

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

Johnny Cruz, on behalf of himself and all others similarly
situated,

Plaintiff,

v.

Raytheon Company, Kelly B. Lappin, in her capacity as
Plan Administrator for the Raytheon Company Pension
Plan for Hourly Employees, the Raytheon Company
Pension Plan for Salaried Employees, the Raytheon Non-
Bargaining Retirement Plan, the Raytheon Bargaining
Retirement Plan, and the Raytheon Retirement Plan for
Engineers & Contractors, Inc. and Aircraft Credit
Employees, and John/Jane Does 1-10,

Defendants.

Case No. 1:19-cv-11425-PBS

DECLARATION OF DOUGLAS P. NEEDHAM

EXHIBIT B

**Declaration of Mitchell I. Serota, President
Mitchell I. Serota & Associates, Inc.**

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

Johnny Cruz, on behalf of himself and all others similarly situated,

Plaintiff,

v.

Raytheon Company, Kelly B. Lappin, in her capacity as Plan Administrator for the Raytheon Company Pension Plan for Hourly Employees, the Raytheon Company Pension Plan for Salaried Employees, the Raytheon Non-Bargaining Retirement Plan, the Raytheon Bargaining Retirement Plan, and the Raytheon Retirement Plan for Engineers & Contractors, Inc. and Aircraft Credit Employees, and John/Jane Does 1-10,

Defendants.

Case No. 1:19-cv-11425-PBS

DECLARATION OF MITCHELL I. SEROTA

I, Mitchell I. Serota, pursuant to 28 U.S.C. § 1746, declare as follows:

1. I am the President of Mitchell I. Serota & Associates, Inc. (“MIS&A”), an actuarial consulting firm in Skokie, IL. Prior to establishing Serota & Associates in 1988, I was Vice President of Alexander & Alexander Consulting Group and Vice President of Johnson & Higgins, Inc., both international consulting actuarial firms. During my career as an actuary, I have performed thousands of pension valuations for United States corporations with domestic or foreign pension plans, including calculating the present value of a pension’s liabilities, the selection of actuarial and demographic assumptions, including mortality and discount rate assumptions.

2. I am an Enrolled Actuary under ERISA, a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. From 2011 to 2017, I was a member of the Pension Committee of the Actuarial Standards Board (“ASB Pension Committee”), which is

responsible for publishing the Actuarial Standards of Practice (“ASOPs”) for pension sector of the actuarial profession related to selecting assumptions and validating methods of valuing and disclosing liabilities and costs of pension plans. I was a member of the ASB Pension Committee when it published ASOP No. 27, titled “Selection of Economic Assumptions for Pension Obligations,” and ASOP No. 35, titled “Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations,” as well as ASOP Nos. 4, 6 and 34. A copy of my CV is attached as **Exhibit 1**.

I. The Serota Report.

3. On April 24, 2020, I issued a report in this case (the “Serota Report”) about whether Mr. Cruz’s joint and survivor annuity (“JSA”) pension benefit was actuarially equivalent to his single life annuity (“SLA”) benefit when he began receiving his pension benefits on November 1, 2015.

4. An actuarial equivalence calculation measures the present values of two pension benefits. There are two assumptions used in an actuarial equivalence calculation: (1) a mortality assumption, which estimates the probability that each pension payment would be made; and (2) a discount rate, which discounts the value of each future payment.

5. In the Serota Report, I calculated the 50% Joint and Survivor Annuity (“JSA”) that would have been actuarial equivalent of to the Single-Life Annuity (“SLA”) that Mr. Cruz could have taken when he retired by using the RP-2014 Mortality Table with the MMP-2007 (blended 50% male, 50% female) as the mortality assumption.¹ I chose this assumption because Raytheon used it to calculate the present value of its pension liabilities the year before Mr. Cruz began receiving benefits in the report Raytheon prepared under Accounting Standard Codification 715-

¹ Serota Report at ¶ 109.

30 (“715-30 Report”).²

6. I used 4.05% as the discount rate assumption used to calculate Mr. Cruz’ actuarially equivalent JSA in the Serota Report.³ I selected 4.05% because it was the rate on December 31, 2014 of the third-party index (the FTSE Above Median Double-A Index) that best matched the discount rates Raytheon used between 2011 and 2019 in its 715-30 Reports.⁴

7. Applying these actuarial assumptions, I determined that Mr. Cruz did not receive a JSA benefit that was actuarially equivalent to the SLA he could have selected, and that he has suffered a shortfall each month in his pension benefit payment.⁵

8. In the Serota Report, I also provided a framework for how to calculate Mr. Cruz’s damages.⁶ I stated that Mr. Cruz’s past damages should be calculated by multiplying his monthly shortfall by the number of months Mr. Cruz had received a reduced benefit (i.e., since November 1, 2015) and that Mr. Cruz’s future damages could be calculated by the value of an annuity based on his monthly shortfall using the prevailing FTSE Above Median Double-A Index rate and the mortality assumption from Raytheon’s most recent 715-30 Report.⁷

II. The Settlement Agreement Uses the Same Methodology as the Serota Report.

9. Counsel for Plaintiff Cruz has retained MIS&A to review the Settlement Agreement dated February 12, 2020 (the “Settlement”) and calculations made pursuant to the terms of the Settlement. As explained below, the Settlement uses the same methodology that I proposed in the Serota Report to calculate the relief that Class Members receive under the Settlement.

² Serota Report at ¶ 77.

³ Serota Report at ¶ 109.

⁴ Serota Report at ¶ 105.

⁵ Serota Report at ¶ 102.

⁶ Serota Report at ¶¶ 113-114.

⁷ Serota Report at ¶ 113.

10. Under the Settlement, Class Members' benefits will be re-calculated using the "Adjustment Assumptions."⁸ The Adjustment Assumptions' discount rate is the FTSE Above Median Double-A Index rate on the December 31 before the Class Member began receiving benefits (e.g., the rate on December 31, 2015 is used for those that began receiving benefits in 2016).⁹ This is the same index and methodology used in the Serota Report.¹⁰

11. The Adjustment Assumptions' mortality assumption is the one Raytheon used in its 715-30 Report from the year before the Class Member began receiving benefits (e.g., the mortality assumption in the 715-30 Report for the year ending December 31, 2015 is used for those that began receiving benefits in 2016).¹¹ This is the same methodology used in the Serota Report.¹²

12. The Settlement then compares the Class Member's current monthly benefit to the benefit generated by the Adjustment Assumptions to determine their monthly shortfall.

13. The Settlement then calculates the total of Class Members' monthly benefit shortfalls through December 31, 2020 (with interest added at 2.82% per annum, compounded monthly, to account for each lower payment),¹³ and converts that amount to the form that the Class Member is receiving by applying the "Annuitization Assumptions."¹⁴ The Annuitization

⁸ Settlement at §§ 1.D and 3.D.

⁹ Settlement Agreement at § I.D; Serota Report at ¶ 109.

¹⁰ Serota Report at ¶ 105.

¹¹ Settlement Agreement at § 1.D.

¹² Serota Report at ¶ 103.

¹³ I did not offer an opinion in the Serota Report about what rate should be used to compensate Mr. Cruz for the monthly shortfalls he had received since he began receiving benefits. The Settlement's inclusion of a 2.82% interest rate to calculate Class Members' past shortfalls results in higher benefits.

¹⁴ Settlement Agreement at §§ I.E and III.D.4. Class Members' past shortfalls are annuitized to a JSA for Participant Class Members and an SLA for Beneficiary Class Members and Surviving Spouse Class Members. The different forms reflect the fact that Beneficiary Class Members' and Surviving Spouse Class Members' spouses who participated in one of the Covered Plans are no longer alive.

Assumptions are the FTSE Above Median Double-A Index rate for August 31, 2020, and the mortality assumption from Raytheon's 715-30 Report for the year ending December 31, 2019¹⁵ which is consistent with the methodology in the Serota Report used to calculate the value of a Plan annuity.¹⁶

14. The Settlement then multiplies the total of Class Members' monthly shortfall amount plus their past monthly shortfalls through December 31, 2020 by 0.40.¹⁷ In other words, Class Members' gross recovery under the Settlement is 40% of the damages using the damages model I proposed in the Serota Report.¹⁸

III. The Settlement Uses Actuarial Assumptions that are Reasonable for All Class Members.

15. While the Serota Report focused on benefits calculations for Mr. Cruz, who began receiving benefits from the Hourly Plan in 2015, the assumptions and methodologies used in the Serota Report – and thus the Settlement – are reasonable for all Class Members.

16. As explained in the Serota Report, the model used to measure Mr. Cruz's benefits could be modified to use other, reasonable assumptions to determine whether, for example, someone that began receiving benefits at a different time than Mr. Cruz received an actuarially equivalent benefit.¹⁹ The Settlement's Adjustment Assumptions are reasonable and current for all Class Members because Raytheon updated these assumptions each year of the Class Period.²⁰

17. The Serota Report's methodology for selecting a mortality assumption equally applies to Class Members that are receiving benefits from plans other than the Hourly Plan because

¹⁵ Settlement Agreement at § I.E.

¹⁶ Serota Report at ¶¶ 113-114.

¹⁷ Settlement Agreement at §§ III.D.1, D.2, D.3 and D.4.

¹⁸ The .40 multiplier is a negotiated term between the Parties and is not an actuarial assumption. Accordingly, I am not offering an opinion about it.

¹⁹ Serota Report at ¶ 101.

²⁰ Settlement at § I.D.

Raytheon has used the same mortality assumption for each of the Covered Plans since 2012.²¹ Accordingly, the mortality assumptions used in the Adjustment Assumptions and the Annuitization Assumptions are reasonable for Class Members in the Salaried Plan, the Bargaining Plan, the Non-Bargaining Plan and the RE&C Plan.

18. The FTSE Above Median Double-A Index rate is a reasonable discount rate for Class Members that are not receiving benefits from the Hourly Plan. Raytheon has used the same discount rate for the Hourly Plan, the Salaried Plan and the RE&C Plan in its 715-30 Reports,¹ so the FTSE Above Median Double-A Index is an equally good fit for these plans.

19. Moreover, while a plan-specific rate provides a more tailored approach, using the single discount rate from Raytheon's 10-K Reports for all the Covered Plans to select an index is also a sound methodology. The FTSE Above Median rate is an even better match for Raytheon's 10-K rates than it is for the Hourly Plan's specific rates. Accordingly, the discount rate assumptions used in the Adjustment Assumptions and the Annuitization Assumptions are reasonable for Class Members receiving benefits from the Salaried Plan, the Bargaining Plan, the Non-Bargaining Plan and the RE&C Plan.

IV. Review of Class Members' Data.

20. MIS&A was asked by Iazard, Kindall & Raabe ("IKR") to review the data file that Raytheon provided about Class Members' benefits under the Settlement to ensure that the formula described in the Memorandum of Understanding dated November 23, 2020 (the "Term Sheet") and Settlement was applied appropriately.²²

²¹ See, e.g., Raytheon's 715-30 Report for YE December 31, 2014, at RTN-Cruz-00000386 (ECF 61-2).

²² I performed this assignment in accordance with ASOP No. 23, titled "Data Quality." Section 3.3 of ASOP 27 is titled "Review of Data," and provides that an actuary should "make a reasonable effort to determine the definition of each data element. . . .[and] identify data values that are

21. As part of this assignment, we reviewed data provided by Defendants concerning the recalculation of benefits under the Settlement agreement. As a result of our review, we engaged in an iterative process to confirm that the calculations were consistent with the terms of the Settlement Agreement. This process mostly involved sending comments and questions, through counsel, to the actuaries working on the data for Defendants. We also had a conference call that involved personnel at Raytheon and Mercer (Raytheon's actuary) and counsel for the Parties. As a result of this process, we received additional information as well as revisions to the dataset that addressed particular issues that we had raised. The final data file, provided on February 3 (the "February 3 Data File") forms the basis for the remainder of this opinion.

22. We have extensively reviewed the February 3 Data File to ensure that the calculations were consistent with the terms of the Covered Plans and the Settlement. We have also checked the demographic information in the February 3 Data File about Mr. Cruz against the documents we were provided to prepare the Serota Report. Based on this review, including the earlier questions of Raytheon and their responses we are confident that calculations in the February 3 Data File are consistent with the terms of the Settlement Agreement.

V. The Settlement Applied to Mr. Cruz

23. MIS&A applied the Settlement's terms to Mr. Cruz below using the February 3 Data File.²³

24. Mr. Cruz currently receives a 50% JSA of \$1,021.33 each month. Mr. Cruz's Adjusted Monthly Benefit is \$1,066.31,²⁴ a difference of \$44.98 a month (\$1,066.31 - \$1,021.33

questionable. . . ." ASOP 27 does not require an "actuary to perform an audit of the data." *Id.* at § 1.2.

²³ I was able to identify Mr. Cruz in the data file because we had his Raytheon ID number

²⁴ This amount is slightly different from what is shown in the Serota Report as a result of a rounding difference.

= \$44.98).²⁵ Applying the 40% reduction factor to this \$44.98 shortfall on a go-forward basis would increase the benefits Mr. Cruz will receive by \$17.99 ($\$44.98 \times 0.4 = \17.99).

25. Mr. Cruz started receiving benefits on November 1, 2015, so he has received lower pension benefits for 62 months as of January 1, 2021. The total of Mr. Cruz's past \$44.98 monthly shortfalls, plus 2.82 percent interest, is \$3,005.42. Annuitizing this shortfall in Mr. Cruz's past benefits, using the Annuity Assumptions, would increase his monthly benefits by \$13.00. Therefore, his Adjusted Prospective Increase for this retrospective portion of his claim is \$5.20 ($\$13.00 \times .4 = \5.20).

Accordingly, Mr. Cruz's Gross Benefit Increase under the Settlement is \$23.19 per month ($\$17.99 + \$5.20 = \23.19).

I declare under penalty of perjury that the foregoing is true to the best of my knowledge, information and belief.

Executed 12th of February, 2021

/s/ Mitchell I. Serota
Mitchell I. Serota & Associates, Inc.
by Mitchell I. Serota, President

²⁵ These figures are from the February 3 Data File.

EXHIBIT A

**VITA
MITCHELL I. SEROTA**

Professional Credentials

Fellow, Society of Actuaries, 1983
Member, American Academy of Actuaries, 1980
Enrolled Actuary, 1983

Founding Member (1988) of Retirement Income Planners, a Chicago discussion group of 16 Employee Benefit Plan attorneys and one actuary, who meet monthly to discuss interpretation of law, anticipation of legislation, coordination with government agencies, etc.

Professional Service

Actuarial Committee Membership

Member, Pension Committee of American Academy of Actuaries, 2009-2018
Member, Pension Committee of Actuarial Standards Board, 2011-2017
Vice-chair, Entrepreneurial Actuaries Section of Society of Actuaries, 2002-05
Founding Member, Entrepreneurial Actuaries Section, 2002
Liaison between EAS for SOA and Smaller Consulting Group for Conference of Consulting Actuaries, 2003-05
Member, SOA Task Force on the Personal Actuary, 2005-07
Illinois Assn of School Business Officials, Financial Reporting Section, 2019-20

Educational

Society of Actuaries Examination Committee Member, Pension Plan Design and Funding, 1984-87
Society of Actuaries Education Coordinator, Pension Plan Design and Funding, 1986-87

Speaking

Windy City Summit, 2019 “When Your DB Frozen Plan has Freezer Burn”
Illinois Government Finance Officers Assn., 2017, (funding problems of Illinois municipalities)
Illinois Municipal League, 2014 (funding problems of Illinois municipalities)
Enrolled Actuaries Meeting, 2014 (Actuarial Standards of Practice)
Society of Actuaries Speaker, 1983, 2000, 2004, 2005, 2008, 2017, 2019 (3)
Society of Actuaries Lead Workshop Co-Chairperson, 1989
Conference of Consulting Actuaries, Program Committee and Moderator

Publications

“Searching for Revenue in a Very Wrong Place,” *Pension Section News*, March 2014, #83, p. 1.
“QDROs with Fewer Hassles,” *Pension Section News*, June 2001, #46, pp. 6-7.
“Lump sum distributions for QDROs,” speech at Society of Actuaries, October 16, 2000.

"Effect of the Social Security Act of 1983 on the Funding of Pension Plans," *Record of the Society of Actuaries*, IX, 521ff.

"Government Health and Welfare Programs in the United States and West Germany," *Benefits International*, December, 1979, pp. 15-18.

Professional Experience

Mitchell I. Serota & Associates, Inc. (April, 1988 to present), President

Serota & Associates is a corporation dedicated to general Employee Benefit Consulting

- Pension Design and Funding
 - Assisting consulting firms and law firms for independent actuarial review
 - Mergers and acquisition support
 - Writing actuarial valuation reports
 - Writing analysis of impact of law on a given situation
 - Analyzing potential (or imminent) impact of change in law
 - Dealing with government agencies regarding compliance
 - Negotiating with government agencies regarding non-compliance
 - Presenting expense figures to auditors based on
 - *ASC 715-30*
 - Cost Accounting Standards (Federal Government)
 - *IAS-19* (International)
 - *GASB 67/68* (Government entities)
 - Projecting costs using deterministic and stochastic modeling
 - Optimizing benefit design of plan, given a budget
 - Comparing advantages and disadvantages of hybrid designs
- Group Health and Post-Retirement Medical
 - Calculating Incurred But Not Reported Reserves
 - Trending claims cost levels
 - Calculating COBRA rates for self-funded plans
 - Optimizing Stop-Loss levels for group health programs
 - Presenting expense figures to auditors based on
 - *ASC 715-60*
 - Cost Accounting Standards (Federal Government)
 - *IAS-19* (International)
 - *GASB 43/45, 74/75* (Government entities)
 - Projecting costs using deterministic and stochastic modeling
- Actuarial testimony
 - Preparation of analysis, reports and depositions in matters pertaining to the need for plan sponsors to update their plan document definitions of Actuarial Equivalence
 - Preparation of analysis and reports pertaining to the ERISA funding requirements of plan sponsors who claim "Church plan" exceptions from ERISA requirements
 - Preparation of reports and testimony before the State of New Jersey Board of Public Utilities to reduce proposed rate increases successfully (8 times)

- Consulting and writing actuarial opinions for Delta Air Lines Retirement Committee during Bankruptcy (“1114 Committee”) which led to the successful award to the retirees of \$70 million
- Providing analysis and testimony for divorce cases, including drafting QDROs and QILDROs
- Providing analysis and testimony for wrongful death and dismissal cases
- Calculating contingencies for estate planning attorneys

Alexander & Alexander Consulting Group, Inc. (April, 1987 to April, 1988)

Vice President

Consulting Actuary responsibilities included marketing prospects, meeting with clients, understanding their Human Resource needs and their financial goals, and tailoring employee benefits programs to fit their specific circumstances.

Johnson & Higgins of Illinois, Inc. (October, 1978 to April, 1987)

Vice President, 1986

Assistant Vice President, 1982

Consulting Actuary responsibilities included performing pension valuations for United States corporations with domestic or foreign pension plans; analyzing and immunizing investment portfolios, researching markets for asset management; analyzing self-funded group medical and long-term disability programs; valuing liabilities for post-retirement medical plans; training employees.

CNA Insurance (July, 1976 to October, 1978)

Actuarial Assistant responsibilities included organizing, writing, and revising the Major Group Claims Cost Manual; researching the utilization and cost of non-standard group health benefits; determining the fluctuation of utilization and prices of group health and dental care across the country.

Academics

Adjunct Professor of History and Business, Carthage College, Kenosha, WI, 2010-13

Adjunct Professor, Columbia College Chicago, Dept. of Liberal Education, 2003

University of Chicago, Ph.D., History, March, 1976

University of Paris-I (1973-74)

University of Chicago, M.A., History, June, 1972

Massachusetts Institute of Technology, S.B., Mathematics, June, 1971

Massachusetts Institute of Technology, S.B., History, June, 1971

Personal Data

Born January 24, 1950 in Chicago, Illinois

Community service

Glenview School District 34 Caucus, 1994-2002

Chairman, 2000-2002

Northfield School District 225 Caucus, 2000-2004

Substitute Teacher at Glenbrook South H.S.: History, Mathematics, French

Surrey Lane Civic Association, President 1999-2005

Educational Counselor for M.I.T. applicants, 1998-2010