Post Office Box 13300 32317-3300 1801 Hermitage Boulevard, Suite 100 Tallahassee, Florida 32308 (850) 413-1349 www.sbafla.com/methodogy

Anne Bert Chief Operating Officer, Florida Hurricane Catastrophe Fund Floyd Yager, FCAS, Chair Actuary, Florida Hurricane Catastrophe Fund Advisory Council Jainendra Navlakha, Ph.D. Computer Systems Design Expert, Florida International University

Barry Gilway President/CEO & Executive Director, Citizens Property Insurance Corporation Steve Paris, Ph.D., ASA Statistics Expert, Florida State University

Robert Lee, FCAS Actuary, Florida Office of Insurance Regulation Hugh Willoughby, Ph.D. Meteorology Expert, Florida International University

Jeffrey McCarty, FCAS Actuary, Property and Casualty Industry

Vacant Insurance Consumer Advocate, Florida Department of Financial Services

Jared Moskowitz, J.D. Director, Florida Division of Emergency Management Vacant Professional Structural Engineer

> Vacant Insurance Finance Expert

June 11, 2019

Ms. Brandie Andrews AIR Worldwide Corporation 131 Dartmouth Street, 4<sup>th</sup> Floor Boston, MA 02116-5134

Dear Ms. Andrews:

This will confirm the finding of the Florida Commission on Hurricane Loss Projection Methodology on June 11, 2019, that the AIR Worldwide Corporation model has been determined acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings. The determination of acceptability expires on November 1, 2021.

The Commission has determined that the AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone<sup>®</sup> Version 6.1.0 limited to the options selected in the input form provided in Standard A-1, Hurricane Modeling Input Data and Output Reports, Disclosure 4 complies with the standards adopted by the Commission on October 25, 2017, and concludes that the AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone<sup>®</sup> Version 6.1.0 limited to the Florida hurricane model options selected (Standard A-1, Hurricane Modeling Input Data and Output Reports, Disclosure 4) is sufficiently accurate and reliable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential property in Florida.

Ms. Brandie Andrews AIR Worldwide Corporation June 11, 2019 Page Two

On behalf of the Commission, I congratulate you and your colleagues. We appreciate your participation and input in this process.

Sincerely,

Floyd Yager, Chair

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Jared Moskowitz, J.D. Director, Florida Division of Emergency Management

Vacant Professional Structural Engineer

> Vacant Insurance Finance Expert

July 31, 2019

Ms. Brandie Andrews AIR Worldwide Corporation 131 Dartmouth Street, 4<sup>th</sup> Floor Boston, MA 02116-5134

Dear Ms. Andrews:

On July 23, 2019, AIR notified the Florida Commission on Hurricane Loss Projection Methodology (Commission) of edits to Standard CI-7, Hurricane Model Security, which were omitted from the final submission for the AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone<sup>®</sup> 6.1.0, and identified the edits as a Type I difference in the submission document.

As Chair, I have reviewed and assessed, with input from the Professional Team, the submitted Forms A-1 (Zero Deductible Personal Residential Hurricane Loss Costs by ZIP Code), A-4B (Hurricane Output Ranges, 2017 FHCF Exposure Data), A-8B (Hurricane Probable Maximum Loss for Florida, 2017 FHCF Exposure Data), and S-5 (Average Annual Zero Deductible Statewide Hurricane Loss Costs – Historical versus Modeled), and the addendum to the previous May 31, 2019 submission. The documentation and explanations provided are sufficient, and a change in the model version identification is not required.

Ms. Brandie Andrews AIR Worldwide Corporation July 31, 2019 Page Two

This will confirm that the AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone<sup>®</sup> Version 6.1.0 remains acceptable under the 2017 Hurricane Standards. The determination of acceptability expires on November 1, 2021.

Sincerely,

Floyd Yager, Chair

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Tasha Carter Insurance Consumer Advocate, Florida Department of Financial Services Steve Paris, Ph.D., ASA Statistics Expert, Florida State University

Barry Gilway President/CEO & Executive Director, Citizens Property Insurance Corporation Hugh Willoughby, Ph.D. Meteorology Expert, Florida International University

Robert Lee, FCAS Actuary, Florida Office of Insurance Regulation Vacant Insurance Finance Expert

Jeffrey McCarty, FCAS Actuary, Property and Casualty Industry Vacant Professional Structural Engineer

Property and Casualty Industry

Jared Moskowitz, J.D.

Director,
Florida Division of Emergency Management

August 30, 2019

Ms. Brandie Andrews AIR Worldwide Corporation 131 Dartmouth Street, 4<sup>th</sup> Floor Boston, MA 02116-5134

Dear Ms. Andrews:

On July 24, 2019, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the software platform update, Touchstone 7.0.0 containing the AIR Hurricane Model for the United States Version 17.0.1 functionally equivalent to the AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0 and acceptable under the 2017 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2017 Hurricane Standards Report of Activities, as Chair, I have reviewed and assessed, with input from the Professional Team, all documentation and the regression test results submitted and have confirmed that the interim software update does not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0.

Ms. Brandie Andrews AIR Worldwide Corporation August 30, 2019 Page Two

This will confirm that the AIR Hurricane Model for the United States Version 17.0.1 as implemented in Touchstone 7.0.0 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2021.

Sincerely,

Floyd Yager, Chair

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Floyd Yager, FCAS, Chair

Actuary.

Florida Hurricane Catastrophe Fund Advisory Council

Steve Paris, Ph.D., ASA, Vice Chair

Statistics Expert,

Florida State University

Anne Bert Chief Operating Officer, Florida Hurricane Catastrophe Fund

Patricia Born, Ph.D. Insurance Finance Expert, Florida State University

Tasha Carter Insurance Consumer Advocate, Florida Department of Financial Services

Barry Gilway President/CEO & Executive Director, Citizens Property Insurance Corporation

Robert Lee, FCAS Actuary, Florida Office of Insurance Regulation

December 26, 2019

Ms. Brandie Andrews AIR Worldwide Corporation 131 Dartmouth Street, 4<sup>th</sup> Floor Boston, MA 02116-5134

Dear Ms. Andrews:

On December 12, 2019, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the software platform updates in Touchstone 7.0.7 and Touchstone 7.1.3, containing the AIR Hurricane Model for the United States Version 17.0.1, to be functionally equivalent to the AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0 and acceptable under the 2017 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2019 Hurricane Standards Report of Activities, as Chair, I have reviewed and assessed, with input from a subset of the Professional Team, all documentation and the regression test results submitted and have confirmed that the interim software updates do not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0.

Jeffrey McCarty, FCAS, MAAA, CERA Actuary, Property and Casualty Industry

Jared Moskowitz, J.D. Director, FL Division of Emergency Management

> Jainendra Navlakha, Ph.D. Computer Systems Design Expert, Florida International University

Hugh Willoughby, Ph.D. Meteorology Expert, Florida International University

Vacant Licensed Professional Structural Engineer Ms. Brandie Andrews AIR Worldwide Corporation December 26, 2019 Page Two

This will confirm that the AIR Hurricane Model for the United States Version 17.0.1 as implemented in Touchstone 7.0.7 and as implemented in Touchstone 7.1.3 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2021.

Sincerely,

Floyd Yager, Chair

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Floyd Yager, FCAS, Chair

Actuary.

Florida Hurricane Catastrophe Fund Advisory Council

Steve Paris, Ph.D., ASA, Vice Chair

Statistics Expert,

Florida State University

Anne Bert Chief Operating Officer, Florida Hurricane Catastrophe Fund

Patricia Born, Ph.D. Insurance Finance Expert, Florida State University

Tasha Carter Insurance Consumer Advocate, Florida Department of Financial Services

Barry Gilway President/CEO & Executive Director, Citizens Property Insurance Corporation

Robert Lee, FCAS Actuary, Florida Office of Insurance Regulation

February 13, 2020

Ms. Brandie Andrews AIR Worldwide Corporation 131 Dartmouth Street, 4<sup>th</sup> Floor Boston, MA 02116-5134

Dear Ms. Andrews:

On February 7, 2020, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the software platform update in Touchstone 7.3.0, containing the AIR Hurricane Model for the United States Version 17.0.1, to be functionally equivalent to the AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0 and acceptable under the 2017 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2019 Hurricane Standards Report of Activities, as Chair, I have reviewed and assessed, with input from a subset of the Professional Team, all documentation and the regression test results submitted and have confirmed that the interim software update does not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0.

Jeffrey McCarty, FCAS, MAAA, CERA Actuary, Property and Casualty Industry

Jared Moskowitz, J.D. Director, FL Division of Emergency Management

> Jainendra Navlakha, Ph.D. Computer Systems Design Expert, Florida International University

Hugh Willoughby, Ph.D. Meteorology Expert, Florida International University

Vacant Licensed Professional Structural Engineer Ms. Brandie Andrews AIR Worldwide Corporation February 13, 2020 Page Two

This will confirm that the AIR Hurricane Model for the United States Version 17.0.1 as implemented in Touchstone 7.3.0 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2021.

Sincerely,

Floyd Yager, Chair

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Timothy Barnett, FCAS, CPCU, ARe Actuary, Property and Casualty Industry

Patricia Born, Ph.D. Insurance Finance Expert, Florida State University

Tasha Carter Insurance Consumer Advocate, Florida Department of Financial Services

Barry Gilway President/CEO & Executive Director, Citizens Property Insurance Corporation

Jared Moskowitz, J.D. Director, FL Division of Emergency Management

March 16, 2021

Ms. Brandie Andrews AIR Worldwide Corporation 131 Dartmouth Street, 4<sup>th</sup> Floor Boston, MA 02116-5134

Dear Ms. Andrews:

On January 20, 2021, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the interim software update and the interim geographical update in Touchstone Version 8.2.5 containing the AIR Hurricane Model for the United States Version 17.0.1 acceptable under the 2017 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission and Interim Updates to Geographical or Other Data after a Model has been Determined to be Acceptable by the Commission in the 2019 Report of Activities, as Chair, I have reviewed and assessed, with input from the Professional Team, all documentation and the regression test results submitted and have confirmed that the interim software update and the interim geographical update do not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 17.0.0 as implemented in Touchstone Version 6.1.0.

Floyd Yager, FCAS, Chair Actuary, Florida Hurricane Catastrophe Fund Advisory Council

> Steve Paris, Ph.D., ASA, Vice Chair Statistics Expert, Florida State University

Jainendra Navlakha, Ph.D. Computer Systems Design Expert, Florida International University

Kayne Smith, Ph.D., FCAS Actuary, Florida Office of Insurance Regulation

> Hugh Willoughby, Ph.D. Meteorology Expert, Florida International University

Gina Wilson, ARe, CPA, CPM, CPCU Chief Operating Officer, Florida Hurricane Catastrophe Fund

Vacant Licensed Professional Structural Engineer Ms. Brandie Andrews AIR Worldwide Corporation March 16, 2021 Page Two

This will confirm that the AIR Hurricane Model for the United States Version 17.0.1 as implemented in Touchstone Version 8.2.5 is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2021.

Sincerely,

Floyd Yager, Chair