 \$ 0 \$ 0 Minimum Required Contribution \$ 0 \$ 0 \$ 0 \$ 0 \$ 0

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Section 2.4

Development of Minimum Required Contribution - Amortization Record

				Initial Amount	Date of First Charge or Credit	Remaining Period*	1	itstanding Balance g. of Year	mortization Charge or Credit
1.	Am	nortization Charges							
	a.	Combined Bases	\$	35,873,400	1/1/1989	3.000	\$	4,193,993	\$ 1,493,579
	b.	1991 Benefit Change		4,915,400	1/1/1991	10.000		2,208,238	293,835
	c.	1994 Assumption Chng.		1,093,800	1/1/1994	13.000		623,351	69,705
	d.	1994 Benefit Change		3,785,300	1/1/1994	13.000		2,157,138	241,218
	e.	1995 Benefit Change		563,976	1/1/1995	14.000		341,716	36,518
	f.	1996 Benefit Change		12,056,033	1/1/1996	15.000		7,714,587	791,608
	g.	1997 Benefit Change		3,069,392	1/1/1997	16.000		2,062,432	204,042
	h.	1998 Benefit Change		9,903,744	1/1/1998	17.000		6,953,514	665,622
	i.	1999 Assumption Chng.		6,110,025	1/1/1999	18.000		4,463,340	414,685
	j.	2000 Benefit Change		6,061,373	1/1/2000	19.000		4,589,548	415,002
	k.	2001 Benefit Change		2,142,636	1/1/2001	20.000		1,676,066	147,858
	1.	2002 Benefit Change		198,863	1/1/2002	21.000		160,245	13,822
	m.	2001 Actuarial Loss		4,022,217	1/1/2002	6.000		1,428,284	280,044
	n.	2002 Actuarial Loss		8,363,701	1/1/2003	7.000		3,535,864	613,169
	0.	2003 Benefit Change		2,219,172	1/1/2003	22.000		1,882,020	159,015
	p.	2003 Actuarial Loss		1,443,554	1/1/2004	8.000		705,070	110,351
	q.	2004 Actuarial Loss		4,850,250	1/1/2005	9.000		2,675,557	383,797
	r.	2005 Benefit Change		1,123,349	1/1/2005	24.000		975,069	79,453
	s.	2005 Actuarial Loss		2,883,606	1/1/2006	10.000		1,765,150	234,877
	t.	2007 Assumption Chng.		3,258,771	1/1/2007	26.000		2,943,560	232,626
	u.	2008 Plan Change		571,064	1/1/2008	12.000		413,773	48,686
	v.	2008 Actuarial Loss		17,178,277	1/1/2009	13.000		13,338,054	1,491,504
	w.	2009 Plan Change		1,604,038	1/1/2009	13.000		1,245,450	139,271
	х.	2009 Actuarial Loss		2,680,954	1/1/2010	14.000		2,213,151	236,508

<sup>\*</sup> Remaining periods were increased by 5 years effective January 1, 2010 pursuant to an automatic extension of amortization periods under IRC Section 431(d).

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 2.4

Development of Minimum Required Contribution - Amortization Record

		Amount or Credit		Remaining Period	Outstanding Balance Beg. of Year		Amortization Charge or Credit		
1.	<b>Amortization Charges (continued)</b>								
	y. 2010 Actuarial Loss	\$	1,170,736	1/1/2011	10.000	\$	902,817	\$	120,131
	z. 2011 Actuarial Loss		8,705,794	1/1/2012	11.000		7,167,604		893,317
	aa. 2012 Actuarial Loss		9,155,033	1/1/2013	12.000		7,983,777		939,414
	ab. 2016 Assumption Change		29,896	1/1/2016	15.000		29,896		3,068
	ac. Total Charges					\$	86,349,264	\$	10,752,725
2.	Amortization Credits								
	a. 2012 Plan Change	\$	5,059,966	6/1/2012	11.417	\$	4,098,630	\$	498,286
	b. 2013 Actuarial Gain		1,082,325	1/1/2014	13.000		993,169		111,059
	c. 2014 Plan Change		2,911,822	1/1/2014	13.000		2,671,962		298,787
	d. 2014 Actuarial Gain		3,371,072	1/1/2015	14.000		3,236,921		345,912
	e. 2015 Assumption Change		685,205	1/1/2015	14.000		657,938		70,310
	f. 2015 Plan Change		571,573	1/1/2015	14.000		548,827		58,650
	g. 2015 Actuarial Gain		1,061,581	1/1/2016	15.000		1,061,581		108,931
	h. 2016 Plan Change		926,045	1/1/2016	15.000		926,045		95,023
	i. Total Credits					\$	14,195,073	\$	1,586,958
3.	Credit Balance					\$	26,907,740		
	D. I. (1) (2) (2)								
4.	Balance Test = $(1) - (2) - (3)$					\$	45,246,451		
5.	Unfunded Actuarial Accrued Liability					\$	45,246,451		

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 2.5

Development of Minimum Required Contribution - Full Funding Limitation

			ERISA Accrued Liability		RPA '94 Current Liability
1.	Liability (Beginning of Year)	\$	124,369,630	\$	194,297,552
2.	Normal Cost	\$	555,450	\$	901,603
3.	Expected Disbursements During Year	\$	12,087,213	\$	12,087,213
4.	Assumed Interest Rate		7.00%		3.28%
5.	Projected Liability (End of Year)	\$	121,166,725	\$	189,317,843
6.	Applicable Percentage		100%		90%
7.	Assets				
	a. Market Value	\$	81,295,236		N/A
	<ul><li>b. Actuarial Value</li><li>c. Lesser of (a) and (b)</li></ul>	\$ \$	79,123,179 79,123,179	\$ \$	79,123,179 79,123,179
8.	Credit Balance	\$	26,907,740	Ψ	N/A
9.	Assets Projected to End of Year	\$	43,367,409	\$	72,158,691
				•	
10.	Initial Full Funding Limitation (FFL) = $(5) \times (6) - (9)$	\$	77,799,316	\$	98,227,368
11.	Full Funding Limitation, not less than RPA '94 FFL	\$	98,227,368		N/A
12.	Total Net Charges from Section 2.3	\$	10,401,702		N/A
13.	Full Funding Credits	\$	0		N/A

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 2.6 Funding Standard Account Information

Plan Vear Ending December 31.

		 			Plan Ye	ar E	nding Decem	ber :	51,	
		 2016		_	2015		2014		2013	 2012
Charges	Prior Year Funding Deficiency	\$ 0		\$	0	\$	0	\$	0	\$ 0
	Normal Cost for Plan Year Amortization Charges Interest	555,450 10,752,725 791,572			586,863 10,749,657 793,556		909,111 10,749,657 816,114		1,111,941 10,749,657 830,312	1,248,185 9,810,243 774,090
	Other Charges	0			0		0		0	0
	Total Charges	\$ 12,099,747		\$	12,130,076	\$	12,474,882	\$	12,691,910	\$ 11,832,518
Credits	Prior Year Credit Balance Employer Contributions	\$ 26,907,740 3,279,000	*	\$	31,398,548 3,829,054	\$	34,176,422 4,039,977	\$	33,803,727 3,942,119	\$ 33,136,634 3,651,961
	Amortization Credits Interest	1,586,958 2,108,095	*		1,383,004 2,427,210		2,920,451 2,736,580		6,186,741 2,935,745	5,982,910 2,864,740
	Full Funding Limitation Credit	0			0		0		0	0
	Other Credits Total Credits	\$ 33,881,793	*	\$	39,037,816	\$	43,873,430	\$	46,868,332	\$ 45,636,245
<b>Balance</b>	Credit Balance as of December 31 = Credits Less Charges	\$ 21,782,046	*	\$	26,907,740	\$	31,398,548	\$	34,176,422	\$ 33,803,727

<sup>\*</sup> Estimated.

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### Section 2.7

### **Estimated Maximum Deductible Contribution**

1.	Normal Cost for Plan Year Beginning January 1, 2016	\$ 555,450
2.	Unfunded Accrued Liability as of January 1, 2016, not less than 0	\$ 45,246,451
3.	Ten Year Amortization of Unfunded Accrued Liability	\$ 6,020,632
4.	Interest on (1) and (3) to End of Year	\$ 460,326
5.	Limitation Under Section $404(a)(1)(A)(iii)$ of Internal Revenue Code = $(1) + (3) + (4)$	\$ 7,036,408
6.	Minimum Required Contribution	\$ 0
7.	Greater of (5) and (6)	\$ 7,036,408
8.	Full Funding Limitation (See Section 2.8)	\$ 98,227,368
9.	Excess of 140% of RPA '94 Current Liability over Actuarial Value of Assets	\$ 192,886,289
10.	Limitation on Maximum Deductible Contribution for Plan Year Beginning January 1, 2016 = Lesser of (7) and (8), but not less than (9)	\$ 192,886,289

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 2.8 Estimated Maximum Deductible Contribution - Full Funding Limitation

		_	ERISA Accrued Liability	RPA '94 Current Liability
1.	Liability (Beginning of Year)	\$	124,369,630	\$ 194,297,552
2.	Normal Cost	\$	555,450	\$ 901,603
3.	Expected Disbursements During Year	\$	12,087,213	\$ 12,087,213
4.	Assumed Interest Rate		7.00%	3.28%
5.	Projected Liability (End of Year)	\$	121,166,725	\$ 189,317,843
6.	Applicable Percentage		100%	90%
7.	Assets			
	a. Market Value	\$	81,295,236	N/A
	b. Actuarial Value	\$	79,123,179	\$ 79,123,179
	c. Lesser of (a) and (b)	\$	79,123,179	\$ 79,123,179
8.	Assets Projected to End of Year	\$	72,158,691	\$ 72,158,691
9.	Full Funding Limitation (FFL)	\$	49,008,034	\$ 98,227,368
	$= (5) \times (6) - (8)$			
10.	IRC Section 404 Full Funding Limitation			
	= Greater of ERISA FFL and RPA '94 FFL	\$	98,227,368	

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 2.9 Development of Actuarial Gain/(Loss)

		 	Plan Ye	ar	Ending Decer	nbe	r 31,	
		 2015	 2014	_	2013		2012*	 2011
1.	Unfunded accrued liability at beginning of year	\$ 47,231,582	\$ 51,463,981	\$	54,529,796	\$	49,418,228	\$ 40,093,620
2.	Normal Cost for Plan Year	\$ 586,863	\$ 909,111	\$	1,111,941	\$	1,248,185	\$ 1,394,620
3.	Interest on (1) and (2) to end of year	\$ 3,347,291	\$ 3,666,116	\$	3,894,922	\$	3,546,649	\$ 2,904,177
4.	Contributions for Plan Year	\$ 3,829,054	\$ 4,039,977	\$	3,942,119	\$	3,651,961	\$ 3,556,900
5.	Interest on (4) to end of Plan Year	\$ 132,501	\$ 139,799	\$	136,412	\$	126,372	\$ 123,083
6.	Expected unfunded accrued liability at end of year $= (1) + (2) + (3) - (4) - (5)$	\$ 47,204,181	\$ 51,859,432	\$	55,458,128	\$	50,434,729	\$ 40,712,434
7.	Unfunded accrued liability as of December 31	\$ 46,142,600	\$ 48,488,360	\$	54,375,803	\$	59,589,762	\$ 49,418,228
8.	Gain/(Loss) = (6) - (7)	\$ 1,061,581	\$ 3,371,072	\$	1,082,325	\$	(9,155,033)	\$ (8,705,794)
9.	Change in unfunded accrued liability due to:							
	a. Assumption Change	\$ 29,896	\$ (685,205)	\$	0	\$	0	\$ 0
	b. Plan Change	\$ (926,045)	\$ (571,573)	\$	(2,911,822)	\$	(5,059,966)	\$ 0
	c. Method Change	\$ 0	\$ 0	\$	0	\$	0	\$ 0
10.	Unfunded accrued liability as of December 31 $= (7) + (9a) + (9b) + (9c)$	\$ 45,246,451	\$ 47,231,582	\$	51,463,981	\$	54,529,796	\$ 49,418,228

<sup>\*</sup> Reflects the changes to the plan of benefits under the Rehabilitation Plan, effective May 1, 2012, which were recognized on a pro rata basis for 2012 funding requirements.

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### Section 2.10

### **Presentation of ASC Topic 960 Disclosures**

			As of January 1	,	
Actuarial Present Value of Accumulated Plan Benefits	2016	2015	2014	2013	2012
1. Vested Benefits					
a. Persons in Pay Status	\$102,506,537	\$ 105,879,757	\$ 108,137,220	\$ 106,722,853	\$ 107,409,052
b. Persons with Deferred Benefits	8,971,582	7,715,856	7,433,239	7,637,772	6,824,184
c. Active Participants	11,140,208	11,436,187	11,551,789	13,739,081	 16,709,680
d. Total	\$122,618,327	\$ 125,031,800	\$ 127,122,248	\$ 128,099,706	\$ 130,942,916
2. Non-Vested Benefits	\$ 1,751,303	\$ 2,811,892	\$ 4,989,212	\$ 7,814,190	\$ 10,317,289
3. Total Actuarial Present Value of Accum. Plan Benefits	\$ 124,369,630	\$ 127,843,692	\$ 132,111,460	\$ 135,913,896	\$ 141,260,205
4. Market Value of Assets	\$ 81,295,236	\$ 86,225,376	\$ 88,229,274	\$ 82,519,260	\$ 82,304,757
Statement of Changes in Accumulated Plan Benefits				·	
<ol> <li>Actuarial Present Value of Accumulated Benefits, Beginni</li> <li>Increase (Decrease) During the Year due to:</li> </ol>	ing of Year	\$ 127,843,692	\$ 132,111,460	\$ 135,913,896	\$ 141,260,205
a. Benefits Accumulated *		\$ 543,370	\$ (40,198)	\$ 1,769,640	\$ 2,250,590
b. Decrease in the Discount Period		8,540,883	8,834,613	9,102,284	9,468,040
c. Benefits Paid		(11,662,166)	(11,805,405)	(11,762,538)	(12,004,973)
d. Plan Amendment		(926,045)	(571,573)	(2,911,822)	(5,059,966)
e. Change in Actuarial Assumptions		29,896	(685,205)	0	 0
f. Net Increase (Decrease)		\$ (3,474,062)	\$ (4,267,768)	\$ (3,802,436)	\$ (5,346,309)
3. Actuarial Present Value of Accumulated Benefits, End of	Year	\$ 124,369,630	\$ 127,843,692	\$ 132,111,460	\$ 135,913,896
* Includes the effects of actuarial experience gains and losses.					
mendes the effects of actualial experience gains and losses.					
			Name		 

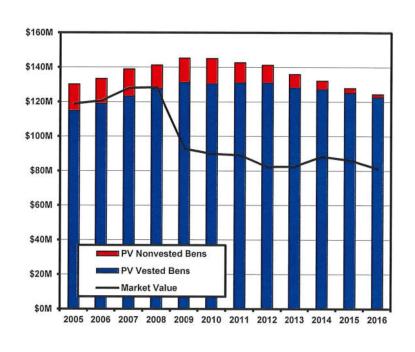
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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 2.11
Historical ASC Topic 960 Information

	Actuarial Pr		Market			
January 1,	Vested Benefits	Accum. Plan Benefits	Value of Assets			
2016	\$ 122,618,327	\$ 124,369,630	\$	81,295,236		
2015	125,031,800	127,843,692		86,225,376		
2014	127,122,248	132,111,460		88,229,274		
2013	128,099,706	135,913,896		82,519,260		
2012	130,942,916	141,260,205		82,304,757		
2011	130,956,177	142,696,200		89,220,278		
2010	130,382,882	145,028,413		89,918,019		
2009	131,170,874	145,275,205		92,869,795		
2008	127,594,958	141,251,264		128,329,061		
2007	123,233,745	138,872,165		128,034,557		
2006	118,912,190	133,344,781		120,587,669		
2005	114,870,187	130,123,209		118,949,769		



Note: Values shown prior to January 1, 2007 were determined by the prior actuary and are shown here for comparison purposes only.

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

## PART III

## WITHDRAWAL LIABILITY INFORMATION

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 3.1 Withdrawal Liability Information

			1	As o	f December 31	1,			
1.	Present Value of Vested Benefits	 2015	 2014		2013		2012		2011
	<ul><li>a. Active Participants</li><li>b. Persons with Deferred Benefits</li><li>c. Retirees and Beneficiaries</li><li>d. Total</li></ul>	\$  11,140,208 8,971,582 102,506,537 122,618,327	\$  11,436,187 7,715,856 105,879,757 125,031,800	\$	11,551,789 7,433,239 108,137,220	\$	13,739,081 7,637,772 106,722,853	\$	16,709,680 6,772,449 107,059,157
2.	Market Value of Assets	\$ 81,295,236	\$ 86,225,376	\$ \$	127,122,248 88,229,274	\$	128,099,706 82,519,260	\$ \$	130,541,286 82,304,757
<ul><li>3.</li><li>4.</li></ul>	Unfunded Vested Benefit Liability (UVB) Unamortized Balance of Affected Benefits	\$ 41,323,091	\$ 38,806,424	\$	38,892,974	\$	45,580,446	\$	48,236,529
	<ul><li>a. 2012 Base</li><li>b. 2014 Base</li><li>c. Total</li></ul>	\$  3,505,581 1,846,103 5,351,684	\$  3,688,730 1,922,612 5,611,342	\$ 	3,859,897 0 3,859,897	\$	4,019,866 ———————————————————————————————————		n/a n/a n/a

Withdrawal liabilities are determined using the presumptive method as described in ERISA Section 4211(b). PBGC Regulations require that plans in critical status disregard certain benefit reductions (adjustable benefits) in determining withdrawal liability and prescribe simplified methods for making these calculations. Therefore, for purposes of calculating withdrawal liability, the UVB shown above should be increased by the amortized balance of affected benefits also shown above.

The plan of benefits for the December 31, 2015 calculation are the same as those described in Section 7.1 except as noted below:

- 1. Benefits which are first effective January 1, 2016 or later are not reflected in the UVB as of December 31, 2015.
- 2. Death benefits unrelated to pension benefits and disability benefits other than those in pay status are not included in the UVB.

The actuarial basis used in the calculation of the December, 31, 2015 UVB is the same as used in the January 1, 2016 actuarial valuation of the plan as described in Section 6 except that, as indicated, the market value of assets is used in the determination of UVB.

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 3.2 Basic Withdrawal Liability Pools

	Unfunded				Unfunded		
Year	Vested	Basic	Pools	Year	Vested	Basic	Pools
Ended	Benefit	Original	Unamortized	Ended	Benefit	Original	Unamortized
December 31	Liability	Balance	Balance	December 31	Liability	Balance	Balance
1996	0	0	0	2006	0	0	0
1997	0	0	0	2007	0	0	0
1998	0	0	0	2008	38,301,079	38,301,079	24,895,701
1999	0	0	0	2009	40,075,544	3,689,519	2,582,663
2000	0	0	0	2010	41,338,363	3,362,349	2,521,762
2001	0	0	0	2011	48,236,529	9,165,813	7,332,651
2002	0	0	0	2012	45,580,446	69,855	59,377
2003	0	0	0	2013	38,892,974	(3,958,041)	(3,562,237)
2004	0	0	0	2014	38,806,424	2,444,979	2,322,730
2005	0	0	0	2015	41,323,091	5,170,445	5,170,445

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 3.3

Reallocated Withdrawal Liability Pools

Year	Realloca	ted Pools	Year	Realloca	ted Pools
Ended	Original	Unamortized	Ended	Original	Unamortized
December 31	Balance	Balance	December 31	Balance	Balance
1996	0	0	2006	0	0
1997	0	0	2007	0	0
1998	0	0	2008	0	0
1999	0	0	2009	0	0
2000	0	0	2010	0	0
2001	0	0	2011	0	0
2002	0	0	2012	0	0
2003	0	0	2013	0	0
2004	0	0	2014	0	0
2005	0	0	2015	0	0

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### Section 3.4

### **Contribution History**

Year		Withdrawn		5-Year	Year		Withdrawn		5-Year
Ended	Total Plan	Employer	Adjusted	Adjusted	Ended	<b>Total Plan</b>	Employer	Adjusted	Adjusted
December 31	<u>Contribs</u>	Contribs	Contribs*	Contribs**	December 31	Contribs	Contribs	Contribs*	Contribs**
1992	0	0	0	n/a	2004	3,089,738	0	3,089,738	n/a
1993	0	0	0	n/a	2005	2,964,018	0	2,964,018	n/a
1994	0	0	0	n/a	2006	3,016,400	0	3,016,400	n/a
1995	0	0	0	n/a	2007	4,271,053	0	4,271,053	n/a
1996	0	0	0	n/a	2008	4,918,127	0	4,918,127	18,259,336
1997	0	0	0	n/a	2009	4,248,121	0	4,248,121	19,417,719
1998	0	0	0	n/a	2010	2,961,780	0	2,961,780	19,415,481
1999	0	0	0	n/a	2011	3,556,900	0	3,556,900	19,955,981
2000	0	0	0	n/a	2012	3,651,961	0	3,651,961	19,336,889
2001	0	0	0	n/a	2013	3,942,119	0	3,942,119	18,360,881
2002	0	0	0	n/a	2014	4,039,977	0	4,039,977	18,152,737
2003	0	0	0	n/a	2015	3,829,054	0	3,675,665	18,866,622

<sup>\*</sup> Total Plan contributions, adjusted for withdrawn employer contributions and starting January 1, 2015 adjusted for limitations placed by Section 109 of MPRA.

<sup>\*\*</sup> Total adjusted Plan contributions during the 5-year period ending with the December 31 of the year shown.

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 3.5 Individual Employer Withdrawal Liability Estimate Worksheet

Year		ıortized Balanc rawal Liability		Unamortized Balance of		s During 5-Year g in December 31,	Allocated
Ended	Basic	Reallocated		Affected	Adjusted	Individual	- Withdrawal
December 31	Pools	Pools	Total	Benefits	Plan Total	Employer *	Liability
(a)	(b)	(c)	(d)	(e)	(f)	(g)	$(h) = [(d) + (e)] \times [(g) \div (f)]$
1996	0	0	0	n/a	0		
1997	0	0	0	n/a	0		
1998	0	0	0	n/a	0		
1999	0	0	0	n/a	0		
2000	0	0	0	n/a	0		-
2001	0	0	0	n/a	0		
2002	0	0	0	n/a	0		
2003	0	0	0	n/a	0		
2004	0	0	0	n/a	0		
2005	0	0	0	n/a	0		
2006	0	0	0	n/a	0 -		
2007	0	0	0	n/a	0		
2008	24,895,701	0	24,895,701	n/a	18,259,336		
2009	2,582,663	0	2,582,663	n/a	19,417,719		
2010	2,521,762	0	2,521,762	n/a	19,415,481		
2011	7,332,651	0	7,332,651	n/a	19,955,981		
2012	59,377	0	59,377	n/a	19,336,889		
2013	(3,562,237)	0	(3,562,237)	n/a	18,360,881		
2014	2,322,730	0	2,322,730	n/a	18,152,737		
2015	5,170,445	0	5,170,445	5,351,684	18,866,622		
1.	Gross Liability	(= Sum of Colur	nn (h))				
		nount = 0.75% of	. , ,	greater than \$5	0.000		50,000
		100,000 + (2) - (3)					20,000
- 1		Net Withdrawal I	,,	` '			

\* For plan years ending after Dec. 31, 2014, contributions must be computed by multiplying employment hours by \$9.20, the rate in effect as of Dec. 31, 2014

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

## **PARTIV**

**ASSET INFORMATION** 

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 4.1 Historical Asset Information

	Beginning	Change in Market Value of Assets During Plan Year					
Plan Year Ending December 31	of Year Market Value of Assets	Contributions	Net Investment Return	Benefit Payments	Expenses	End of Year Market Value of Assets	End of Year Actuarial Value of Assets
2015	\$ 86,225,376	\$ 3,829,054	\$ 3,319,217	\$ 11,662,166	\$ 416,245	\$ 81,295,236	\$ 79,123,179
2014	88,229,274	4,039,977	6,071,454	11,805,405	309,924	86,225,376	80,612,110
2013	82,519,260	3,942,119	13,835,458	11,762,538	305,025	88,229,274	80,647,479
2012	82,304,757	3,651,961	8,865,286	12,004,973	297,771	82,519,260	81,384,100
2011	89,220,278	3,556,900	1,516,875	11,715,686	273,610	82,304,757	91,841,977
2010	89,918,019	2,961,780	9,187,530	12,567,902	279,149	89,220,278	102,602,580
2009	92,869,795	4,248,121	5,146,934	12,030,107	316,724	89,918,019	107,901,622
2008	128,329,061	4,918,127	(28,738,463)	11,364,182	274,748	92,869,795	111,443,754
2007	128,034,557	4,271,053	7,054,791	10,755,590	275,750	128,329,061	124,708,399
2006	120,587,669	3,016,400	14,900,190	10,189,387	280,315	128,034,557	118,899,595
2005	118,949,769	2,964,018	8,675,894	9,752,891	249,121	120,587,669	116,156,093
2004	114,115,806	3,089,738	11,622,429	9,192,988	685,216	118,949,769	115,920,520

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 4.2

Summary of Plan Assets\*

	As of January 1,				
	2016	2015	2014	2013	2012
Pooled Funds	\$ 28,469,859	9 \$ 28,357,361	\$ 20,969,435	\$ 23,119,954	\$ 22,514,278
Common and Preferred Stocks	19,053,531	1 21,597,299	22,056,524	16,620,170	17,142,542
Mutual Fund	(	0	5,881,837	5,145,232	4,948,222
Limited Partnerships	22,580,414	4 24,711,179	25,646,415	20,298,383	23,177,769
Corporate Obligations	6,840,983	7,882,902	8,640,367	9,872,017	8,701,431
U.S. Government Agency Obligations	1,205,941	1,003,061	912,062	2,969,740	2,772,446
Short-term Investments	826,487	950,716	1,479,486	1,241,808	832,713
Cash and Cash Equivalents	1,810,030	1,350,143	2,178,119	2,404,015	1,644,246
Fixed Assets	101,912	2 104,685	107,458	110,231	113,004
Receivables and Prepaid Expenses	610,749	531,190	494,261	867,982	599,030
Accounts Payable and Other Liabilities	(204,670	(263,160)	(136,690)	(130,272)	(140,924)
Net Assets Available for Benefits	\$ 81,295,236	\$ 86,225,376	\$ 88,229,274	\$ 82,519,260	\$ 82,304,757

<sup>\*</sup> Per Auditor's Reports

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

## Section 4.3 Changes in Assets from Prior Valuation\*

	 	Plan Y	ear :	<b>Ending Decem</b>	ber	31,	
	 2015	2014	,	2013		2012	 2011
Market Value of Assets at Beginning of Year	\$ 86,225,376	\$ 88,229,274	\$	82,519,260	\$	82,304,757	\$ 89,220,278
Income During Year							
Employer contributions Investment income	\$ 3,829,054	\$ 4,039,977	\$	3,942,119	\$	3,651,961	\$ 3,556,900
Interest and dividends	\$ 927,524	\$ 1,025,083	\$	1,139,955	\$	1,255,472	\$ 1,210,987
Recognized and unrecognized gains (losses)	2,899,216	5,562,222		13,160,234		8,091,645	815,210
Investment expenses	(519,947)	 (533,200)	-	(481,912)		(494,914)	(511,572)
Total net investment income	\$ 3,306,793	\$ 6,054,105	\$	13,818,277	\$	8,852,203	\$ 1,514,625
Other Income	\$ 12,424	\$ 17,349	\$	17,181	\$	13,083	\$ 2,250
Total Income	\$ 7,148,271	\$ 10,111,431	\$	17,777,577	\$	12,517,247	\$ 5,073,775
Disbursements							
Benefits	\$ 11,662,166	\$ 11,805,405	\$	11,762,538	\$	12,004,973	\$ 11,715,686
Administrative Expenses	416,245	309,924		305,025		297,771	273,610
Other	0	 0		0		0	0
Total Disbursements	\$ 12,078,411	\$ 12,115,329	\$	12,067,563	\$	12,302,744	\$ 11,989,296
Market Value of Assets at End of Year	\$ 81,295,236	\$ 86,225,376	\$	88,229,274	\$	82,519,260	\$ 82,304,757

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

#### Section 4.4

### **Development of Actuarial Value of Assets**

1.	Market Value of Assets as of January 1, 2015	\$ 86,225,376
2.	Contributions during year	\$ 3,829,054
3.	Disbursements during year	\$ 12,078,411
4.	Expected investment income at valuation rate of 7.00% per annum, net of investment expense	\$ 5,752,683
5.	Expected Market Value of Assets as of December 31, 2015	\$ 83,728,702
6.	Actual Market Value of Assets as of December 31, 2015	\$ 81,295,236
7.	Gain/(Loss) during year	\$ (2,433,466)
8.	Unrecognized Prior Gain/(Loss)	
	Year Ending Original Unrecognized Unrecognized  December 31 Gain/(Loss) Percentage Amount	
	2015 \$ (2,433,466) 80% \$ (1,946,773) 2014 172,471 60% \$ 103,483	
	2013 8,337,919 40% \$ 3,335,168 2012 3,400,894 20% \$ 680,179	
	Total	\$ 2,172,057
9.	Preliminary Actuarial Value of Assets as of January 1, 2016 = (6) - (8)	\$ 79,123,179
10.	Actuarial Value of Assets as of January 1, 2016 = (9) but not more than 120% of (6) nor less than 80% of (6)	\$ 79,123,179
11.	Actuarial Value of Assets as a Percentage of Market Value	97.3%

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

## Section 4.5 Investment Rates of Return

Plan Year Ending December 31.

				A 10011 A	CHI	Ending Decen	1001	O.,		
		2015		2014		2013		2012		2011
ket Value of Assets										
Market Value as of Beginning of Year	\$	86,225,376	\$	88,229,274	\$	82,519,260	\$	82,304,757	\$	89,220,278
Employer Contributions During Year	\$	3,829,054	\$	4,039,977	\$	3,942,119	\$	3,651,961	\$	3,556,900
Disbursements During Year	\$	12,078,411	\$	12,115,329	\$	12,067,563	\$	12,302,744	\$	11,989,296
Market Value as of End of Year	\$	81,295,236	\$	86,225,376	\$	88,229,274	\$	82,519,260	\$	82,304,757
Investment Income (Net of Inv. Exp.)	\$	3,319,217	\$	6,071,454	\$	13,835,458	\$	8,865,286	\$	1,516,875
Average Value of Assets	\$	82,100,698	\$	84,191,598	\$	78,456,538	\$	77,979,366	\$	85,004,080
Rate of Return During Year		4.04%		7.21%		17.63%		11.37%		1.78%
arial Value of Assets										
Actuarial Value as of Beginning of Year	\$	80,612,110	\$	80,647,479	\$	81,384,100	\$	91,841,977	\$	102,602,580
Employer Contributions During Year	\$	3,829,054	\$	4,039,977	\$	3,942,119	\$	3,651,961	\$	3,556,900
Disbursements During Year	\$	12,078,411	\$	12,115,329	\$	12,067,563	\$	12,302,744	\$	11,989,296
Actuarial Value as of End of Year	\$	79,123,179	\$	80,612,110	\$	80,647,479	\$	81,384,100	\$	91,841,977
Investment Income (Net of Inv. Exp.)	\$	6,760,426	\$	8,039,983	\$	7,388,823	\$	(1,807,094)	\$	(2,328,207)
Average Value of Assets	\$	76,487,432	\$	76,609,803	\$	77,321,378	\$	87,516,586	\$	98,386,382
Rate of Return During Year		8.84%		10.49%		9.56%		-2.06%		-2.37%
	Employer Contributions During Year Disbursements During Year Market Value as of End of Year Investment Income (Net of Inv. Exp.) Average Value of Assets Rate of Return During Year  Marial Value of Assets Actuarial Value as of Beginning of Year Employer Contributions During Year Disbursements During Year Actuarial Value as of End of Year Investment Income (Net of Inv. Exp.) Average Value of Assets	Market Value as of Beginning of Year Employer Contributions During Year Disbursements During Year Market Value as of End of Year Investment Income (Net of Inv. Exp.) Average Value of Assets Rate of Return During Year  Actuarial Value as of Beginning of Year Employer Contributions During Year Disbursements During Year  Actuarial Value as of End of Year Investment Income (Net of Inv. Exp.) Average Value of Assets	Market Value as of Beginning of Year \$86,225,376 Employer Contributions During Year \$3,829,054 Disbursements During Year \$12,078,411 Market Value as of End of Year \$81,295,236 Investment Income (Net of Inv. Exp.) \$3,319,217 Average Value of Assets \$82,100,698 Rate of Return During Year 4.04%  Marial Value of Assets Actuarial Value as of Beginning of Year \$80,612,110 Employer Contributions During Year \$3,829,054 Disbursements During Year \$12,078,411 Actuarial Value as of End of Year \$79,123,179 Investment Income (Net of Inv. Exp.) \$6,760,426 Average Value of Assets \$76,487,432	Market Value as of Beginning of Year \$86,225,376 \$  Employer Contributions During Year \$3,829,054 \$  Disbursements During Year \$12,078,411 \$  Market Value as of End of Year \$81,295,236 \$  Investment Income (Net of Inv. Exp.) \$3,319,217 \$  Average Value of Assets \$82,100,698 \$  Rate of Return During Year \$4.04%   Marial Value of Assets  Actuarial Value as of Beginning of Year \$80,612,110 \$  Employer Contributions During Year \$3,829,054 \$  Disbursements During Year \$3,829,054 \$  Disbursements During Year \$12,078,411 \$  Actuarial Value as of End of Year \$79,123,179 \$  Investment Income (Net of Inv. Exp.) \$6,760,426 \$  Average Value of Assets \$76,487,432 \$	### Value of Assets  Market Value as of Beginning of Year \$ 86,225,376 \$ 88,229,274  Employer Contributions During Year \$ 3,829,054 \$ 4,039,977  Disbursements During Year \$ 12,078,411 \$ 12,115,329  Market Value as of End of Year \$ 81,295,236 \$ 86,225,376  Investment Income (Net of Inv. Exp.) \$ 3,319,217 \$ 6,071,454  Average Value of Assets \$ 82,100,698 \$ 84,191,598  Rate of Return During Year \$ 4.04% 7.21%  **Parall Value of Assets**  Actuarial Value as of Beginning of Year \$ 80,612,110 \$ 80,647,479  Employer Contributions During Year \$ 3,829,054 \$ 4,039,977  Disbursements During Year \$ 12,078,411 \$ 12,115,329  Actuarial Value as of End of Year \$ 79,123,179 \$ 80,612,110  Investment Income (Net of Inv. Exp.) \$ 6,760,426 \$ 8,039,983  Average Value of Assets \$ 76,487,432 \$ 76,609,803	### Piket Value of Assets  Market Value as of Beginning of Year Employer Contributions During Year  Disbursements During Year  Market Value as of End of Year  Investment Income (Net of Inv. Exp.)  Average Value of Assets  Actuarial Value as of Beginning of Year  Employer Contributions During Year  Actuarial Value as of Beginning of Year  Disbursements During Year  Actuarial Value as of Beginning of Year  Employer Contributions During Year  Disbursements During Year  Actuarial Value as of End of Year  Disbursements During Year  Actuarial Value as of End of Year  Disbursements During Year  Actuarial Value as of End of Year  Disbursements During Year  Actuarial Value as of End of Year  Fine Value of Assets  Actuarial Value as of End of Year  Sinvestment Income (Net of Inv. Exp.)  Average Value of Assets  \$ 86,225,376 \$  86,225,376 \$  86,071,454 \$  84,191,598 \$  84,191,598 \$  84,191,598 \$  84,191,598 \$  84,039,983 \$  80,612,110 \$  80,647,479 \$  80,612,110 \$	Market Value as of Beginning of Year \$ 86,225,376 \$ 88,229,274 \$ 82,519,260 Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 Market Value as of End of Year \$ 81,295,236 \$ 86,225,376 \$ 88,229,274 Investment Income (Net of Inv. Exp.) \$ 3,319,217 \$ 6,071,454 \$ 13,835,458 Average Value of Assets \$ 82,100,698 \$ 84,191,598 \$ 78,456,538 Rate of Return During Year 4.04% 7.21% 17.63%  Harial Value of Assets Actuarial Value as of Beginning of Year \$ 80,612,110 \$ 80,647,479 \$ 81,384,100 Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 Actuarial Value as of End of Year \$ 79,123,179 \$ 80,612,110 \$ 80,647,479 Investment Income (Net of Inv. Exp.) \$ 6,760,426 \$ 8,039,983 \$ 7,388,823 Average Value of Assets \$ 76,487,432 \$ 76,609,803 \$ 77,321,378	Market Value as of Beginning of Year \$ 86,225,376 \$ 88,229,274 \$ 82,519,260 \$ Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 \$ Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 \$ Market Value as of End of Year \$ 81,295,236 \$ 86,225,376 \$ 88,229,274 \$ Investment Income (Net of Inv. Exp.) \$ 3,319,217 \$ 6,071,454 \$ 13,835,458 \$ Average Value of Assets \$ 82,100,698 \$ 84,191,598 \$ 78,456,538 \$ Rate of Return During Year \$ 4.04% 7.21% 17.63%  Harial Value of Assets  Actuarial Value as of Beginning of Year \$ 80,612,110 \$ 80,647,479 \$ 81,384,100 \$ Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 \$ Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 \$ Actuarial Value as of End of Year \$ 79,123,179 \$ 80,612,110 \$ 80,647,479 \$ Investment Income (Net of Inv. Exp.) \$ 6,760,426 \$ 8,039,983 \$ 7,388,823 \$ Average Value of Assets \$ 76,487,432 \$ 76,609,803 \$ 77,321,378 \$	Market Value as of Beginning of Year \$ 86,225,376 \$ 88,229,274 \$ 82,519,260 \$ 82,304,757 Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 \$ 3,651,961 Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 \$ 12,302,744 Market Value as of End of Year \$ 81,295,236 \$ 86,225,376 \$ 88,229,274 \$ 82,519,260 Investment Income (Net of Inv. Exp.) \$ 3,319,217 \$ 6,071,454 \$ 13,835,458 \$ 8,865,286 Average Value of Assets \$ 82,100,698 \$ 84,191,598 \$ 78,456,538 \$ 77,979,366 Rate of Return During Year \$ 4.04% 7.21% 17.63% 11.37%  **Marial Value as of Beginning of Year \$ 80,612,110 \$ 80,647,479 \$ 81,384,100 \$ 91,841,977 Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 \$ 3,651,961 Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 \$ 12,302,744 Actuarial Value as of End of Year \$ 79,123,179 \$ 80,612,110 \$ 80,647,479 \$ 81,384,100 Investment Income (Net of Inv. Exp.) \$ 6,760,426 \$ 8,039,983 \$ 7,388,823 \$ (1,807,094) Average Value of Assets \$ 76,487,432 \$ 76,609,803 \$ 77,321,378 \$ 87,516,586	Market Value as of Beginning of Year \$ 86,225,376 \$ 88,229,274 \$ 82,519,260 \$ 82,304,757 \$ Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 \$ 3,651,961 \$ Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 \$ 12,302,744 \$ Market Value as of End of Year \$ 81,295,236 \$ 86,225,376 \$ 88,229,274 \$ 82,519,260 \$ Investment Income (Net of Inv. Exp.) \$ 3,319,217 \$ 6,071,454 \$ 13,835,458 \$ 8,865,286 \$ Average Value of Assets \$ 82,100,698 \$ 84,191,598 \$ 78,456,538 \$ 77,979,366 \$ Rate of Return During Year \$ 4.04% 7.21% 17.63% 11.37%  **Marial Value as of Beginning of Year \$ 80,612,110 \$ 80,647,479 \$ 81,384,100 \$ 91,841,977 \$ Employer Contributions During Year \$ 3,829,054 \$ 4,039,977 \$ 3,942,119 \$ 3,651,961 \$ Disbursements During Year \$ 12,078,411 \$ 12,115,329 \$ 12,067,563 \$ 12,302,744 \$ Actuarial Value as of End of Year \$ 79,123,179 \$ 80,612,110 \$ 80,647,479 \$ 81,384,100 \$ Investment Income (Net of Inv. Exp.) \$ 6,760,426 \$ 8,039,983 \$ 7,388,823 \$ (1,807,094) \$ Average Value of Assets \$ 76,487,432 \$ 76,609,803 \$ 77,321,378 \$ 87,516,586 \$

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### PART V

### **DEMOGRAPHIC INFORMATION**

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 5.1

Historical Participant Information

January 1	Actives	Terminated w/ Deferred Benefits	Disabled Retirees	All Other Retirees & Beneficiaries	Total	Ratio of Inactives to Actives
2016	233	213	34	604	1,084	365.2%
2015	261	191	35	619	1,106	323.8%
2014	278	181	37	623	1,119	302.5%
2013	284	209	34	610	1,137	300.4%
2012	325	181	34	600	1,140	250.8%
2011	351	215	37	599	1,202	242.5%
2010	489	186	38	573	1,286	163.0%
2009	553	187	37	558	1,335	141.4%
2008	505	206	37	548	1,296	156.6%
2007	417	220	37	537	1,211	190.4%
2006	440	208	not available	549	1,197	172.0%
2005	460	148	not available	554	1,162	152.6%

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 5.2

Active Participant Age/Service Distribution as of January 1, 2016

#### **Years of Service Credits Attained Age** Under 1 5 to 9 10 to 14 15 to 19 20 to 24 1 to 4 25 to 29 30 to 34 35 to 39 40 & Up **Totals** Under 25 25 to 29 30 to 34 35 to 39 40 to 44 45 to 49 50 to 54 55 to 59 60 to 64 65 to 69 70 & Up Total

Average Age:

42.4

**Average Service:** 

12.9

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

Section 5.3 **Inactive Participant Information as of January 1, 2016** 

	Termin	ated	with Deferred	Bene	efits			Hea	lthy Retirees *	•	
Age Last Birthday	Count	_Ar	Total inual Benefit	_Aı	Average nnual Benefit_	Age Last Birthday	Count	An	Total nual Benefit		Average ual Benefit
						< 55	33	\$	842,123	\$	25,519
< 45	65	\$	655,635	\$	10,087	55 - 59	40		981,773		24,544
45 - 49	21		236,910		11,281	60 - 64	82		1,774,981		21,646
50 - 54	43		529,384		12,311	65 - 69	124		2,444,769		19,716
55 - 59	51		432,115		8,473	70 - 74	86		1,511,056		17,570
60 - 64	24		202,583		8,441	75 - 79	69		1,063,984		15,420
> 64	9		84,633		9,404	> 79	68		925,053		13,604
Total	213	\$	2,141,262	\$	10,053	Total	502	\$	9,543,738	\$	19,011
		Disa	bled Retirees	k				Be	neficiaries *		
Age Last Birthday	Count	An	Total nual Benefit	An	Average nual Benefit	Age Last Birthday	Count	An	Total nual Benefit		Average ual Benefit
< 55	4	\$	72,828	\$	18,207	< 55	6	\$	24,195	\$	4,033
55 - 59	4		58,188		14,547	55 – 59	6		27,519		4,586
60 - 64	8		143,922		17,990	60 - 64	10		84,989		8,499
65 - 69	3		47,226		15,742	65 - 69	17		154,739		9,102
70 - 74	8		116,647		14,581	70 - 74	19		135,505		7,132
75 - 79	2		14,463		7,232	75 - 79	15		75,808		5,054
> 79	5		69,090		13,818	> 79	29		167,691		5,782
Total	34	\$	522,365	\$	15,364	Total	102	\$	670,446	\$	6,573

<sup>\*</sup> Does not reflect the 13th check benefit, which totals \$32,539 for disabled retirees, \$596,136 for healthy retirees, and \$86,842 for beneficiaries.

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

# Section 5.4 Reconciliation of Participants

	Actives	Terminated With Deferred <u>Benefits</u>	Disabled Participants	Retirees and <u>Beneficiaries</u>	<u>Total</u>
Counts as of January 1, 2015	261	191	35	619	1,106
New Entrants	15	0	0	0	15
Rehired	7	(7)	0	0	0
Terminated without Vesting	(16)	0	0	0	(16)
Terminated with Vesting	(32)	32	0	0	0
Became Disabled	0	0	0	0	0
Retired	(2)	(5)	0	7	0
Died	0	(4)	(1)	(25)	(30)
New Beneficiaries	0	0	0	7	7
Certain Period Expiration	0	0	0	(4)	(4)
Data Corrections	0	6 *	0	0	6
Net Change	(28)	22	(1)	(15)	(22)
Counts as of January 1, 2016	233	213	34	604	1,084

<sup>\*</sup> Includes five alternate payees who are entitled to a future benefit, reported by the fund office for the first time.

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### PART VI

ACTUARIAL BASIS

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

#### Section 6.1

#### **Actuarial Methods**

#### **Actuarial Cost Method**

The Actuarial Cost Method for determining the Actuarial Accrued Liability and Normal Cost is the Unit Credit Cost Method and is the same method used in the prior valuation.

In connection with the Plan's then-endangered status, the Trustees applied for and received an automatic 5-year extension of amortization periods pursuant to Section 431(d) of the Internal Revenue Code effective January 1, 2010.

#### **Asset Valuation Method**

The Actuarial Value of Assets (AVA) is determined using an adjusted market value. Under this method, a preliminary AVA is determined as the market value of assets on the valuation date less a decreasing fraction (4/5, 3/5, 2/5, 1/5) of the gain or loss in each of the preceding four years. The gain or loss for a given year is the difference between the actual investment return (on a market-to-market basis) and the assumed investment return based on the market value of assets at the beginning of the year and actual cash flow. The AVA is then the preliminary AVA subject to a minimum and maximum value equal to 20% below and 20% above market value, respectively.

The McKeogh Company

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### Section 6.2

### **Actuarial Assumptions**

Interest Rate (Net of Investment Expenses)			
For RPA '94 Current Liability	3.28% per year		
For All Other Purposes	7.00% per year		
Administrative Expenses	\$320,000 as of begi	nning of the year	
Mortality Healthy lives	1983 Group Annuit	y Mortality Table (GAM	83) for males and females
Disabled lives	1971 Group Annuit	y Mortality Table for mal	es
Mortality improvement	No future mortality	improvements were assu	med beyond the valuation date
RPA '94 Current Liability Mortality			
Healthy lives			s for annuitants and non-annuitantate tables for males and females.
Disabled lives	Mortality specified	in Revenue Ruling 96-7 f	or Disabilities occurring post-199
Retirement Age – Active Participants	Age		Rate
		ess Than 30 Service Cred	its 30 or More Service Credits
	55	0.15	0.50
	56-59	0.10	0.25
	60-61	0.20	1.00
			1.00
	62-64 65	0.25 1.00	1.00

The McKeogh Company

Iron Workers Local No. 16

service.

**Pension Plan** 

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### Section 6.2

### Actuarial Assumptions (Continued)

Retirement at Norm	al Retirement Age
Age	Rate
20	0.0760
30	0.0441
40	0.0259
50	0.0076
Age	Rate
20	0.0018
30	0.0033
40	0.0066
50	0.0182
Based on the averag	e of the prior two years of hours
	: 50% J&S Annuity with pop-up nts: Single Life Annuity
75%	
Spouses of male/fem	nale Participants 3 years younger/older than the Participant.
	Age 20 30 40 50 Age 20 30 40 50 Based on the average Married participants Unmarried participants

The McKeogh Company

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Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### PART VII

SUMMARY OF PLAN PROVISIONS AND CONTRIBUTION RATES

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

### Section 7.1

#### **Plan Provisions**

The following is a brief summary of principal plan provisions as in effect on the valuation date, unless specified. Plan provisions which apply infrequently or to a limited group of participants may be omitted from this summary. The plan document will govern if there is any discrepancy with this summary.

The McKeogh Company	-39- Iron Workers Local No. 16
Normal Retirement Date	The date the Participant attains age 65, or if later the fifth anniversary of plan participation.
Vesting Service	One year for each Plan Year in which the Participant earns 1,000 or more Hours of Service.
Hour of Service	Hours worked in Covered Employment or other hours on behalf of which contributions are required to be made to the Fund.
Covered Employment	Employment with an Employer who has agreed to contribute to the Fund for the Employee under a collective bargaining agreement.
Plan Year	Twelve-month period ending December 31.
Definitions	
Participation	A person initially becomes an Active Participant on the earliest January 1 or July 1 following completion of 1,000 Hours of Service in Covered Employment during a twelve consecutive month period.
Effective Date	July 19, 1960; amended and restated effective January 1, 2015. Most recent amendment effective January 1, 2016.

**Pension Plan** 

Exhibit 7.10a (Checklist Item #41) 2016 Actuarial Valuation

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### Plan Provisions (Continued)

Service Credits

Service Credits are based on Hours of Service in Covered Employment during a Plan Year, according to the following schedules:

			Hours of Service		
Service Credits	Apr. 1, 1960 – Dec. 31, 1992	<u>Jan. 1, 1993 –</u> <u>Dec. 31, 2007</u>	Jan. 1, 2008 – Dec. 31, 2010	Jan. 1, 2011 – Dec. 31, 2014	<u>Jan. 1, 2015</u> <u>and later</u>
0.00	Less than 500	Less than 262.50	Less than 300	Less than 500	Less than 400
0.25	500 - 699	262.50 - 524.25	300 - 599	500 - 699	400 - 799
0.50	700 - 999	524.50 - 787.25	600 - 899	700 - 999	800 - 1,199
0.75	1,000 - 1,399	787.50 - 1,049.25	900 - 1,199	1,000 - 1,399	1,200 - 1,599
1.00	1,400 or more	1,050 or more	1,200 or more	1,400 or more	1,600 or more

Hours Bank

A Participant's Hours of Service in excess of 1,600 in a Plan Year earned on or after April 1, 1960 will be credited to the Participant's Hours Bank. A Participant's Hours Bank will be limited to a maximum of 3,500 hours (2,800 hours prior to January 1, 1998).

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### Plan Provisions (Continued)

Accrued Monthly Pension

For active participants who retire on and after June 1, 2012, the Participant's Service Credits in each period listed below, times the applicable accrual rates listed below:

	Accrual Rates			
Service Period	Service Credits up to 25	Service Credits in excess of 25		
Prior to January 1, 2006	87.00	116.00		
January 1, 2006 to December 31, 2010	94.00	125.33		
January 1, 2011 to May 31, 2012	94.00	94.00		
June 1, 2012 to December 31, 2014	88.50	88.50		
After January 1, 2015	50.00	50.00		

For participants with at least one quarter Service Credit during 2007 or one full Service Credit on or after January 1, 2008 and prior to June 1, 2012 who retire on or after January 1, 2008 and prior to June 1, 2012, the Participant's Service Credits in each period listed below, times the applicable accrual rates listed below:

	Accrual Rates	
Service Period	Service Credits up to 25	Service Credits in excess of 25
Prior to January 1, 2006	90.00	120.00
January 1, 2006 to December 31, 2010	94.00	125.33
January 1, 2011 to May 31, 2012	94.00	94.00

For Participants who did not earn at least one quarter Service Credit after December 31, 2007, different formulas apply.

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### Plan Provisions (Continued)

### **Eligibility for Benefits**

Normal Pension	Retirement on or after NRD.
Early Retirement Pension	Retirement prior to NRD but after attaining age 55 and earning 10 or more Service Credits.
Service Pension	Retirement prior to June 1, 2012: Completion of 25 Service Credits if the participant earned at least one Service Credit prior to September 1, 2004. Completion of 30 or more Service Credits and attainment of age 50 for all other participants.
	Retirement after June 1, 2012: Completion of 30 or more Service Credits and attainment of age 55. If the participant earned at least 25 Service Credits prior to June 1, 2012 (Grandfathered Participant), eligibility determined as described above.
Disability Pension	The Disability Pension was eliminated for Participants that become totally and permanently disabled on or after January 1, 2014. For onsets prior to January 1, 2014, eligibility was based on fifteen or more Service Credits as well as certain hours and age requirements.
Deferred Pension	Termination of Covered Employment for reasons other than death or retirement after completing 5 or more years of Vesting Service.
Hours Bank	At retirement, a Participant may use the Hours Bank to provide full or partial Service Credit for a year in which the Participant did not work sufficient hours to earn one Service Credit in that year. Specific rules and procedures exist in order to calculate such additional Service Credits.
Preretirement Surviving Spouse Benefit	Participant dies after completing 5 or more years of Vesting Service and leaves a surviving spouse to whom the Participant was married for at least one year at the time of the Participant's death.
Preretirement Lump Sum Death Benefit	Participant dies prior to termination and retirement. Available only if the Preretirement Surviving Spouse benefit is not payable or has been waived.
Pop-Up Benefit	Married Participant who retires after January 1, 1996 with a 50% Joint and Survivor Annuity and who is predeceased by his/her spouse.

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#### **Plan Provisions** (Continued)

#### **Benefits Paid Upon the Following Events**

Normal Pension Accrued Monthly Pension as of NRD.

Early Retirement Pension Accrued Monthly Pension as of early retirement date, reduced by 6 2/3% for each year that commencement precedes the Participant's NRD.

Service Pension Accrued Monthly Pension as of normal retirement date, reduced by 6 2/3% per year that retirement precedes age 60. For retirements occurring between January 1, 2014 and June 30, 2014, the 6% per year early retirement reduction applied starting at age 57. Grandfathered Participants (i.e., those who have completed at least 25 Service Credits as of June 1, 2012) will be reduced 2% per year prior to age 60, with a maximum reduction of 10%.

> Accrued Monthly Pension payable at NRD. A vested participant with at least 10 years of Service Credit may elect to have benefits commence as early as age 55. The benefit shall be reduced by 6 2/3% per year for each year that commencement precedes NRD.

Preretirement Surviving Spouse receives a lifetime monthly pension equal to 50% of the benefit that would be payable if the Participant separated from service on the date of death (or separation from service, if earlier), survived to the earliest retirement age, Spouse Benefit retired with an immediate qualified joint and survivor annuity, and died on the day after the earliest retirement age. Instead of the benefit described above, the surviving spouse may elect to receive the Preretirement Lump Sum Death Benefit.

For participants with at least 10 years of Service Credit, \$300 times Service Credits earned on and after

April 1, 1960, maximum of \$7,500. Payment shall be made in a single lump sum or in 60 equal monthly installments, at the option of the beneficiary. For all other participants, \$2,500 payable in single lump sum.

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Preretirement Lump Sum

Death Benefit

Deferred Pension

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#### Section 7.1

### Plan Provisions (Continued)

Pop-Up Benefit

The pension amount will be increased to the amount that would have been payable in the single life annuity form of pension.

Normal and Optional Forms of Payment

The basic pension benefits described above are payable as a single life annuity (single life annuity with 60 monthly payments guaranteed, for those retiring prior to June 1, 2012). Married employees receive a benefit which is the basic benefit actuarially reduced to provide the spouse with a 50% contingent annuity benefit.

Prior to June 1, 2012, certain participants could elect a lump sum payment with respect to the portion of the benefit attributable to Service Credits over 25 years.

Other optional forms of payment are: Joint and 50%, 75% or 100% to Survivor, and life with 60, 120 or 180 monthly payments guaranteed. Married participants must have spousal consent to elect a form of payment other than the Joint and 50% to Surviving Spouse form.

#### Other Benefits

Postretirement Death Benefit At the death of a Participant receiving a pension benefit who dies prior to January 1, 2016, a single sum death benefit shall be paid to the named beneficiary in an amount equal to \$1,500. This benefit has been eliminated for deaths occurring on or after January 1, 2016.

13th Check

Pensioners on the rolls at December 31, 2007 shall be entitled to one additional monthly payment in January of each year equal to the pensioner's current monthly pension payment, with a minimum of \$1,000. Participants who retired between January 1, 2008 and December 31, 2009 were entitled to one additional monthly payment (without the \$1,000 minimum) in January of each year with the last such payment made in January 2013. Participants who retired after December 31, 2009 are not eligible for this benefit. Beneficiaries of participants who retired before January 1, 2010 are also eligible for the 13<sup>th</sup> check, equal to the beneficiary's monthly pension payment (with a minimum of \$1,000 if the deceased pensioner retired prior to January 1, 2008).

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### Plan Provisions (Continued)

Changes from Prior Year	The following changes to the plan of benefits were adopted on November 20, 2015 and are being reflected for the first time in this valuation.
Early Retirement Pension	For retirements occurring after December 31, 2015, the 6% per year early retirement reduction will be increased to 6 2/3% per year.
Deferred Pension	For retirements occurring after December 31, 2015, the 6% per year early retirement reduction will be increased to 6 2/3% per year.
Service Pension	Service Pension for Grandfathered Participants (i.e., those who have completed at least 25 Service Credits as of June 1, 2012) retiring after December 31, 2015 will be reduced 2% per year prior to age 60, with a maximum reduction of 10%.
Postretirement Death Benefit	The \$1,500 death benefit has been eliminated for deaths occurring after December 31, 2015.

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#### Section 7.2

#### **Contribution Rates**

#### Contributions

Employers make contributions to fund the plan in accordance with the terms of several collective bargaining agreements. Employee contributions are neither required nor permitted. Recent hourly contribution rates are as follows:

<u>Period</u>	<u>Hourly Rate</u>	<u>Period</u>	<u>Hourly Rate</u>
5/1/2005 - 4/30/2006	\$3.84	4/1/2011 - 3/31/2012	\$7.20
5/1/2006 - 4/30/2007	\$4.24	4/1/2012 - 3/31/2013	\$8.20
5/1/2007 - 4/30/2008	\$4.34	4/1/2013 - 5/31/2014	\$8.70
5/1/2008 - 4/8/2009	\$4.80	6/1/2014 - 3/31/2015	\$9.20
4/9/2009 - 3/31/2010	\$5.70	4/1/2015 & later	\$9.70
4/1/2010 - 3/31/2011	\$6.70		