

May 2, 2024

Sang-Mi Lee, Planning and Rules Manager  
Planning, Rule Development and Implementation  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, CA 91765-4178

**MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN THE SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT AND THE CITY OF LONG BEACH – FINAL UPDATE TO THE ANNUAL PROGRESS  
REPORT FOR CALENDAR YEAR 2021**

Dear Ms. Lee,

Long Beach Airport (LGB or Airport) is pleased to submit this final update to the 2021 annual progress report in response to comments by the South Coast Air Quality Management District (South Coast AQMD). On December 6, 2019, a Memorandum of Understanding (MOU) was entered into by the South Coast AQMD and the Airport. The 2021 annual progress report was submitted by the Airport to South Coast AQMD on May 31, 2022. An initial update to the 2021 annual progress report was submitted by the Airport to South Coast AQMD on September 9, 2022. A subsequent update was submitted on January 30, 2022, to revise certain information provided in the 2021 annual progress report in response to South Coast AQMD comment. During the 2023 survey year data collection process, additional revisions to certain information were identified and this final update incorporates those revisions. There is one measure in the LGB MOU, which addresses ground support equipment (GSE) operated at the Airport.

**PROGRESS ON MOU MEASURES**

**MOU SCHEDULE NO.1 – GROUND SUPPORT EQUIPMENT**

As required by Schedule No. 1 of the MOU, the 2021 annual progress report provides a list of GSE subject to this measure with the required information specified in MOU Schedule No.1 Section III.B.1. This list was updated in the September 2022 update to the 2021 annual progress report and was updated again in the January 2023 subsequent update. The final list of equipment is presented in **Table III.B.1** of this final updated report. Minor updates to equipment activities (in hours per year) for certain low-use equipment and horsepower or model year specifications for selected equipment were revised relative to the fleet information reported in the initial 2021 annual progress report.

Information on the sale or retirement of non-zero emission GSE subject to this measure and relocation details (as applicable) are required by MOU Schedule No. 1, Section III.B.2. and are included in this final 2021 annual progress report in **Table III.B.2**. No revisions were necessary relative to the information reported in the initial 2021 annual progress report pertaining to the sale or retirement of non-zero emission GSE.

MOU Schedule No. 1, Section III.B.3, requires that an emissions inventory be developed for the GSE subject to this measure. **Table III.B.3** provides the final emission inventory for the 2021 reporting year, which includes all applicable updates in response to South Coast AQMD comment. Consistent with prior inventories, the estimated activity (in hours of operation per year) for equipment relocated from LGB in 2021 were prorated in the emissions inventory to account only for the time that the equipment operated at LGB.

#### ***Methodology – Collection of Data***

The methodology for the collection of data was unchanged from that detailed in the 2020 and 2021 annual progress reports.

#### ***Methodology – Emissions Calculation***

The methodology for the collection of data and calculation of emissions was unchanged from that detailed in the 2020 and 2021 annual progress reports. However, calculation discrepancies related to the estimation of engine deterioration rates, fuel correction factors, equipment specifications, and equipment activity hours for certain low-use equipment were resolved in the updates to this equipment inventory since the initial 2021 reporting year report submittal.

#### ***Results of Updates***

The revisions incorporated in this final 2021 annual progress report have resulted in differences in the Airport fleet GSE emission inventory relative to the values submitted in the initial 2021 annual progress report. The final 2021 fleet-average NO<sub>x</sub> performance factor (0.96 grams per brake-horsepower hour) is slightly lower than the value presented in the initial report (0.99 grams per brake-horsepower hour). Additionally, the final updated fleet total NO<sub>x</sub> emissions (7.7 tons) are lower than those of the initial 2021 annual progress report (9.6 tons).

These changes were the result of adjustments to the estimation of engine deterioration rates, fuel correction factors, and updates to the equipment specifications, such as horsepower ratings, model years, and activity hours, of selected equipment. These updates to the 2021 annual progress report were made to ensure consistency in approach with the 2020 annual progress report and subsequent annual reports.

Sincerely,



Juan López-Rios

Deputy Director, Long Beach Airport