



**REPORT ON THE
ACTUARIAL VALUATION OF THE
SOUTH CAROLINA NATIONAL GUARD
RETIREMENT SYSTEM**

**PREPARED AS OF
JULY 1, 2009**

May 10, 2010

State Budget and Control Board
South Carolina Retirement Systems
202 Arbor Lake Drive
Columbia, SC 29223

Members of the Board:

We have submitted the results of the actuarial valuation of the South Carolina National Guard Retirement System prepared as of July 1, 2009. The valuation indicates that State contributions in the amount of \$3,904,715 are required to support the benefits of the System for the fiscal year ending June 30, 2011.

The promised benefits of the System are included in the actuarially calculated contribution which is developed using the entry age normal actuarial cost method. Actuarial gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level dollar amount over a period of approximately 23 years. The assumptions recommended by the actuary are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System and meet the parameters for the disclosures under GASB 25 and 27.

This is to certify that the independent consulting actuary is a Member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Respectfully submitted,



Edward A. Macdonald, ASA, FCA, MAAA
President



Cathy Turcot
Principal and Managing Director

EAM/CGT:dmw

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**REPORT ON AN ACTUARIAL VALUATION OF THE
SOUTH CAROLINA NATIONAL GUARD RETIREMENT SYSTEM
PREPARED AS OF JULY 1, 2009**

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, as of July 1, 2009, presents the results of an actuarial valuation of the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below.

**TABLE I
SUMMARY OF PRINCIPAL RESULTS**

VALUATION DATE	7/1/2009	7/1/2008
Number of active members included in valuation	12,599	12,559
Retired members		
Number	3,785	3,492
Annual pensions	\$ 3,536,280	\$ 3,284,100
Former members entitled to deferred vested pensions		
Number	2,786	2,942
Annual deferred pensions	\$ 2,163,300	\$ 2,288,280
Assets		
Market value	\$ 12,773,000	\$ 16,188,000
Actuarial value	18,599,557	17,425,894
Unfunded accrued liability	\$ 34,820,939	\$ 36,108,299
Amortization period*	23 years	24 years
Employer Contributions for Fiscal Year Ending	June 30, 2011	June 30, 2010
Annual required contributions (ARC)		
Normal	\$ 533,736	\$ 507,282
Accrued liability	3,370,979	3,438,430
Total	\$ 3,904,715	\$ 3,945,712

* Refer to Section V for a description of the derivation of the amortization period.

2. Comments on the valuation results are given in Section IV and the contributions payable by the State are given in Section V.

3. Schedule B shows the development of the actuarial value of assets. Schedule C of this report outlines the full set of actuarial assumptions and methods employed. The System experienced an actuarial loss on plan assets of \$850,000 as a result of investment return on the actuarial value of assets being less than the assumed rate.
4. Schedule D gives a summary of the provisions of the System. There have been no changes since the previous valuation.

SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation was provided by the South Carolina National Guard staff and submitted through the South Carolina Retirement Systems. The following table summarizes the membership of the System upon which the valuation was based.

**TABLE II
MEMBERSHIP OF THE SYSTEM**

	NUMBER	ANNUAL PENSIONS
Active Members	12,599	N/A
Retired Members, Currently Payable	3,785	\$ 3,536,280
Former Members, Deferred Pensions	2,786	\$ 2,163,300

Table I of Schedule E of this report shows a distribution by age and years of service of the number of active members included in the valuation. Table 2 shows a distribution of the number of retired members and Table 3 shows a distribution of the number of deferred former members.

SECTION III – ASSETS OF THE SYSTEM

The market value of assets in the System as of July 1, 2009 was reported to be \$12,773,000. The market related actuarial value of assets as of July 1, 2009 is \$18,599,557. Schedule B shows the development of the actuarial value of assets as of July 1, 2009. The asset valuation method was changed from a method that smoothes market gains and losses over a five-year period, to a method that incorporates a 10-year smoothing period starting with the investment experience for the year ending June 30, 2008. All prior investment gains and losses will continue to be recognized over their respective five-year smoothing periods.

SECTION IV – COMMENTS ON VALUATION

Schedule A of this report contains the results of the valuation which show present and prospective assets and liabilities of the System as of July 1, 2009. The schedule shows that the System has actuarial liabilities of \$58,311,016 of which \$27,558,353 represents the present value of prospective pension payments to present retired members, \$17,957,148 represents the present value of prospective pensions which will become payable to present active members and \$12,795,515 represents the present value of future pension payments to former members entitled to deferred pensions. Against these liabilities, the System has assets of \$18,599,557 as of July 1, 2009 leaving a balance of \$39,711,459 to be provided by prospective contributions of the State. Of this amount, \$4,890,520 represents the present value of prospective normal contributions, and the balance of \$34,820,939 represents the present value of unfunded accrued liability contributions. Of this amount, \$4,525,669 is the remaining balance due to legislation which allows those guardsmen who became members of the National Guard after June 30, 1993 to become eligible for membership in the System effective January 1, 2007. The unfunded accrued liability from other sources is, therefore, \$30,295,270.

SECTION V – CONTRIBUTIONS PAYABLE BY THE STATE

The normal contribution covers the cost of benefits based on current service. The valuation indicates that the annual normal contribution payable by the State is equal to \$533,736.

The unfunded accrued liability is amortized through annual unfunded accrued liability contributions. Level annual accrued liability contributions of \$600,534 will amortize \$4,525,669, which is the remaining balance of unfunded accrued liability due to legislation which allows those guardsmen who became members of the National Guard after June 30, 1993 to become eligible for membership in the System effective January 1, 2007, over a 15-year period beginning July 1, 2006. The remaining amortization period as of July 1, 2009 is 12 years. An additional \$2,770,445 is required to amortize the unfunded accrued liability from other sources of \$30,295,270 over a 30 year period beginning July 1, 2006. The remaining amortization period as of July 1, 2009 is 27 years. The total unfunded accrued liability contribution is, therefore, \$3,370,979, and based on the total unfunded accrued liability of \$34,820,939, the resulting blended amortization period as of July 1, 2009 is approximately 23 years.

Based on the present membership the following table shows the total annual contributions payable by the State.

**TABLE III
ANNUAL CONTRIBUTIONS PAYABLE BY THE STATE
FOR THE FISCAL YEAR ENDING JUNE 30, 2011**

CONTRIBUTION	ANNUAL AMOUNT
Normal	\$ 533,736
Unfunded Accrued Liability	<u>3,370,979</u>
Total	\$ 3,904,715

SECTION VI – ACCOUNTING INFORMATION

1. Statements Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF JULY 1, 2009**

GROUP	NUMBER
Retired participants currently receiving benefits	3,785
Terminated participants entitled to benefits but not yet receiving benefits	2,786
Active Participants	<u>12,599</u>
Total	19,170

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

<u>Actuarial Valuation Date</u>	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b – a) / c)
6/30/1996	\$ 6,258,794	\$ 36,755,848	\$ 30,497,054	17.03%	N/A	N/A
6/30/1998	8,639,560	41,478,339	32,838,779	20.83	N/A	N/A
6/30/2000*	11,089,065	43,426,627	32,337,562	25.54	N/A	N/A
6/30/2002	12,608,347	44,677,656	32,069,309	28.22	N/A	N/A
6/30/2004	13,566,711	47,280,891	33,714,180	28.69	N/A	N/A
6/30/2005	12,150,817	46,985,420	34,834,603	25.86	N/A	N/A
7/1/2006	14,046,397	48,755,541	34,709,144	28.81	N/A	N/A
7/1/2007	15,937,090	55,916,798	39,979,708	28.50	N/A	N/A
7/1/2008	17,425,894	53,534,193	36,108,299	32.55	N/A	N/A
7/1/2009	18,599,557	53,420,496	34,820,939	34.82	N/A	N/A

*As of April 30, 2000

Results prior to the 6/30/2005 valuation were prepared by the previous actuarial firm.

3. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2009.

Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending 6/30/2009

(a)	Employer annual required contribution	\$	4,052,000
(b)	Interest on net pension obligation		773,850
(c)	Adjustment to annual required contribution*		<u>(846,506)</u>
(d)	Annual pension cost (a) + (b) + (c)	\$	3,979,344
(e)	Employer contributions made for fiscal year ending 6/30/2009		<u>4,052,000</u>
(f)	Increase (decrease) in net pension obligation (d) – (e)	\$	(72,656)
(g)	Net pension obligation beginning of fiscal year		<u>9,673,121</u>
(h)	Net pension obligation end of fiscal year (f) + (g)	\$	9,600,465

* The adjustment to the annual required contribution is equal to the discounted present value of the balance of the net pension obligation at the beginning of the year, calculated using the same amortization methodology used in determining the annual required contribution for that year.

TREND INFORMATION

<u>Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed*</u>	<u>Net Pension Obligation (NPO)</u>
June 30, 2000	\$3,157,050	78.4%	\$ 4,884,719
June 30, 2001	2,946,825	71.7	5,719,931
June 30, 2002	2,938,373	72.6	6,524,968
June 30, 2003	2,804,241	71.2	7,332,628
June 30, 2004	2,796,068	71.4	8,132,115
June 30, 2005	2,887,189	0.0	11,019,304
June 30, 2006	2,857,972	137.9	9,934,891
June 30, 2007	3,810,374	103.6	9,797,265
June 30, 2008	3,823,856	103.2	9,673,121
June 30, 2009	3,979,344	101.8	9,600,465

For year ending June 30, 2004 and prior, contributions made after the valuation date are included in the assets as receivable. For year ending June 30, 2005 and later, contributions made after the valuation date are not included in the assets as receivable.

4. The annual required contribution (ARC) of the employer in dollars, determined in accordance with the parameters of GASB 25/27 is shown below. The unfunded accrued liability contribution includes amortization of the unfunded accrued liability of \$34,820,939 over a period of approximately 23 years.

**2010/2011 FISCAL YEAR
ANNUAL REQUIRED CONTRIBUTION (ARC)
BASED ON THE VALUATION AS OF JULY 1, 2009**

ANNUAL REQUIRED CONTRIBUTION (ARC)	AMOUNT
Normal	\$ 533,736
Unfunded Accrued liability	<u>3,370,979</u>
Total	\$ 3,904,715

5. Additional information as of the latest actuarial valuation follows.

Valuation date	7/1/2009
Actuarial cost method	Entry age
Amortization method	Level dollar open
Remaining amortization period	23 years
Asset valuation method	Smoothed market**
Actuarial assumptions:	
Investment rate of return*	8.00%
Projected salary increases	N/A
*Includes inflation at	3.00%
Cost-of-living adjustments	None

** 10-year smoothing period starting with the investment experience for the year ending June 30, 2008. All prior investment gains and losses will continue to be recognized over their respective five-year smoothing periods.

SCHEDULE A

RESULTS OF THE VALUATION

(1)	Actuarial liabilities	
	Present value of prospective pensions payable in respect of:	
(a)	Present retired members	\$ 27,558,353
(b)	Former members entitled to deferred pensions	12,795,515
(c)	Present active members	<u>17,957,148</u>
(d)	Total actuarial liabilities	\$ 58,311,016
(2)	Assets of the System	<u>18,599,557</u>
(3)	Present value of prospective contributions = (1)(d)-(2)	\$ 39,711,459
(4)	Present value of prospective normal contributions	<u>4,890,520</u>
(5)	Present value of unfunded accrued liability contributions = (3)-(4)	\$ 34,820,939

SCHEDULE B

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(Amounts expressed in thousands)

Item	July 1, 2009	
1. Excess (Shortfall) of Investment Income for Current Year and Previous Nine Years:		
a. Current Year	\$	(5,339)
b. Current Year - 1		(1,524)
c. Current Year - 2		947
d. Current Year - 3		(906)
e. Current Year - 4		0
f. Current Year - 5		0
g. Current Year - 6		0
h. Current Year - 7		0
i. Current Year - 8		0
j. Current Year - 9		0
2. Deferral of Excess (Shortfall) of Investment Income for:		
a. Current Year (90% Deferral)	\$	(4,806)
b. Current Year - 1 (80% Deferral)		(1,219)
c. Current Year - 2 (40% Deferral)		379
d. Current Year - 3 (20% Deferral)		(181)
e. Current Year - 4		0
f. Current Year - 5		0
g. Current Year - 6		0
h. Current Year - 7		0
i. Current Year - 8		0
j. Current Year - 9		0
k. Total Deferred for Year	\$	(5,827)
3. Market Value of Plan Assets, End of Year	\$	12,773
4. Actuarial Value of Plan Assets, End of Year (Item 3 - Item 2.k.)	\$	18,600

SCHEDULE C

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: 8.00% per annum net of investment and administrative expenses, compounded annually.

ADOPTION DATE: The exact adoption date for the current actuarial assumptions and methods is unknown. The discount rate was changed for the July 1, 2008 valuation and the retirement rates were last changed for the 1996 valuation. The death, disability, and mortality rates were changed in 1990 by the prior actuary.

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of separation from active service are as follows:

Age	Annual Rates of			
	Retirement		Death	Disability*
	Under Age 60 with 20 years of service	Age 60 with 20 years of service or 30 years of service		
25			.0005	.0009
30			.0006	.0011
35			.0009	.0015
40	.100		.0012	.0022
45	.100		.0022	.0036
50	.100		.0039	.0061
55	.100	1.000	.0061	.0101
60		1.000	.0092	.0163

*Applied only to members with less than 20 years of service.

No rates of withdrawal are assumed.

DEATHS AFTER RETIREMENT: According to the 1983 Group Annuity Mortality Table for males.

MARRIAGE ASSUMPTION: Not applicable because no death benefits are payable.

FUTURE EXPENSES: No provision made.

LOADING OR CONTINGENCY RESERVES: None.

VALUATION METHOD: Projected benefit method with entry age normal cost and open-end accrued liability. Gains and losses are reflected in the unfunded accrued liability.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule B. The actuarial value is a smoothed asset value that recognizes 10% (20% for returns prior to July 1, 2007) of the difference between the expected investment return and actual investment return each year for 10 years (5 years for returns prior to July 1, 2007). The expected investment return equals the prior year's market value of assets adjusted with contributions, and payments using the investment earnings assumption from the prior year's valuation (7.25% for returns in the year beginning on July 1, 2007 and 8.00% beginning July 1, 2008).

SCHEDULE D

SUMMARY OF PROVISIONS

MEMBERSHIP

All members of the South Carolina National Guard who became members on or before June 30, 1993 are covered by the System. Effective January 1, 2007, eligibility for membership has been extended to those guardsmen who became members of the South Carolina National Guard after June 30, 1993.

BENEFITS

Service Retirement Pension

Condition for Pension

A member who retires after he has attained age 60 and has credit for 20 years of military service, including at least 15 years, 10 of which immediately precede retirement, of South Carolina National Guard duty, both reserve and active, and who has received an honorable discharge, is entitled to a monthly pension.

Amount of Pension

The amount of the pension is equal to \$50 per month for 20 years' creditable service with an additional \$5 per month for each additional year of such service, provided that the total pension shall not exceed \$100 per month.

Deferred Early Retirement Pension

Condition for Pension

A member whose service is terminated after he has credit for 20 years of military service, including at least 15 years, 10 of which immediately precede retirement, of South Carolina National Guard duty, both reserve and active, and who has received an honorable discharge, is eligible to receive a deferred retirement pension commencing at age 60.

Amount of Pension

The amount is the same as that for a service retirement.

CONTRIBUTIONS

The State makes annual contributions sufficient to meet the cost of the benefits under the System.

SCHEDULE E

**TABLE 1
SCHEDULE OF ACTIVE PARTICIPANT DATA
AS OF JULY 1, 2009**

Attained Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Under 25	1,754	2,266	244								4,264
25 to 29	419	580	1080	121							2,200
30 to 34	184	182	431	567	64						1,428
35 to 39	108	112	236	350	535	137					1,478
40 to 44	69	53	154	191	326	554	35				1,382
45 to 49	23	22	71	109	160	304	324	26			1039
50 to 54	7		20	39	55	103	141	110	7		482
55 to 59	5	1	2	8	21	35	48	75	85	3	283
60 to 64					4		9	12	16	2	43
65 to 69											
70 & up											
Total	2,569	3,216	2,238	1,385	1,165	1,133	557	223	108	5	12,599

Average Age: 31.7

Average Service: 8.7

SCHEDULE E (continued)

TABLE 2

**NUMBER OF RETIRED MEMBERS
AND THEIR BENEFITS BY AGE**

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
60 & Under	345	\$ 304,980	\$ 884
61 – 65	1,464	1,327,800	907
66 – 70	736	664,020	902
71 – 75	632	604,800	957
76 – 80	358	362,820	1,013
Over 80	<u>250</u>	<u>271,860</u>	<u>1,087</u>
Total	3,785	\$ 3,536,280	\$ 934

TABLE 3

**NUMBER OF DEFERRED FORMER MEMBERS
AND THEIR BENEFITS BY AGE**

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total</u> <u>Future Annual Benefits</u>	<u>Average</u> <u>Future Annual Benefit</u>
50 & Under	1,049	\$ 758,400	\$ 723
51 – 55	702	552,960	788
56 – 60	899	746,760	831
Over 60	<u>137</u>	<u>105,180</u>	<u>768</u>
Total	2,787	\$ 2,163,300	\$ 776

SCHEDULE F

**PROJECTED CASH FLOW AND DETERMINATION OF
ANNUAL REQUIRED CONTRIBUTIONS
UNDER 8.00% INVESTMENT RATE OF RETURN
(\$ IN THOUSANDS)**

July 1st	Market Value of Assets⁽¹⁾	Actuarial Value of Assets⁽¹⁾	Unfunded Accrued Liability⁽²⁾	Funded Percentage⁽²⁾
2010	13,993	19,142	34,619	35.61
2011	15,118	19,769	34,287	36.57
2012	16,246	20,211	34,083	37.23
2013	17,386	20,665	33,833	37.92
2014	18,621	21,214	33,517	38.76
2015	19,989	21,895	33,127	39.79
2016	21,477	22,698	32,656	41.01
2017	23,106	23,639	32,097	42.41
2018	24,885	25,419	30,757	45.25
2019	26,828	27,362	29,262	48.32

Fiscal Year	Annual Required Contributions⁽³⁾	Benefit Payments	Cash Flow⁽⁴⁾
2009/2010	3,946	3,740	1,220
2010/2011	3,905	3,885	1,124
2011/2012	3,940	4,003	1,128
2012/2013	3,969	4,108	1,140
2013/2014	4,015	4,149	1,236
2014/2015	4,064	4,166	1,367
2015/2016	4,114	4,205	1,489
2016/2017	4,164	4,236	1,628
2017/2018	4,216	4,268	1,779
2018/2019	4,269	4,300	1,944
2019/2020	4,251	4,364	2,013

(1) Assuming annual required contributions are made.

(2) Determined using actuarial value of assets and assuming annual required contributions are made. Includes impact of opening System.

(3) Determined using actuarial value of assets and a decreasing 30-year amortization period beginning July 1, 2006 for the unfunded liability, plus a decreasing 15-year amortization beginning July 1, 2006 of additional unfunded liability due to opening System. The appropriate amortization period for opening the System was determined to be 15 years, since retroactive service is granted and members can use past service for retirement eligibility.

(4) Determined using market value of assets and assuming annual required contributions are made.

SCHEDULE G

**SUPPLEMENTAL INFORMATION FOR
COMPREHENSIVE ANNUAL FINANCIAL REPORT
For the fiscal year ended
June 30, 2009**

May 10, 2010

State Budget and Control Board
South Carolina Retirement Systems
Columbia, South Carolina 29211

Re: Certification and Statement Regarding the Actuarial Valuation of the South Carolina National Guard Retirement System as of July 1, 2009

Dear Members of the Board:

Applicable Laws

The law governing the operation of the South Carolina National Guard Retirement System provides that actuarial valuation of the assets and liabilities of the System shall be made at least every other year. We have prepared the annual actuarial valuation of the Retirement System as of July 1, 2009.

Funding Objective

A funding objective of the System is that the contributions will remain relatively level over time. As these contributions are set by the Board, the valuation is used to determine the sufficiency of the contributions to maintain or improve the measures of the System's funding progress (i.e. *funded ratio*, *funding period*) and provide for the complete funding of all actuarial liabilities over a period of approximately 23 years.

Funding Methodology

The entry age normal actuarial cost method determines the System's normal cost, the cost of the current year's benefit accrual. Additionally, the method determines the actuarial liability, the value of benefits already earned by active and retired members due to past service. A smoothing technique is utilized to produce a market-related actuarial value of assets with the goal of dampening the impact of investment return volatility. The *funded ratio* is the actuarial value of assets as a percentage of the actuarial liability.

An unfunded actuarial liability exists to the extent the System's actuarial liability exceeds its actuarial value of assets. The contribution amount in excess of the System's normal cost is the level dollar amount available to amortize an unfunded actuarial liability. The System's *funding period* is the resulting number of years necessary to fully amortize the unfunded actuarial liability with the available contributions.

Assumptions

Actuarial assumptions are necessary to estimate the future economic and demographic experience of the System. The actuarial assumptions used in the valuation are internally consistent and reasonably based on the actual experience of the System.

The current actuarial assumptions are in accordance with the applicable Actuarial Standards of Practice, as well as the parameters set forth in the Governmental Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*.

The results and conclusions of this report are based on the valuation as of July 1, 2009. Differences between our projections and actual amounts depend on the extent to which future experience conforms exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

Data Reliance

In preparing the valuations, we, as the actuary, relied on data provided by the System. In fulfillment of the scope of our assignment, we performed a limited review of the data for consistency and reasonableness and did not find material defects in the census data.

Supporting Schedules

Our firm, as actuary, is responsible for the actuarial trend data in the financial section of the report and the supporting schedules in the actuarial section, beginning with the information for the July 1, 2004 to June 30, 2005 period. Information for previous years was supplied by other actuarial firms employed by the System at that time.

Certification

Based on the results of the July 1, 2009 valuation, we believe that the valuation is appropriately reflecting the System's long term obligations and the current contribution levels are sufficient to fund the liabilities over a reasonable time frame, and based on these criteria may be deemed actuarially sound.

I, Edward A. Macdonald, President of Cavanaugh Macdonald Consulting, LLC, am a Member of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. On the basis of the foregoing, I certify that, to the best of my knowledge this report is complete and accurate and has been prepared in accordance with South Carolina's statutes and generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

Respectfully submitted,



Edward A. Macdonald, ASA, FCA, MAAA
President

South Carolina National Guard Retirement System Valuation Balance Sheet

As of Actuarial Valuation at July 1, 2009

(Amounts expressed in thousands)

		<u>July 1, 2009</u>
1. <u>Assets</u>		
a. Current Assets (Actuarial Value)	\$	18,600
b. Present Value of Future Member Contributions	\$	0
c. Present Value of Future Employer Contributions		
i) Normal Contributions	\$	4,890
ii) Accrued Liability Contributions		34,821
iii) Total Future Employer Contributions	\$	<u>39,711</u>
d. <u>Total Assets</u>	\$	<u>58,311</u>
 2. <u>Liabilities</u>		
a. Benefits to be Paid to Retired Members and Beneficiaries	\$	27,558
b. Benefits to be Paid to Former Members Entitled to Deferred Pensions	\$	12,796
c. Benefits to be Paid to Current Active Members	\$	<u>17,957</u>
d. <u>Total Liabilities</u>	\$	<u>58,311</u>

South Carolina National Guard Retirement System Results of the Valuation as of July 1, 2009

(Amounts expressed in thousands)

		July 1, 2009
1. <u>Actuarial Present Value of Future Benefits</u>		
a. Present Retired Members and Beneficiaries	\$	27,558
b. Former Members Entitled to Deferred Pensions		12,796
c. Present Active Members		17,957
d. Total Actuarial Present Value	\$	58,311
2. <u>Present Value of Future Normal Contributions</u>		
a. Employees	\$	0
b. Employer		4,890
c. Total Future Normal Contributions	\$	4,890
3. <u>Actuarial Liability</u>	\$	53,421
4. <u>Current Actuarial Value of Assets</u>	\$	18,600
5. <u>Unfunded Actuarial Liability</u>	\$	34,821
6. <u>Unfunded Actuarial Liability Annual Payment Amount</u>		3,371
7. <u>Unfunded Actuarial Liability Liquidation Period</u>		23 years

South Carolina National Guard Retirement System Development of Actuarial Value of Assets

(Amounts expressed in thousands)

Item	July 1, 2009
1. Excess (Shortfall) of Investment Income for Current Year and Previous Nine Years:	
a. Current Year	\$ (5,339)
b. Current Year - 1	(1,524)
c. Current Year - 2	947
d. Current Year - 3	(906)
e. Current Year - 4	0
f. Current Year - 5	0
g. Current Year - 6	0
h. Current Year - 7	0
i. Current Year - 8	0
j. Current Year - 9	0
2. Deferral of Excess (Shortfall) of Investment Income for:	
a. Current Year (90% Deferral)	\$ (4,806)
b. Current Year - 1 (60% Deferral)	(1,219)
c. Current Year - 2 (40% Deferral)	379
d. Current Year - 3 (20% Deferral)	(181)
e. Current Year - 4	0
f. Current Year - 5	0
g. Current Year - 6	0
h. Current Year - 7	0
i. Current Year - 8	0
j. Current Year - 9	0
k. Total Deferred for Year	\$ (5,827)
3. Market Value of Plan Assets, End of Year	\$ 12,773
4. Preliminary Actuarial Value of Plan Assets, End of Year (Item 3 - Item 2.k.)	\$ 18,600

**South Carolina National Guard Retirement System
Schedule of Active Member Valuation Data
As of July 1, 2009**

Valuation Date	Number of Employers	Number of Active Members	Annual Payroll (in thousands)	Annual Average Pay	Percentage Increase In Average Pay
7-1-09	1	12,599	N/A	N/A	N/A
7-1-08	1	12,559	N/A	N/A	N/A
7-1-07	1	11,076	N/A	N/A	N/A
7-1-06	1	2,502	N/A	N/A	N/A
6-30-05	1	2,864	N/A	N/A	N/A
6-30-04	1	3,425	N/A	N/A	N/A
6-30-02	1	4,010	N/A	N/A	N/A
6-30-00	1	5,289	N/A	N/A	N/A
6-30-98	1	9,604	N/A	N/A	N/A
6-30-96	1	11,198	N/A	N/A	N/A

South Carolina National Guard Retirement System
The Number and Annual Retirement Allowances of
Retired Members and Beneficiaries

As of July 1, 2009

(Dollar amounts expressed in thousands)

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
Service Retirements:		
Males	3,756	\$ 3,511
Females	29	25
Total	3,785	3,536
Disability Retirements:		
Males	N/A	N/A
Females	N/A	N/A
Total	N/A	N/A
Beneficiaries		
Males	N/A	N/A
Females	N/A	N/A
Total	N/A	N/A
Grand Total	3,785	\$ 3,536

South Carolina National Guard Retirement System Schedule of Retirants Added to and Removed from Rolls

(Dollar amounts except average allowance expressed in thousands)

Year Ended	Added to Rolls*		Removed from Rolls*		Rolls End of the Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
7-1-09	378	\$ 335	85	\$ 83	3,785	\$ 3,536	7.7%	\$ 934
7-1-08	364	331	76	75	3,492	3,284	8.5	940
7-1-07	362	329	61	58	3,204	3,028	9.8	945
7-1-06	303	276	90	91	2,903	2,757	7.2	950
6-30-05	244	214	89	81	2,690	2,572	5.5	956
6-30-04	0	0	0	0	2,535	2,439	12.9	962
6-30-02	0	0	0	0	2,213	2,160	10.9	976
6-30-00	0	0	0	0	1,962	1,947	7.7	992
6-30-98	0	0	0	0	1,801	1,808	13.6	1,004
6-30-96	0	0	0	0	1,550	1,591	18.9	1,026

*Sufficient data is not available to complete these columns for years ending before 6/30/2005.

South Carolina National Guard Retirement System
Summary of Accrued and Unfunded Accrued Liabilities
(Dollar amounts expressed in thousands)

Valuation Date	Valuation Assets	Aggregate Accrued Liabilities	Actuarial Assets as a % of Actuarial Accrued Liabilities	Unfunded Accrued Liabilities	Annual Active Member Payroll	UAL as a % of Active Member Payroll
7-1-09	\$ 18,600	\$ 53,421	34.82%	\$ 34,821	N/A	N/A
7-1-08	17,426	53,534	32.55	36,108	N/A	N/A
7-1-07	15,937	55,917	28.50	39,980	N/A	N/A
7-1-06	14,046	48,755	28.81	34,709	N/A	N/A
6-30-05	12,151	46,985	25.86	34,835	N/A	N/A
6-30-04	13,567	47,281	28.69	33,714	N/A	N/A
6-30-02	12,608	44,678	28.22	32,069	N/A	N/A
6-30-00	11,089	43,427	25.54	32,338	N/A	N/A
6-30-98	8,640	41,478	20.83	32,839	N/A	N/A
6-30-96	6,259	36,756	17.00	30,497	N/A	N/A

South Carolina National Guard Retirement System
Analysis of the Increase in the Unfunded Accrued Liability
As of July 1, 2009

(Amounts expressed in thousands)

Item:	Amount of Increase (Decrease)
Beginning of Year Unfunded Actuarial Liability	\$ 36,108
Interest on Unfunded Actuarial Liability	2,889
Amortization Payment	(3,499)
Asset Experience w/ Method Change	850
Salary Experience	0
Other Liability Experience	(1,527)
COLA	0
Benefit Changes (Amendments)	0
Assumption/Method Changes	0
Total Increase/(Decrease)	\$ (1,287)
End of Year Unfunded Actuarial Liability	<u>\$ 34,821</u>

Solvency Test

(Dollar amounts expressed in thousands)

Valuation Date	(1) Active Member Contributions	(2) Retirants & Beneficiaries	(3) Active Members (Employer Funded Portion)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
					(1)	(2)	(3)
7-1-09	\$ 0	\$ 27,558	\$25,863	\$ 18,600	N/A	67.5%	0.0%
7-1-08	0	25,554	27,980	17,426	N/A	68.2%	0.0%
7-1-07	0	24,627	31,290	15,937	N/A	64.7%	0.0%
7-1-06	0	22,366	26,389	14,046	N/A	62.8%	0.0%
6-30-05	0	20,804	26,181	12,151	N/A	58.4%	0.0%
6-30-04	0	19,704	27,577	13,567	N/A	68.9%	0.0%
6-30-02	0	17,597	27,081	12,608	N/A	71.6%	0.0%
6-30-00	0	16,186	27,241	11,089	N/A	68.5%	0.0%
6-30-98	0	14,651	26,827	8,640	N/A	59.0%	0.0%
6-30-96	0	13,138	23,618	6,259	N/A	47.6%	0.0%