

**Assurance Statement related to  
Greenhouse Gas Emissions Inventory and Environmental Data for Fiscal Year 2015  
prepared for Carnival Corporation & plc.**

**Terms of Engagement**

This Assurance Statement has been prepared for Carnival Corporation & plc. (Carnival).

Lloyd's Register Quality Assurance Inc. (LRQA), an affiliate of Lloyd's Register North America, Inc., was commissioned by Carnival to assure its Greenhouse Gas (GHG) Emissions Inventory and Environmental Data Assertion for the fiscal year (FY) 2015 (December 1, 2014 to November 30, 2015).

The GHG Emissions Inventory includes direct GHG emissions and energy indirect GHG emissions.

The following were excluded from the GHG Emissions Inventory on the basis of their de minimis contribution to the total direct and energy indirect GHG emissions and sense-checked during the engagement:

- Fuel combustion emissions from emergency generators used in shore facilities;
- Combustion emissions from burning waste in the shipboard incinerators;
- Fugitive release of Sulphur Hexafluoride (SF<sub>6</sub>) gas from shipboard circuit breakers;
- Fugitive release of Methane (CH<sub>4</sub>) gas or Carbon Dioxide (CO<sub>2</sub>) from shipboard Marine Sanitation Devices or Advanced Waste Water Treatment plants;
- Fugitive release of refrigerant gas from shore hotels and offices;
- Electricity consumption from shore offices smaller than 8,000 square feet;
- Small water craft at private islands; and
- Releases of Halon and CO<sub>2</sub> based fire suppression systems on board the ships.

The Environmental Data Assertion includes the following parameters:

- Total Ship Fugitive Refrigerant Releases (Kg);
- Total Ship Ozone Depleting Substances (ODS) Emissions (Kg CFC-11e);
- Total Ship Energy Consumption (Gigajoules);
- Total Ship Fuel Consumption (Metric Tonnes);
- Ship Fuel Consumption Rate (Grams Fuel/Available Lower Berths-Km);
- High Sulfur Fuel Oil (Percent of total Ship fuel consumption);
- Low Sulfur Fuel Oil (Percent of total Ship fuel consumption);
- Marine Diesel Oil/Marine Gas Oil (Percent of total Ship fuel consumption);
- Total Potable Water Purchased (Tonnes);
- Total Potable Water Produced (Tonnes);
- Total Number of Significant Spills;
- Total Number of Reportable Spills;
- Total Volume of Reportable Spills (Liters);
- Total Number of Non-monetary Sanctions; and
- Total Monetary Value of Fines (US Dollars).

### Management Responsibility

The management of Carnival was responsible for preparing the GHG Emissions Inventory and Environmental Data Assertion and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the GHG Emissions Inventory and Environmental Data Assertion in accordance with our contract with Carnival.

Ultimately, the GHG Emissions Inventory and Environmental Data Assertion have been approved by, and remain the responsibility of Carnival.

### LRQA's Approach

Our verification has been conducted in accordance with ISO-14064-3:2006 *Specification with guidance for validation and verification of greenhouse gas assertion* for the GHG data and LRQA's Verification Approach for the Environmental Data Assertion to provide limited assurance that the data as presented in the GHG Emissions Inventory and Environmental Data Assertion for Carnival have been prepared in conformance with ISO 14064-1:2006 *Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals* and Carnival environmental data management processes.

To form our conclusions the assurance engagement was undertaken as a sampling exercise and covered the following activities:

- Conducted a site visit to Carnival Corporate Headquarters and phone interviews with representatives from three of the Operating Lines;
- Reviewed the processes for the management of data and information related to the direct and energy indirect GHG emissions used at the Carnival corporate level and by the three sampled Operating Lines;
- Interviewed relevant staff responsible for managing and maintaining data and information and for preparing and reporting the GHG Emissions Inventory for Carnival; and
- Verified the direct and energy indirect GHG emissions for FY 2015.
- Verified a subset of environmental data parameters.

### Level of Assurance and Materiality

The opinion expressed in this Assurance Statement has been formed on the basis of a limited level of assurance and at a materiality of the professional judgement of the Verifier.

### LRQA's Opinion

Based on LRQA's approach, nothing has come to our attention that would cause us to believe that the total direct GHG emissions, energy indirect GHG emissions and Environmental Data disclosed by Carnival in its GHG Emissions Inventory and Environmental Data Assertion for FY 2015, as summarized in Table 1 below, are not materially correct and that the GHG Emissions Inventory and Environmental Data Assertion have not been prepared in conformance with ISO 14064-1:2006 and Carnival environmental data management processes.

Signed

Dated: June 9, 2016



Derek Markolf  
LRQA Lead Verifier  
On behalf of Lloyd's Register North America, Inc.,  
represented by Lloyd's Register Quality Assurance, Inc.,  
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LRQA Reference: WO 4438354

**Table 1. Summary of Carnival, GHG Emissions Inventory and Environmental Data FY 2015**

Data Parameter	Data
Direct GHG Emissions (Tonnes CO <sub>2</sub> e)	10,320,701
Energy Indirect GHG Emissions – Location-Based (Tonnes CO <sub>2</sub> e)	54,221
Energy Indirect GHG Emissions – Market-Based (Tonnes CO <sub>2</sub> e)	56,533
Total Ship Fugitive Refrigerant Releases (Kg)	125,603
Total Ship ODS Emissions (Kg CFC-11e)	2,130
Total Ship Energy Consumption (Gigajoules)	131,697,157
Total Ship Fuel Consumption (Tonnes)	3,181,202
Ship Fuel Consumption Rate (Grams Fuel/ALB-Km)	84.2
High Sulfur Fuel Oil (Percent of total Ship fuel consumption)	78.4%
Low Sulfur Fuel Oil (Percent of total Ship fuel consumption)	1.3%
Marine Diesel Oil/Marine Gas Oil (Percent of total Ship fuel consumption)	20.2%
Total Potable Water Purchased (Tonnes)	6,099,369
Total Potable Water Produced (Tonnes)	19,492,605
Total Number of Significant Spills*	0
Total Number of Reportable Spills	49
Total Volume of Reportable Spills (Liters)	8,488
Total Number of Non-monetary Sanctions	0
Total Monetary Value of Fines (US Dollars)	\$35,900

\* A significant spill is defined as a spill for which the monetary sanctions are greater than \$100,000.

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Due to inherent limitations in any internal control, it is possible that fraud, error, or non-compliance with laws and regulations may occur and not be detected. Further, the verification was not designed to detect all weakness or errors in internal controls so far as they relate to the requirements set out above as the verification has not been performed continuously throughout the period and the verification carried out on the relevant internal controls were on a test basis. Any projection of the evaluation of control to future periods is subject to the risk that the processes may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

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