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There's no question about it—thriving in the 21st century will depend on the ability to track, manage, and report on environmental, carbon, and GHG-related risks with speed and precision. Designed to support the demanding Corporate Social Responsibility (CSR) programs of Fortune 1000 companies and small to medium sized businesses, e3's industry-leading software helps top organizations across North America measure, monitor and verify their environmental and carbon footprints.

GHG Inventory Report

Menkes Union Tower Inc.

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September 20, 2011

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SUMMARY

Menkes Union Tower Inc. Summary

This annual report details by scope, activity, and source, the organizations greenhouse gas (GHG) emissions and reductions over the last reporting period. This report covers the Menkes Union Tower Inc., located at 25 York St., Toronto, ON, which is managed by Menkes Property Management Services Ltd. The reporting period covers January 1st 2010 and ending Dec 31, 2010.

The following activities were measured for GHG emissions.

- Natural gas used for cooking (none during this reporting period)
- District Steam for Heating
- District Chilled Water for Cooling
- Supplementary cooling provided by refrigeration (none during this reporting period)
- Electricity
- Water

The company found that its GHG emissions during the reporting period totaled 1758.802 metric tonnes CO_2e (rounded to the nearest thousandth).

The purpose of this undertaking is to help Menkes Property Management Services Ltd. track and understand GHG emissions related to the Menkes Union Tower Inc. facility in order to identify possibilities for further GHG reductions.

This report was prepared using software provided by e3 Solutions Inc. e3 also provided all emission factors, and provided the template for the report itself.

This report is prepared in accordance with ISO 14064, the WRI, the U.S. EPA, and the GHG Protocol.

ORGANIZATIONAL PROFILE

Menkes Union Tower Inc. is located in Toronto, ON at 25 York Street. The facility is Active and is owned by HOOP Reality Corp and Menkes Property Management Services Ltd.

Currently, the facility has 2224 employees, and has a total area of 850349 sq. ft.

GHG INVENTORY DESIGN AND DEVELOPMENT

ORGANIZATIONAL BOUNDARIES

For this report, the physical boundaries of Menkes Union Tower Inc. serve as the reporting boundaries. Activities which take place onsite and over which Menkes Property Management Services Inc. exercises direct control, such as facility heating and cooling are classified as Scope 1. Purchased electricity falls under Scope 2. Activities that occur offsite or with use of non-company assets, such as employee commuting and utility water, are considered Scope 3.

OPERATIONAL BOUNDARIES

ESTABLISHING OPERATIONAL BOUNDARIES

All reported emissions are divided as follows.

Scope 1 (Direct GHG Emissions)

- Vehicle Fleet (all site-owned and leased vehicles)
- Stationary Combustion (on-site combustion including natural gas heating, incineration, propane vehicles, gasoline generators, etc.)
- Refrigeration (includes emissions from cooling systems and refrigerant leaks such as HFCs and PFCs)
- On-site waste (any onsite landfill emissions or onsite waste storage)

Scope 2 (Indirect Energy Emissions)

- Electricity (includes electricity purchased from the local grid or supplied by a source outside the site boundary)
- Imported heat and steam

Scope 3 (Indirect Non-Energy Emissions)

- Employee Commuting (travel by employees to and from the site using personal vehicles)
- Business Travel (travel using non-company vehicles mandated by site operations)
- Water (utility water used onsite)
- Waste (waste produced onsite and shipped to an external landfill or recycling centre)

DIRECT GHG EMISSIONS AND REMOVALS

The following table displays all Scope 1 emissions activities, with quantified consumption data and emissions for each.

Source	Consumption	Emissions(t CO_2e)
EU-25 York_Additional	5348 L Diesel	14.920
RFG-25 York_Refrigeration	0	0

No removal projects were completed during this reporting period.

No combustion of biomass occurred during this reporting period.

ENERGY INDIRECT GHG EMISSIONS

The following table displays all Scope 2 emissions activities, with quantified consumption data and emissions for each.

Source	Consumption	Emissions(t CO_2e)
ELE-25 York_Electricity	9646262 kWh	972.633
25 York_Steam	8679014 lb	628.361
25 York_Chilled Water	2093613 ton-hr	141.528

OTHER INDIRECT GHG EMISSIONS

The following table displays all Scope 3 emissions activities, with quantified consumption data and emissions for each.

Source	Consumption	Emissions(t CO_2e)
25 York_Water	17924.6 m^3	1.229

QUANTIFICATION OF GHG EMISSIONS AND REMOVALS

QUANTIFICATION STEPS AND EXCLUSIONS

All calculated emissions in this report were obtained through the use of emission factors. Consumption totals were multiplied by applicable emission factors to obtain totals.

The following table lists activities, consumption material, emission factors, and the sources from which these factors were obtained.

Source	Material	Emission Factor	Emission Material	Data Source
EU-25 York_Additional	Diesel	2663 g/L	CO_2	Environment Canada National Inventory Report 1990-2009
EU-25 York_Additional	Diesel	0.133 g/L	CH_4	Environment Canada National Inventory Report 1990-2009
EU-25 York_Additional	Diesel	0.4 g/L	N_2O	Environment Canada National Inventory Report 1990-2009
ELE-25 York_Electricity	Electricity	100 g/kWh	CO_2	Environment Canada National Inventory Report 1990-2008
ELE-25 York_Electricity	Electricity	0.01 g/kWh	CH_4	Environment Canada National Inventory Report 1990-2008
ELE-25 York_Electricity	Electricity	0.002 g/kWh	N_2O	Environment Canada National Inventory Report 1990-2008
WTR-25 York_Chilled Water	Chilled Water	67.6 g/ton-hr	CO_2	Latest factors from Enwave. Steam factor is unchanged. Chilled water factor is valid for consumption data from 2009 onward.
WTR-25 York_Steam	Steam	72.4 g/lb	CO_2	Latest factors from Enwave. Steam factor is unchanged. Chilled water factor is valid for consumption data from 2009 onward.
WTR-25 York_Water	Water	68 g/m3	CO_2	Calculating GHG Emissions from Water Use & Collection in Waterloo Region (Tables 1 and 2)
WTR-25 York_Water	Water	0.0068 g/m3	CH_4	Calculating GHG Emissions from Water Use & Collection in Waterloo Region (Tables 1 and 2)
WTR-25 York_Water	Water	0.00136 g/m3	N_2O	Calculating GHG Emissions from Water Use & Collection in Waterloo Region (Tables 1 and 2)

For non-CO_2 gases, values were then multiplied by their respective global warming potentials (GWP) over 100 years. GWP values were drawn from the International Organization for Standardization's (ISO) standard on greenhouse gases (ISO 14064-1). The GWP values relevant to this report are as follows.

Gas	GWP
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310

Final emission values in tonnes of CO_2e are rounded to the nearest thousandth.

SELECTION OF QUANTIFICATION METHODOLOGIES

As previously stated, all quantification of emissions in this report are completed by multiplying consumption data by the emission factors listed under Quantification Steps and Exclusions. The table below lists the source of the consumption data for each emission source.

Source	Data Source	Collection Method
EU-25 York_Additional	Building operator	Manual data entry
ELE-25 York_Electricity	Toronto Hydro utility bills	Manual data entry
WTR-25 York_Chilled Water	Enwave utility bills	Manual data entry
WTR-25 York_Steam	Enwave utility bills	Manual data entry
WTR-25 York_Water	City Water utility bills	Manual data entry

Direct measurement is considered impractical at this time, since meter readings by staff is currently a time-consuming process. Currently, staff are working to make meters readable by BAS remote access.

SELECTION AND COLLECTION OF GHG ACTIVITY DATA

A complete list of activity data for all emissions sources is available in Appendix B.

NOTE: Where consumption data overlaps with a period prior to Jan 01 2010 or after Dec 31 2010, a per-day proration was used to calculate the consumption falling within the reporting period.

SELECTION OR DEVELOPMENT OF GHG EMISSION OR REMOVAL FACTORS

Emission factors were selected by e3 Solutions to conform to Canadian standard inventory reporting, wherever possible. Where available, emission factors obtained using the most recent National Inventory Report (1990-2009) were employed, to make use of the most up-to-date emission factors.

Emission factors for Steam and Chilled Water were supplied by the provider, Enwave.

Emission factors for Water were derived from a study published by Sustainable Waterloo, *Calculating GHG Emissions from Water Use & Collection in Waterloo Region* (Tables 1 and 2). Figures used were those derived from large capacity surface supply water.

GHG INVENTORY COMPONENTS

GHG EMISSIONS AND REMOVALS

The following table documents the total GHG emissions for all activity types in t CO_2e. A full list of emissions by individual equipment is available under Operational Boundaries. A list of individual GHG emissions by source is shown in Appendix A.

Scope	Source	Emissions (t CO_2e)	Total
1	Stationary Combustion	14.920	14.920
2	Electricity	972.633	1742.522
	Steam	628.361	
	Chilled Water	141.528	
3	Water	1.229	1.229
TOTAL			1758.671

ORGANIZATIONAL ACTIVITIES TO REDUCE GHG EMISSIONS OR INCREASE GHG REMOVALS

DIRECTED ACTIONS

Due to both the nature of the software solution, and the company's GHG reduction strategy, emissions are calculated on a site by site basis. This provides the company with a high-level perspective on the distribution of its GHG emissions, as well as identifying critical sectors for reduction.

Therefore, each report covers a single facility. This report is strictly confined to the 25 York St. Facility. As such, all classification of scopes is done from the perspective of the 25 York St. Facility, with all onsite emissions, as well as site-owned equipment, classified as Scope 1, purchased energy used on site as Scope 2, and offsite emissions at the behest of the 25 York St. Facility as Scope 3.

As previously stated, all GHG emissions and reductions are calculated using emission factors. Therefore, the choice of emission factors for this report is consistent with the geographic location and activities of the 25 York St. Facility. Reductions are calculated by means of these same emission factors, taking into account the scope influenced by the project and the actual implementation date.

GHG EMISSION REDUCTION OR REMOVAL ENHANCEMENT PROJECTS

Lists of completed projects, with achieved reductions, are displayed under Organisational Boundaries.

BASE-YEAR GHG INVENTORY

SELECTION AND ESTABLISHMENT OF BASE YEAR

Menkes first began documenting and reporting the GHG inventory for 25 York in 2010. 2010 was established as the baseline year because it is the first 12-month period (as required by ISO 14064 for which complete data is available.

ASSESSING AND REDUCING UNCERTAINTY

The following are any uncertainties or assumptions made in calculating emissions.

Scope	Source	Notes
2	Electricity	June 2010, October 2010, November 2010 – assumptions base on year to date per day averages
3	Water	September 2010, November 2010, December 2010 – based on average use per day for previous month

UNCERTAINTIES

The level of uncertainty regarding the aforementioned estimates is considered to be low, since all are based on figures obtained from actual bill data. Furthermore, the bill data involved is drawn from actual data that is concurrent with those time periods being estimated.

ROUNDING

All emission values in this report are rounded up individually to the nearest thousandth. Therefore, emission totals may be 0.001 t CO_2e lower than the sum of individual gas emissions presented.

GHG INVENTORY QUALITY MANAGEMENT

GHG INFORMATION MANAGEMENT

REQUIREMENTS

In order to ensure consistency in the information imported and exported into the GHG measurement software, specific roles were assigned to both internal and external personnel.

Name(s)	Title(s)	Company	Responsibilities
Olga Voitchenko	Tenant Services Co-Ordinator	Menkes Property Management Services Ltd.	Provide required utility data
Jolene McLaughlin	Sustainability Consultant	Enermodal Engineering	Upload data to e3 software tool

J.P. Brown	Carbon Analyst	e3	Checks for data gaps and verifies accuracy of data
Julie Matthews	VP Carbon Solutions	e3	Ensures that calculations adhere to ISO 14064 standards

Selection of Quantification Methodologies details the data sources used for each activity. The importing of this data for measurement is accomplished using several different methods.

CONSIDERATIONS

To further ensure consistency of this report, all emissions data is broken down according to month. Where data sources split across months, such as utility bills, consumption data is divided by the number of days in the period, with emissions assigned according to the number of days failing in each month.

All data is periodically checked for gaps by e3 Solutions, as well as at the request of the company.

DOCUMENT RETENTION AND RECORD KEEPING

e3 Solutions allows applicable documents, such as utility bills to be retained within the software itself. This not only makes verification simpler and more transparent, but also provides an added safeguard in the event of original record loss.

At any time, reports can be regenerated with the most up-to-date information available. The association of emission factors with specific time periods of operations prevents new emission factors from overwriting those of a previous reporting period.

Data within the software can be accessed at any time, enabling a third-party auditor to verify consumption data, calculation methodology, emission factors, boundaries, and calculated emissions.

E3'S ROLE IN VERIFICATION ACTIVITIES

e3 Solutions Inc., serves as a quantifier of GHG emissions, and supplies software solutions to collect, track, manage data, as well as calculating emissions and reductions. e3 Solutions does not perform 3rd party verification, nor does it provide certification to its clients.

e3 Solutions software is fully compliant with ISO 14064 and the WRI GHG Protocol.

This GHG inventory report has undergone third party verification to a reasonable level of assurance by Evan Jones of 3P Analysis and Consulting. See the third party verification report for further details.

APPENDIX A: FULL EMISSIONS BREAKDOWN

All emissions are in tonnes of CO_2e, rounded to the nearest thousandth.

Category	Source	CO_2	CH_4	NO_2	HFCs	PFCs	SF_6	CO_2e
Direct	Stationary Combustion	14.242	0.015	0.663				14.920
Indirect	Electricity	964.626	2.026	5.981				972.633
	Steam	628.361						628.361
	Chilled Water	141.528						141.528
Other	Water	1.219	0.003	0.008				1.229 *
TOTAL		**1749.976**	**2.044**	**6.652**				**1758.671**

* represents actual value from unrounded emissions, not the sum of rounded CO_2, CH_4, and N_2O shown here.

APPENDIX B: FULL BREAKDOWN OF ACTIVITIES

* denotes per-day prorated figure

Source	Start Date	End Date	Material	Consumption	Units
EU-25 York_Additional	Jan 01 2010	Dec 31 2010	Diesel	5348*	L
ELE-25 York_Electricity	Dec 29 2010	Jan 26 2011	Electricity	99062*	kWh
ELE-25 York_Electricity	Nov 26 2010	Dec 29 2010	Electricity	957600	kWh
ELE-25 York_Electricity	Aug 27 2010	Sep 27 2010	Electricity	799200	kWh
ELE-25 York_Electricity	Jul 28 2010	Aug 27 2010	Electricity	763200	kWh
ELE-25 York_Electricity	Jun 28 2010	Jul 28 2010	Electricity	799200	kWh
ELE-25 York_Electricity	May 1 2010	May 31 2010	Electricity	655200	kWh
ELE-25 York_Electricity	Apr 1 2010	Apr 30 2010	Electricity	835200	kWh
ELE-25 York_Electricity	Mar 1 2010	Mar 31 2010	Electricity	741600	kWh

ELE-25 York_Electricity	Feb 1 2010	Feb 28 2010	Electricity	1303200	kWh
ELE-25 York_Electricity	Jan 1 2010	Jan 31 2010	Electricity	194400	kWh
ELE-25 York_Electricity	Oct 26 2010	Nov 26 2010	Electricity	972000	kWh
ELE-25 York_Electricity	Sep 27 2010	Oct 26 2010	Electricity	698400	kWh
ELE-25 York_Electricity	Jun 1 2010	Jun 30 2010	Electricity	828000	kWh
WTR-25 York_Chilled Water	Dec 1 2010	Dec 31 2010	Chilled Water	77359	ton-hr
WTR-25 York_Chilled Water	Nov 1 2010	Nov 30 2010	Chilled Water	114390	ton-hr
WTR-25 York_Chilled Water	Oct 1 2010	Oct 31 2010	Chilled Water	142523	ton-hr
WTR-25 York_Chilled Water	Sep 1 2010	Sep 30 2010	Chilled Water	203655	ton-hr
WTR-25 York_Chilled Water	Aug 1 2010	Aug 31 2010	Chilled Water	305030	ton-hr
WTR-25 York_Chilled Water	Jul 1 2010	Jul 31 2010	Chilled Water	331043	ton-hr
WTR-25 York_Chilled Water	Jun 1 2010	Jun 30 2010	Chilled Water	245929	ton-hr
WTR-25 York_Chilled Water	May 1 2010	May 31 2010	Chilled Water	200122	ton-hr
WTR-25 York_Chilled Water	Apr 1 2010	Apr 30 2010	Chilled Water	137800	ton-hr
WTR-25 York_Chilled Water	Mar 1 2010	Mar 31 2010	Chilled Water	101191	ton-hr
WTR-25 York_Chilled Water	Feb 1 2010	Feb 28 2010	Chilled Water	98939	ton-hr
WTR-25 York_Chilled Water	Jan 1 2010	Jan 31 2010	Chilled Water	135632	ton-hr

WTR-25 York_Steam	Dec 1 2010	Dec 31 2010	Steam	2729166	lb
WTR-25 York_Steam	Nov 1 2010	Nov 30 2010	Steam	1523485	lb
WTR-25 York_Steam	Oct 1 2010	Oct 31 2010	Steam	979788	lb
WTR-25 York_Steam	Sep 1 2010	Sep 30 2010	Steam	0	lb
WTR-25 York_Steam	Aug 1 2010	Aug 31 2010	Steam	0	lb
WTR-25 York_Steam	Jul 1 2010	Jul 31 2010	Steam	0	lb
WTR-25 York_Steam	Jun 1 2010	Jun 30 2010	Steam	1494	lb
WTR-25 York_Steam	May 1 2010	May 31 2010	Steam	3143	lb
WTR-25 York_Steam	Apr 1 2010	Apr 30 2010	Steam	65289	lb
WTR-25 York_Steam	Mar 1 2010	Mar 31 2010	Steam	274428	lb
WTR-25 York_Steam	Feb 1 2010	Feb 28 2010	Steam	1093241	lb
WTR-25 York_Steam	Jan 1 2010	Jan 31 2010	Steam	2008980	lb
WTR-25 York_Water	Dec 16 2010	Dec 31 2010	Water	674.5 *	m3
WTR-25 York_Water	Nov 16 2010	Dec 16 2010	Water	1470	m3
WTR-25 York_Water	Oct 19 2010	Nov 16 2010	Water	1372	m3
WTR-25 York_Water	Sep 17 2010	Oct 19 2010	Water	923.7	m3
WTR-25 York_Water	Aug 17 2010	Sep 17 2010	Water	1519	m3
WTR-25 York_Water	Jul 14 2010	Aug 17 2010	Water	1761.8	m3
WTR-25 York_Water	Jun 16 2010	Jul 14 2010	Water	1609.9	m3
WTR-25 York_Water	May 13 2010	Jun 16 2010	Water	1892.3	m3
WTR-25 York_Water	Mar 17 2010	May 13 2010	Water	2542	m3
WTR-25 York_Water	Feb 17 2010	Mar 17 2010	Water	1275.1	m3
WTR-25 York_Water	Jan 01 2010	Feb 17 2010	Water	2884.3 *	m3