




A Case Study FROM STALE TO STELLAR

Transforming Indoor Air Quality in an Aging Home

CUSTOMER CONCERNS

The homeowner was experiencing uncomfortable temperatures on the upper floor and high energy bills. An energy audit with IAQ testing revealed a need for ventilation.

Particulate Matter ($\mu\text{g}/\text{m}^3$)		Action Recommended
Chemicals ($\mu\text{g}/\text{m}^3$)		Action Recommended
Carbon Dioxide (ppm)		Action Required

THE SOLUTION

Air Doctors Heating and Cooling conducted an indoor air quality assessment and energy audit. Based on the findings, the following improvements were made:

- **Installation of a two-zone ductless mini-split heat pump:** This addressed the uneven heating and cooling, providing targeted temperature control.
- **Installation of an Energy Recovery Ventilator (ERV) with commissioning:** The ERV system introduces fresh, filtered outdoor air while exhausting stale indoor air. Commissioning ensured optimal system performance.
- **Bathroom vent replacement with roof termination:** Improved ventilation and moisture control.



BUILDING FEATURES

Year Built:
1985

Number of Bedrooms:
Three

Square Footage:
3,176 sq ft

Sensitive Occupants:
Yes



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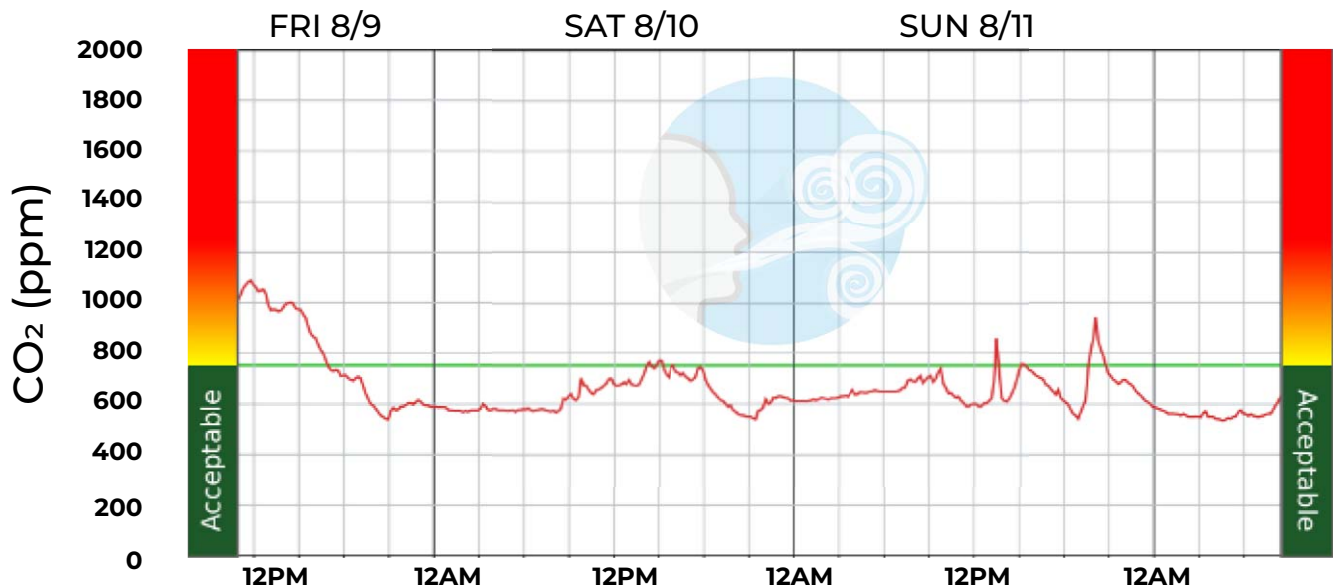


THE RESULTS

AirAdvice Test	Pre	Post
Particulates ($\mu\text{g}/\text{m}^3$)	13	3
VOC ($\mu\text{g}/\text{m}^3$)	946	753
CO ₂ (ppm)	1595	658



- **Enhanced comfort:** The ductless system and ERV work together to maintain consistent temperatures and improve overall air quality.
- **Potential energy savings:** Improved ventilation and targeted heating/cooling zones can contribute to lower energy consumption.



CONCLUSION

This case study demonstrates the effectiveness of a comprehensive approach to indoor air quality and comfort improvements. By addressing ventilation, filtration, and temperature control, the homeowner now enjoys a healthier, more comfortable living environment. The use of AirAdvice monitoring pre- and post-installation was instrumental in validating the performance of the ERV system and quantifying the improvements in indoor air quality.