



7. SOAR's experts have performed superficial reviews of the new IDOT study, and have determined that they require certain additional documents and data in order to sufficiently and thoroughly analyze the study. (See Affidavits of Dr. Thomas Corke, attached hereto as "Exhibit B" and Dr. Patrick Veillette attached hereto as "Exhibit C").

8. SOAR hereby requests, on behalf of its experts, discovery of all documents in the possession of IDOT or its experts relating to the study just released, including but not limited to the following:

- a. Data and results from any model and simulations runs;
- b. Videos, documents, and data relating to any flight tests;
- c. Any documents providing verification or validation of test results;
- d. A list of all documents and data relied upon by Dr. Horn and Continuum Dynamics, Inc., in designing, carrying out, and analyzing the study;
- e. All correspondence between representatives of IDOT and either Dr. Horn or representatives of Continuum Dynamics, Inc.;
- f. All correspondence between representatives of CMH and either Dr. Horn or representatives of Continuum Dynamics, Inc.;
- g. All additional documents and information identified by Dr. Thomas Corke and Dr. Patrick Veillette in their affidavits attached hereto as **Exhibits B and C**;
- h. Any and all contracts not yet produced between IDOT and its experts.

9. Each of the documents described above is clearly relevant to this case and is necessary in order to allow SOAR and its experts to complete a thorough and accurate analysis of IDOT's new study.

WHEREFORE, the Streeterville Organization of Active Residents respectfully requests that Administrative Law Judge Neville enter a written Order compelling the Illinois Department of Transportation to produce the documents described above by Friday June 3, 2011.

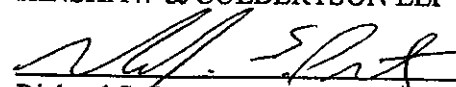
Dated: May 31, 2011

Respectfully submitted,

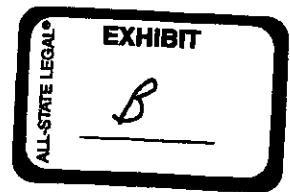
Streeterville Organization of Active Residents

BY: HINSHAW & CULBERTSON LLP

BY:

A handwritten signature in black ink, appearing to read "R. S. Porter", is written over a horizontal line.

Richard S. Porter  
One of Its Attorneys



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

In re: The Matter of the Proposed Children's Memorial Hospital Rooftop Heliport to be located in Chicago, Illinois )
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AFFIDAVIT OF DR. THOMAS C. CORKE

I, Dr. Thomas C. Corke, being duly sworn on oath, do depose and state as follows:

1. I am a professor at the University of Notre Dame and the founding director of the Center for Flow Physics and Control (FlowPac) and the Director of the Hessert Laboratory for Aerospace Research. I am a fellow of the American Institute of Aeronautics and Astronautics (AIAA), a fellow of the American Society of Mechanical Engineers, and a fellow of the American Physical Society, and the recipient of the AIAA's 2010 Aerodynamics Award. My Career Biography has been provided to the Illinois Department of Transportation (IDOT).

2. In 2007 the Streeterville Organization of Active Residents (SOAR) asked me to review the Children's Memorial Hospital's (CMH) heliport proposal and provide my professional assessment on behalf of the community. I reviewed materials related to the CMH proposal in advance of IDOT's first public hearing on the proposal held July 22nd to July 25th, 2009. I also testified at that hearing.

3. I have reviewed the "Analysis of Urban Airwake Effects on Heliport Operations at the Chicago Children's Memorial Hospital" produced by Joseph F. Horn and Continuum Dynamics dated 27 May 2011. Based on my review of this report to-date, the community's request for my professional assessment, and the serious and significant public safety issues and concerns surrounding this proposal, I respectfully request the following information be provided in an electronic format for my review:

Overall

- Bibliography of all reports, studies, documents, presentations, data etc. provided to Joseph F. Horn and Continuum Dynamics, Inc. in conjunction with the CMH proposal

Creation & validation of a Computational Fluid Dynamics (CFD) model in the Streeterville Area

- CFD data used to develop report Figures 3.6-1 through 3.6-5, including the mean and fluctuating velocity components for the vertical and horizontal directions
- Grid dependence study and time stepping study for the CFD model
- Validation results used to define CFD model accuracy bounds for subsequent calculations/predictions and conservatism assessment
- Uncertainty analysis for the time averaged and fluctuating velocity of the CFD model

Use of the CFD to predict flow fields for two to three wind conditions to be used as an input to a helicopter simulation

- Representative time series at a location along the flight path in the wake of a building used as input to the helicopter flight dynamics simulation and its corresponding spectrum
- Representative time series at a location over the heliport used as input to the helicopter flight dynamics simulation and its corresponding spectrum

Execution of a helicopter simulation to calculate the aircraft control and power margins for a sample helicopter along the approach path and the helipad to determine the ability of the helicopter to maintain control

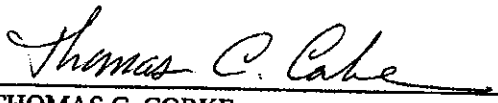
- Uncertainty analysis on the time length and blending period of the time history used for the airwake database
- Representative time series for wind case S11 with a scale factor of 1 and a representative time series for wind case S11 with a scale factor of 0.839 indicated in table 4.3-1
- List of CFD input conditions used to generate the data in Figures 4.4-1 and 4.4-2
- Uncertainty bounds on the flight dynamic model validation for the Bell 206-L3 for the conditions along the flight path and at the heliport

Analysis of the efficacy of the wind measurement system (the super-AWOS) for predicting dangerous wind conditions

- Any and all data used as the basis for the report's conclusions regarding the super AWOS
- Assumptions regarding the sensitivity and time response of the super AWOS to wind gust, wind direction, and wind shear which were used to develop the report's conclusions
- Assumptions regarding the uncertainty of the super AWOS in measuring mean wind velocity, wind gust, wind direction, and wind shear which were used in the report's conclusions

4. Further Affiant sayeth not.

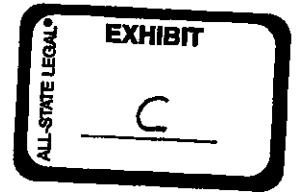
Dated: May 31, 2011

  
THOMAS C. CORKE

SUBSCRIBED and SWORN to  
before me this \_\_\_\_ day of May, 2011.

\_\_\_\_\_  
Notary Public

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**In re: The Matter of the Proposed Children's  
Memorial Hospital Rooftop Heliport to be  
located in Chicago, Illinois**

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**AFFIDAVIT OF DR. PATRICK VEILLETTE**

I, Dr. Patrick Veillette, being duly sworn on oath, do depose and state as follows:

1. I am an international award-winning researcher with recognition from the: Royal Aeronautical Society, Transportation Research Board, American Institute of Aeronautics and Astronautics, Flight Safety Foundation, and National Business Aircraft Association. I have consulted with the US General Accountability Office, National Transportation Safety Board (NTSB), Department of Homeland Security, and the Secretary of the Air Force on special research projects and safety protocols. I am a licensed pilot and training and safety officer, past FAA pilot examiner, and past aviation accident investigator for the US Air Force and US Forest Service. My Career Biography has been provided to the Illinois Department of Transportation (IDOT).

2. In 2009 the Streeterville Organization of Active Residents (SOAR) asked me to review the Children's Memorial Hospital's (CMH) heliport proposal and provide my professional assessment on behalf of the community. I reviewed materials related to the CMH proposal in advance of IDOT's first public hearing on the proposal held July 22<sup>nd</sup> to July 25<sup>th</sup>, 2009. I also testified at that hearing.

3. I have reviewed the "Analysis of Urban Airwake Effects on Heliport Operations at the Chicago Children's Memorial Hospital" produced by Joseph F. Horn and Continuum Dynamics dated 27 May 2011. Based on my review of this report to-date, the community's request for my professional assessment, and the serious and significant public safety issues and concerns surrounding this proposal, I respectfully request the following information be provided in an electronic format for my review:

Overall

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For the Helicopter Simulation and for the Flight Tests Conducted at the Site

- Aircraft airspeed
- Aircraft vertical speed
- Aircraft torque setting
- Aircraft weight
- Density altitude or assumed ambient temperature
- Uncertainty and sensitivity analyses
- Videos (for the flight tests outline in Table 5.1-1)
- Specification for “zero” reference point for all altitudes (e.g., Figure 5.4-12)

4. Further Affiant sayeth not.

Dated: June 1, 2011

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PATRICK VEILLETTE

SUBSCRIBED and SWORN to  
before me this \_\_\_ day of June, 2011.

\_\_\_\_\_  
Notary Public