Verification Report – Ventas CDP Submission

Goby, Inc. is in a contractual agreement with Ventas, Inc. to collect and compile the necessary data required to provide the energy consumption and GHG calculations that support the CDP report. In 2016, the consumption data was collected from Ventas for electricity, natural gas and other major CO2 emitting fuels.

Responsibilities of Ventas and the Verification Provider

The management of Ventas has primary responsibilities for the preparation and content of its CDP Response. Goby's statement represents its independent opinion on the content and accuracy of the information and environmental data within.

Goby's Data Collection Process

The following processes were utilized to collect and compile the data for the CDP Assessment:

- 2016 consumption data was provided to Goby directly from third party energy suppliers and utility companies in the format of either an invoice, flat file, or other raw consumption data to be reviewed, analyzed, and validated into Goby's data management system. Each invoice was validated for accuracy by identifying any discrepancies and outliers prior to inputting in the Goby platform.

- After all data was inputted into the Goby platform, a missing data and data validation report was provided to Ventas for review to provide any additional data or clarifications. After all data was confirmed, the greenhouse gases were then calculated using The Climate Registry General Verification Version 2.1 (Released June 2014) standard.

- All relevant data is exported from the Goby platform to be broken down by each scope of GHG emissions, as applicable. The data was further verified by Goby teams to address any changes in property type and number of facilities.

- On a monthly basis, Goby will update utility data and property data as available for each building

- On a monthly basis, Goby will pull the monthly average temperature for weather normalization from NOAA based on local zip code

- Goby performs quality assurance tracking for reporting errors and large outliers in data

- Data and utility invoices will be pulled automatically into Goby via sites' online utility accounts, where available, and will manually load utility data from bills where online logins are not available

- Any invoices are stored in a cloud based file sharing program as a document repository
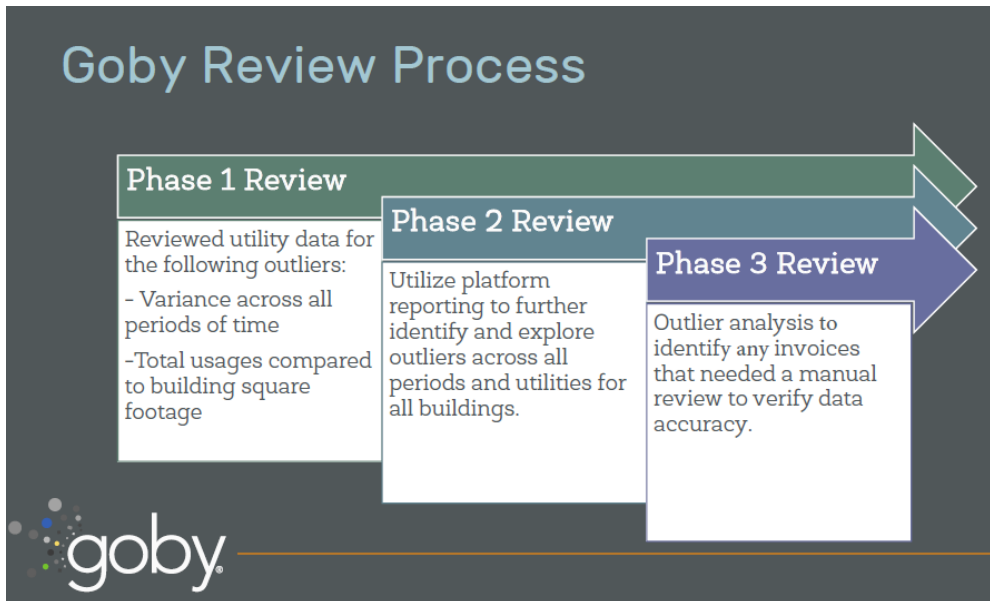
Data Validation Process and Methodology

Below is a flow chart of the Goby Data Validation Process for how primary and secondary data are reviewed.
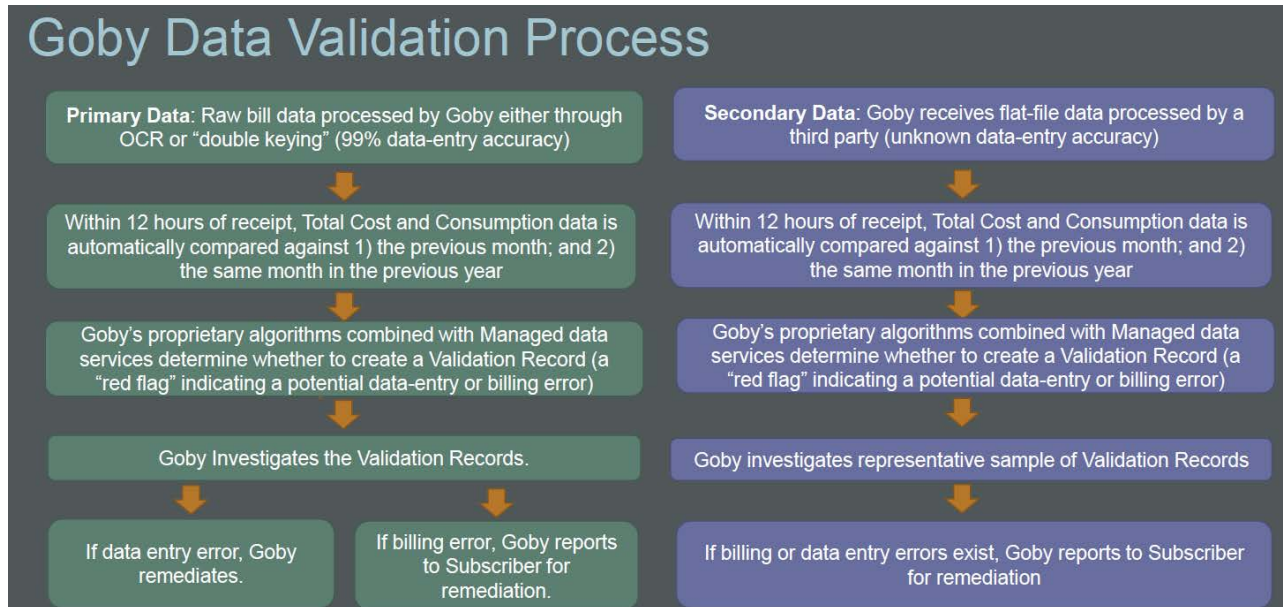
All utility data in the Goby platform is assessed based on the below validation rules. If any data is above or below the listed Error Type's then a flag is generated within the platform and a Goby Team member responds to that item. Data is reviewed based on various Interval periods to assess for potential errors.

Goby Platform Automated Validations			
Validation Rule	**Error Type**	**Interval**	**Utility Type(s)**
• Average Consumption per Day per Meter (if meter level data available) • Average Consumption per Day per Building (if meter level data unavailable)	Exceeds Threshold Percentage Change (+/-)	• Current Billing Period vs. Previous Billing Period • Current Billing Period vs. Same Billing Period Last Year	• Energy • Water • Waste
Total Cost Per Bill	Exceeds Threshold Percentage Change (+/-)	• Current Billing Period vs. Previous Billing Period • Current Billing Period vs. Same Billing Period Last Year	• Energy • Water • Waste
• Average Cost per Day per Meter (if meter level data available) • Average Cost per Day per Building (if meter level data unavailable)	Exceeds Threshold Percentage Change (+/-)	• Current Billing Period vs. Previous Billing Period • Current Billing Period vs. Same Billing Period Last Year	• Energy • Water • Waste

Goby Review Process

Phase 1 Review

Reviewed utility data for the following outliers:

- Variance across all periods of time

-Total usages compared to building square footage

Phase 2 Review

Utilize platform reporting to further identify and explore outliers across all periods and utilities for all buildings.

Phase 3 Review

Outlier analysis to identify any invoices that needed a manual review to verify data accuracy.

Stages of the Goby Platform

HISTORICAL
Historical Data Load
QA Spot Check

The Goby team will load historical utility data and monthly bills from either paper bills, utility logins, or other preferred systems in a **seamless data transfer.** This data will be saved in a central location and easily accessed from SeaSuite reports.

CONFIG
Data Configuration

SeaSuite **connects directly to utility providers** to pull data in automatically every month, removing burden and creating a painless setup process. Meter configurations will be unique to each property's specifications.

LAUNCH
Client Access

A **customized communication strategy** will be utilized to launch the platform as "live" to both executive level and property level teams. This strategy will onboard users with pragmatic training and support, including live webinars and in-person presentations.

ONGOING
Active

Our expert and **dedicated team** ensure ongoing support. This includes: ongoing meetings, data quality review, turn-key services, normalized and comparative reporting, utility bill management, etc.

Goby has a high level of confidence with respect to the reported data. The consumption data was collected directly from the professional utility providers and input into our data management system. Once the data is extracted by the operators, Goby utilizes a separate process to automatically upload the data. Goby's validation process then begins by ensuring that the data that was provided by the operators and utility providers corresponds with what is in the Goby platform. The entry and validation process is both electronic and manual to insure greater accuracy. All data points are validated for outliers and discrepancies.

All GHG calculations are performed by Goby using the consumption data provided by the operators. Goby runs all the data through a manual recheck once exported from the platform to ensure there are no major outliers that could potentially misinterpret the data. Goby also uses the GHG Protocol to evaluate Ventas' specified environmental performance information and its adherence to the principles.

The loading of data and calculating of GHG emissions are overseen by Ashley Dauksas, Vice President of Data and Michelle Winters, Director of Consulting.

ISO 14001 Alignment

The Goby processes described here are aligned with the four stages of ISO 14001. See Appendix B for details.

Scope and Limitations

The submission covered a reporting period of January 1, 2013 – December 31, 2016. Greenhouse gas ("GHG") quantification is subject to inherent uncertainty due to such things as incomplete scientific knowledge and other factors, to precisely characterize the relationship between various inputs and the emission results. Energy use data used in GHG emissions calculations are subject to primary limitations, given the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques may result in materially different measurements.

Based on our review, nothing came to our attention that caused us to believe that the selected sustainability metrics are not fairly stated.

Using the process outlined herein, Goby has assured Ventas's 2016 emissions and data points as specified in Appendix A. This represents 100% of the data that Ventas has reported to CDP.

Appendix A

	Total Portfolio GSF	90,813,547.73

Medical Office	2017 Submittal			
	2015 Reported Value	2016 Reported Value	2016 Data Coverage	2016 Max Potential Data Coverage
Energy (MWh)	349,327.54	414,204.63	13,670,324.73	21,498,829.73
Fuels (MWh)	75,490.20	103,936.00	9,010,824.00	11,321,321.00
District H&C (MWh)				
Electricity (MWh)	273,837.34	310,268.62	13,670,324.73	21,498,829.73
Water (m3)	1,073,496.25	1,299,333.94	14,566,368.73	21,498,829.73
GHG - Scope 1 (MT CO2e)	13,681.41	18,836.76	9,010,824.00	11,321,321.00
GHG - Scope 2 (MT CO2e)	144,891.49	166,281.34	13,670,324.73	21,498,829.73
Waste - Total Waste (tonnes)		28,126.79		
Waste - Diversion %		22.46%		

Healthcare	2017 Submittal			
	2015 Reported Value	2016 Reported Value	2016 Data Coverage	2016 Max Potential Data Coverage
Energy (MWh)	145,602.55	151,161.79	2,990,634.00	11,004,235.00
Fuels (MWh)	56,241.00	59,503.32	2,910,829.00	6,514,094.00
District H&C (MWh)	-	-	-	-
Electricity (MWh)	89,361.54	91,658.47	2,990,634.00	11,004,235.00
Water (m3)	620,465.10	599,090.54	2,448,570.00	11,004,235.00
GHG - Scope 1 (MT CO2e)	10,198.62	10,796.05	2,910,829.00	6,514,094.00
GHG - Scope 2 (MT CO2e)	44,133.22	45,332.26	2,990,634.00	11,004,235.00
Waste - Total Waste (tonnes)				
Waste - Diversion %				

Senior Housing	2017 Submittal			
	2015 Reported Value	2016 Reported Value	2016 Data Coverage	2016 Max Potential Data Coverage
Energy (MWh)	846,040.95	794,892.30	37,075,807.00	54,055,374.00
Fuels (MWh)	376,748.12	338,201.50	36,211,904.00	44,819,302.00
District H&C (MWh)	-	-	-	-
Electricity (MWh)	469,292.83	456,690.80	37,075,807.00	54,055,374.00
Water (m3)	5,233,474.88	5,218,124.11	30,285,944.00	54,055,374.00
GHG - Scope 1 (MT CO2e)	68,279.65	61,393.82	36,211,904.00	44,819,302.00
GHG - Scope 2 (MT CO2e)	195,794.63	191,617.76	37,075,807.00	54,055,374.00
Waste - Total Waste (tonnes)	22,980.07	32,215.76		
Waste - Diversion %	12.00%	12.50%		

Lab (Other)	2017 Submittal			
	2015 Reported Value	2016 Reported Value	2016 Data Coverage	2016 Max Potential Data Coverage
Energy (MWh)	-	106,400.79	2,856,752.00	4,255,109.00
Fuels (MWh)	-	18,336.38	2,518,735.00	3,330,239.00
District H&C (MWh)	-	31,329.64	330,126.00	330,126.00
Electricity (MWh)	-	56,734.77	2,856,752.00	4,255,109.00
Water (m3)		70,077.86	3,047,533.00	4,255,109.00
GHG - Scope 1 (MT CO2e)		3,328.04	2,518,735.00	3,330,239.00
GHG - Scope 2 (MT CO2e)		28,018.44	2,856,752.00	4,255,109.00
Waste - Total Waste (tonnes)				
Waste - Diversion %				

Grand Total	2017 Submittal			
	2015 Reported Value	2016 Reported Value	2016 Data Coverage	2016 Max Potential Data Coverage
Energy (MWh)	1,340,971.04	1,466,659.52	56,593,517.73	90,813,547.73
Fuels (MWh)	508,479.32	519,977.21	50,652,292.00	65,984,956.00
District H&C (MWh)	-	31,329.64	330,126.00	330,126.00
Electricity (MWh)	832,491.71	915,352.66	56,593,517.73	90,813,547.73
Water (m3)	6,927,436.24	7,186,626.46	50,348,415.73	90,813,547.73
GHG - Scope 1 (MT CO2e)	92,159.68	94,354.67	50,652,292.00	65,984,956.00
GHG - Scope 2 (MT CO2e)	384,819.35	431,249.79	56,593,517.73	90,813,547.73
Waste - Total Waste (tonnes)	22,980.07	60,342.56	-	-
Waste - Diversion %	12.00%	34.96%	-	-

Total Renewable Energy Generated (kWh)

Property Name	2013	2014	2015	2016
Atria Cranford	130765	70866	107214	128052
Atria on the Hudson	92145	84958	46235	19404
Atria Woodbriar Place Huntington	8515.03	54042.01	48114.89	55778.66
4220 Duncan Avenue (ID 6782)	0	42647	26463	26785.48276

Total Renewable Energy Generated (MWh)

2013	2014	2015	2016
231.42503	252.513	228.02689	230.0201428

Percent of Renewable Energy from Total Energy Consumption

2013	2014	2015	2016
0.000254535	0.000207	0.000170046	0.000156833

GRESB 2016 Results

		2014	2015
Residential, Senior Homes	On-Site Generated & consumed (mwh)	432.032	347.196
	Percentage	0.1	0.1
Healthcare	none		
Medical Office	none		

Ventas Scope 3

Travel: Mileage					
Total miles driven	CO2 kg	CH4 kg	N2O kg	Total	
389,496.00	138,271.08	229.02	1,548.25	140,048.35	kg
				140.05	Metric Ton
Rental Car - Mileage	CO2 kg	CH4 kg	N2O kg		
80,970.00	28,744.35	47.61	321.86	29,113.82	kg
				29.11	Metric Ton
Employee Commuting					
472 FTE in 2016				7.87	Metric Ton
Corporate Jet Travel (Miles)					
61,137.49	15,345.51	6.68	134.47	15,486.66	Kg
				15.49	Metric Ton
Commerical Air Travel (Miles)	CO2 kg	CH4 kg	N2O kg		
1,437,732.00	236,746.63	26.81	2,082.51	226,336.33	kg
				226.34	Metic Ton
Upstream Leased Assets	CO2 MT	CH4 MT	N2O MT		
Unit 3300 353 North Clark Street	186.35	0.57	0.79	187.70	Metic Ton
Louisville (Esitmation)	112.23	0.33	0.45	113.01	Metic Ton
				300.71	
			Total Scope 3	719.57	Metic Ton

Appendix B

Goby's Alignment with ISO 14001 Plan – Do – Check – Act Standard

Plan:
- Incorporate the Plan-Do-Check-Act model in setting environmental objectives to comply with legal and environmental sustainability certification, such as Energy Star, LEED and city-benchmarking requirements
- Configure the Entities sustainability and projects within the Goby Platform
- Configure tasks and association with users
- Perform up to 2 training sessions for the Entities on the Goby Platform platform to cover necessary feature, functions, and access.
- Provide program management and strategy for historical waste data collection and set up of ongoing tracking process
- Goby will provide data entry services, where necessary.

Do:
- Provide consulting services on energy efficiency, sustainability, Energy Star, and LEED for the Entities environmental goals
- Goby will conduct periodical meetings to strategize on energy efficiency, water consumption and waste production

Check:
- Analyze the Entities portfolio environmental impact in terms of energy consumption, water use and waste generation for Energy Star and city-wide benchmarking and environmental sustainability certification requirements
- Establish and monitor programs to meet environmental objectives

Act:
- Evaluate performance against targets.
- Provide feedback and suggestions for improvement.
- Relay information and provide guidance for the Entities employee environmental awareness and competence
- Review the Entities Sustainability and Community Modules through the Goby Platform with continuous modifications and improvements following the Plan-Do-Check-Act mode.

Please note the Goby EMS is aligned with the four stages of ISO 14001 EMS standards as indicated in the steps above.