



## Sample Occupant Comfort Survey - Results

### SUMMARY

A thermal comfort survey was distributed to building occupants at 452 Main Street. The intent of this survey was to assess occupant comfort as it relates to the building environment. Answers to these survey questions helped indicate the performance of the buildings' heating, ventilation, air conditioning, acoustical, lighting and cleaning systems. The results provide direction for improving the comfort conditions for building occupants.

This survey was divided into eight sections:

- Section 1 – Background information.
- Section 2 – Current thermal conditions in your space
- Section 3 – Thermal conditions in your space during the winter months
- Section 4 – Thermal conditions in your space during the summer months.
- Section 5 – Acoustical conditions in your space.
- Section 6 – Lighting conditions in your space.
- Section 7 – Air quality in your space.
- Section 8 – Cleanliness / maintenance in your space and the general building.

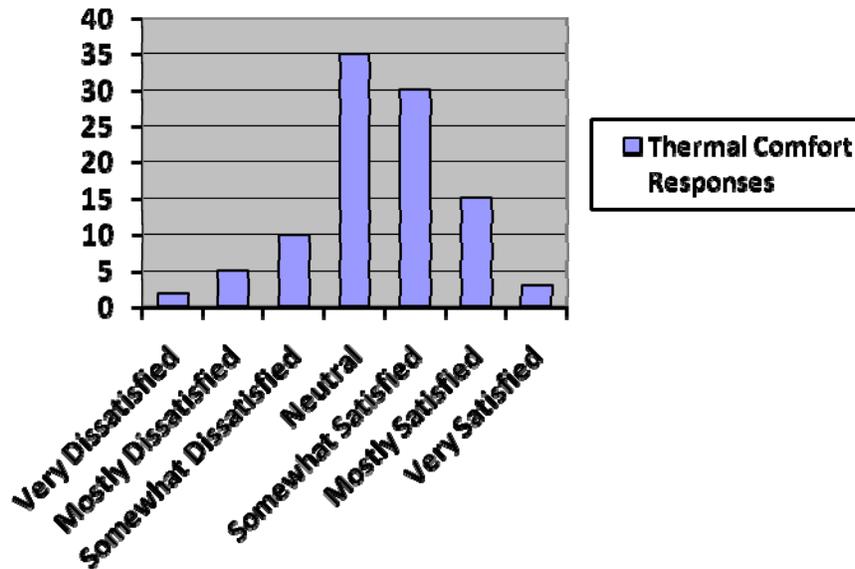
Of the 300 full-time equivalent (FTE) occupants, 100 occupants completed the survey. This represents approximately 33% of the total building occupants. In accordance with ASHRAE 55-2004 and LEED-EB:OM IEQ credit 2.1 (Occupant Comfort- Occupant Survey), results were tabulated from these responses. A sampling of these results has been provided below.

For any questions that resulted in at least 20% dissatisfactory responses, corrective action measures are being taken to address these concerns. Corrective action for these issues included HVAC control adjustments, diffuser airflow adjustments, solar control, acoustical and lighting modifications or other investigations and adjustments.

### RESULTS

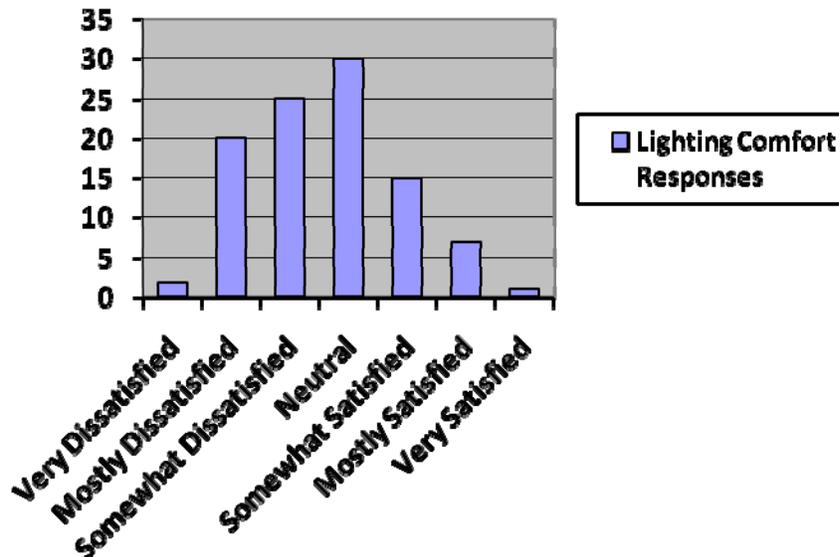
#### **Thermal Comfort**

The following chart represents the results of questions pertaining to thermal comfort conditions within the building. Based on these results, 17% of respondents were dissatisfied with thermal comfort. No corrective action is required, however building management recognizes that this represents a significant level of dissatisfaction, so possible repairs and improvements will be investigated. Building engineers will also make an effort to verify temperature setpoints in the relevant building zones and communicate with building occupants if complaints persist.



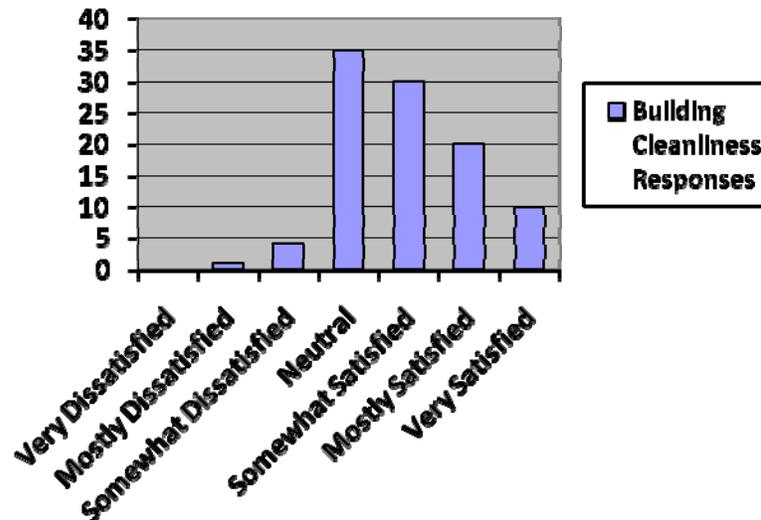
### Lighting Quality

The following chart represents the results of questions pertaining to lighting quality conditions within the building. Based on these results, 47% of respondents were dissatisfied with lighting comfort. Further investigation of responses and investigations revealed that the largest area of concern was with excessive afternoon glare in office areas. To correct this issue, the building is installing shading devices on the western side of the building to control glare from the afternoon sun.



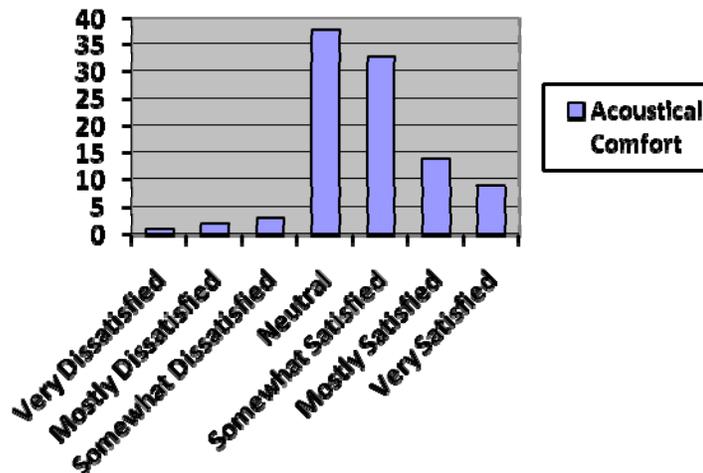
### Building Cleanliness

The following chart represents the results of questions pertaining to building cleanliness. Based on these results, only 5% of respondents were dissatisfied with building cleanliness. This is largely due to the implementation of a building wide green cleaning and waste/recycling program.



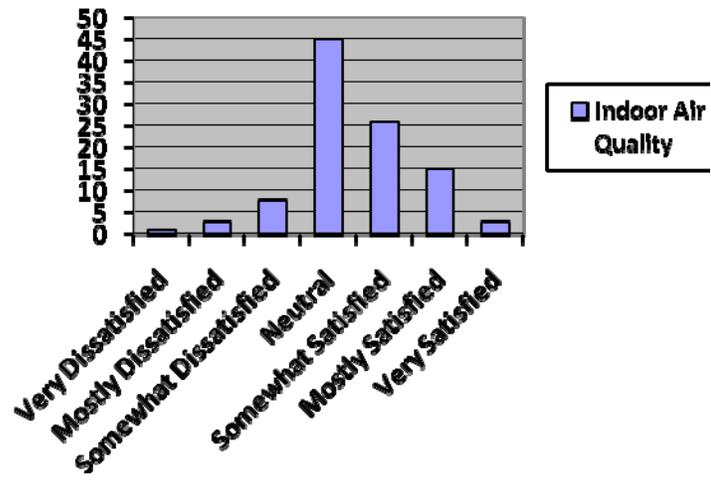
### Acoustics

The following chart represents the results of questions pertaining to acoustical comfort. Based on these results, only 6% of respondents were dissatisfied with acoustics in the workplace.



### Indoor Air Quality

The following chart represents the results of questions pertaining to indoor air quality. Based on these results 11% of respondents were dissatisfied with air quality in the workplace, with many of the comments indicating that the air in portions of the building felt “stuffy”. These results may be linked to the level of satisfaction with thermal comfort, so building engineers will assess HVAC status and airflow in the relevant building spaces.



**APPENDIX A: Corrective Action Tracking Log**

Survey Date	IEQ Complaint	Building Location	Corrective Action Performed	Description of Results	Responsible Party and Date Completed
Aug. 2009	Lighting Quality: excessive lighting and glare problems	Office areas on west/south west side of building	Installed shading devices on all windows on W and SW office areas and reduced lighting levels in certain areas by switching from 32 Watt lamps to 25 Watt lamps.	Survey of these occupants and light level readings were taken to confirm improved lighting levels and glare reduction. Survey resulted in only 5% dissatisfied employees.	Bob Jones, Building Engineer October, 2009
Aug. 2009	Thermal Comfort: Room too cold and strong draft in some areas	Open office areas on 10 <sup>th</sup> and 11 <sup>th</sup> floors	Building engineer tested these areas for temperature, humidity and air speed. Found that certain diffusers should be relocated and cooling set-points raised 2 degrees on these floors.	Survey of 10 <sup>th</sup> and 11 <sup>th</sup> floor occupants demonstrated improved thermal comfort. Additional survey/investigation will take place during heating season to ensure heating set-points are accurate.	John Doe, Building Engineer September 2009