



LOS ANGELES INTERNATIONAL AIRPORT

GROUND SUPPORT EQUIPMENT REPORTING FORMS AND EMISSION FACTOR MODEL

USER GUIDE

-DRAFT-

Prepared for:

Los Angeles World Airports
Environmental & Land Use Planning Division (ELUP)
7301 World Way West
Los Angeles, California 90045

Prepared by:

CDM Smith
111 Academy Way, Suite 150
Irvine, California 92617
Contact: John Pehrson, P.E.



August 27, 2015

Table of Contents

Section 1	INTRODUCTION	1-1
1.1	Background.....	1-1
1.2	Overview of LAX GSE Emissions Reduction Requirements.....	1-1
1.3	Confidentiality of GSE Reporting Data.....	1-2
Section 2	DEFINITIONS AND GSE CATEGORIES.....	2-1
2.1	Definitions	2-1
2.2	GSE Categories.....	2-2
Section 3	LAX GSE REPORTING FORMS AND EMISSION FACTOR MODEL.....	3-1
3.1	Model Overview and Availability	3-1
3.2	Information Required and Data Input	3-1
Section 4	SUBMITTAL OF CALCULATOR MODEL RESULTS FOR ANNUAL REPORT	4-1
4.1	Submittal of Model Results in Annual Reports for Existing GSE Operators.....	4-1
4.2	Submittal of Model Results in Annual Reports for New GSE Operators.....	4-1

List of Tables

Table 2-1	GSE Categories, Descriptions, and Examples.....	2-2
Table 3-1	ORD and LSI Equipment Input Data	3-2
Table 3-2	ATCM Portable Equipment Input Data.....	3-4

Section 1

INTRODUCTION

1.1 Background

As part of Los Angeles World Airports' (LAWA's) ongoing efforts to reduce environmental impacts associated with operation of Los Angeles International Airport (LAX), and related commitments by LAWA to surrounding communities, LAWA established a Ground Support Equipment (GSE) Emissions Reduction Policy. Specifically, LAWA established the GSE Emissions Reduction Policy to reduce the airport-wide fleet average composite GSE emission factor at LAX to equal to, or less than, 2.65 grams per horsepower-hour of hydrocarbons plus nitrogen oxides (g/bhp-hr of HC plus NO_x) by December 31, 2021 (the "2021 LAX GSE Emissions Goal"). The final GSE Emissions Reduction Policy, which was adopted by the LAWA Board of Airport Commissioners on April 16, 2015 and became effective July 1, 2015, is available at the following link: <http://www.lawa.org/gse/>

1.2 Overview of LAX GSE Emissions Reduction Requirements

As set forth in the GSE Emissions Reduction Policy, each GSE Operator at LAX is required to achieve a composite emissions factor that is equal to or less than 2.65 g/bhp-hr of HC plus NO_x for its LAX GSE Fleet by December 31, 2021. Upon achieving the 2021 LAX GSE Fleet Operator Emissions Target, each GSE Operator is required to ensure that its fleet average composite emissions factor does not thereafter exceed the target.

The overall structure and applicability of LAWA's GSE Emissions Reduction Policy are designed to be generally compatible with existing emission control/reduction programs set forth by the California Air Resources Board (CARB). While the requirements of the LAWA GSE Emissions Reduction Policy apply to all operators of GSE at LAX including airlines, tenants, GSE service providers, and LAWA, the specific types of equipment that are subject to the emissions reduction requirements are defined through the following CARB programs:

- the In-Use Off-Road Diesel Vehicle Regulation Program ("ORD");
- the Off-Road Large Spark-Ignition Engine Fleet Requirements Regulation Program ("LSI"); and
- Portable Diesel Engine Airborne Toxic Control Measures ("ATCM").

Internet links to more information regarding each of these programs are provided below in Section 2, Definitions.

Achievement of the LAX GSE Emissions Goal (i.e., 2.65 g/bhp-hr of HC plus NO_x) is required to occur by December 31, 2021, and each GSE Operator must submit to LAWA an annual report indicating the current composite emissions factor for its fleet as a general indication of its progress towards meeting that goal. LAWA has developed, in consultation and coordination with GSE operators at LAX, a standardized method for calculating the GSE composite emission factor. That method for calculating the GSE composite emission factor is described below in Section 3, Emissions Factor Calculation Model, and takes into account specific emission factors, assumptions, and approaches utilized in the CARB emissions control/reduction programs referenced above. The requirements for LAX GSE

Operator annual reports, including the calculated GSE composite emission factor for each Operator's fleet, are delineated below in Section 4, Submittal of Calculator Model Results in Annual Report.

If the average composite emissions factor of a GSE Operator's LAX GSE fleet exceeds 3.0 g/bhp-hr as of March 1, 2019, the GSE Operator shall provide to LAWA an action plan for reducing the average composite emissions factor of its LAX GSE Fleet to be equal to or less than 2.65 g/bhp-hr of HC plus NOx by December 31, 2021. The requirements associated with such an action plan are defined in the LAX Rules and Regulations related to the LAX GSE Emissions Reduction Policy (<http://www.lawa.org/airops.aspx?id=862>).

1.3 Confidentiality of GSE Reporting Data

Information submitted to LAWA by each LAX GSE Operator is strictly for the purpose of LAWA tracking progress towards achievement of the 2021 LAX GSE Emissions Goal and will not be disclosed outside (i.e., Non-LAWA) entities, nor will GSE data specific to each LAX GSE Operator's fleet be shared with other Operators. To the extent that LAX GSE fleet data are presented in back-up documentation associated with presentation of calculation results for the LAX airport-wide GSE composite emission factor, such data would be presented in terms of GSE grouped by type (i.e., all aircraft pushback tractors at LAX, all baggage tugs at LAX, all belt-loaders at LAX, etc.), and would not include any references to the GSE Operators of such equipment.

Section 2

DEFINITIONS AND GSE CATEGORIES

2.1 Definitions

a. ATCM

“ATCM” refers to the California Air Resources Board’s Portable Equipment Registration Program (PERP) and associated Portable Diesel Engine Airborne Toxic Control Measures. More information on ATCM can be found at <http://www.arb.ca.gov/toxics/atcm/atcm.htm>.

b. CARB

“CARB” refers to the California Air Resources Board.

c. Grams per Brake Horsepower Hour – g/bhp-hr

“Grams per brake horsepower-hour” or g/bhp-hr is a measurement of the grams of pollutant emitted by an engine of a specific horsepower rating over a one hour period.

d. GSE

Ground Support Equipment or “GSE” is any vehicle or equipment used to support aircraft operations that is subject to, or included in compliance plans to meet, the requirements of the CARB In-Use Off-Road Diesel (ORD) Vehicle Regulation Program, CARB Off-Road Large Spark-Ignition (LSI) Engine Fleet Requirements Regulation Program, or CARB Portable Equipment Registration Program and associated Portable Diesel Engine Airborne Toxic Control Measure (ATCM). At LAX, LAWA, airlines and other entities own and operate GSE to support arriving, departing, and parked aircraft.

e. LAWA

“LAWA” refers to Los Angeles World Airports.

f. LAX

“LAX” refers to the Los Angeles International Airport.

g. LAX GSE Fleet

A GSE Operator’s “LAX GSE Fleet” is comprised solely of GSE operated at LAX.

h. Low-Use GSE

“Low-Use GSE”, which may be excluded from the GSE fleet average emission calculation, shall be determined based on the rules set forth in the applicable CARB program, i.e., ORD, LSI, ATCM. Rules governing Low-Use GSE under these programs can be found at <http://www.arb.ca.gov>.

i. LSI

“LSI” refers to the CARB Off-Road Large Spark-Ignition Engine Fleet Requirements Regulation Program. More information on LSI can be found at <http://www.arb.ca.gov/msprog/offroad/orspark/orspark.htm>.

j. Operator or GSE Operator

“Operator” or “GSE Operator” shall mean any Airport Contractor, Airport Lessee, or Airport Licensee that operates GSE at LAX.

k. ORD

“ORD” refers to the CARB In-Use Off-Road Diesel Vehicle Regulation Program. More information on ORD can be found at <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>.

l. Small Equipment

“Small Equipment” is a category of GSE, which covers equipment with internal combustion engines of less than 25 horsepower (excluding electric-powered GSE). Such equipment includes portable generators, power-washers, landscaping equipment, small compressors, and the like.

2.2 GSE Categories

Table 2-1 presents common categories of GSE, recognizing that specific types of equipment may be referenced differently by individual GSE operators; however, use of the following GSE category names by LAX GSE operators when calculating GSE composite emission factors and in submitting annual report data will help achieve better consistency and compatibility of airport-wide data.


Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Air Conditioner	PORTABLE; either on skids, carts, or on the back of truck beds, that provide conditioned air to aircraft	 <p>ACE 802: www.fsm-vienna.at</p>





Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
		 <p>ACE 804: www.fsm-vienna.at</p>
Air Start	<p>PORTABLE; that provide high air flow to start aircraft jet engines; can be internal combustion (IC) engines or turbine engines. Will be assumed to be IC unless specified as turbine. Bottle-starts (compressed air) will not be included in GSE emissions calculations</p>	 <p>ACE 300/400: www.fsm-vienna.at</p>
Aircraft Tractor	<p>Includes wide-body, narrow-body, push-back, and long-haul or maintenance tractors used to move aircraft (aka paymover); conventional and towbarless; (mounted GPU engines should be reported as a separate unit under "Ground Power Unit" – see below)</p>	 <p>S&S/TUG GT-35: www.ssss.com</p>
		 <p>S&S/TUG MC: www.ssss.com</p>






Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
		 <p>Douglas TBL-180: www.douglas-tugmaster.co.uk</p>
		 <p>Douglas TBL-400: www.douglas-tugmaster.co.uk</p>
		 <p>S&S/TUG GT-50G: www.ssss.com</p>
		 <p>S&S/TUG T-750: www.ssss.com</p>
Baggage Tractor	Hitched to a series of carts to transport luggage between the aircraft and the terminal; distinguished from cargo tractor by drawbar (3,000 lbs. vs. 5,000 lbs. for cargo tractor), tow capacity (30,000 lbs. vs. 50,000 lbs.) and duty cycle (intermittent vs. 6-12 hrs. non-stop) (see also “Cargo Tractor” description below)	 <p>S&S/TUG MA-50: www.ssss.com</p>

Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Belt Loader	Used to load baggage into aircraft	 <p>S&S TUG 660: www.ssss.com</p>
Bobtail	ORE	 <p>Eagle Bobtail F350: www.eagleindustrialtruck.com</p>
Cabin Service Truck	ORE; classify as "Catering Truck" (same duty cycle, emissions)	 <p>Hi-Way/TUG 660 chassis: www.tescohilift.com</p>
		 <p>Hi-Way F650 chassis: www.tescohilift.com</p>





Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Cargo Loader	Loads cargo in aircraft via a platform that is loaded then launched up to the deck level	 <p>FMC Commander 15: www.fsm-vienna.at</p>
		 <p>FMC Commander 30: www.airport-technology.com</p>
Cargo Tractor	Hauls heavy cargo loads in carts; distinguished from baggage tractors by drawbar (4,000-12,000 lbs. vs. 3,000-3,500 lbs. for baggage tractors), tow capacity (50,000-60,000 lbs. vs. 30,000 lbs.) and duty cycle (6-12 hrs. non-stop vs. intermittent); also, cargo tractors frequently use a side hitch (see also description of “Baggage Tractor” above)	 <p>S&S/TUG MT: www.ssss.com</p>
Cart	Include only self-propelled carts (e.g., personnel carts, some lavatory carts and hydrant carts) in the inventory; do <i>not</i> include baggage carts, cargo carts, hydrant carts, etc., that are towed.	 <p>Taylor Dunn: www.taylor-dunn.com</p>

Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Catering Truck	ORE; include cabin service trucks of all types in this category	 <p>Hi-Way/TUG 660 chassis: www.tescohilift.com</p>
		 <p>Hi-Way F650 chassis: www.tescohilift.com</p>
Deicer	Used to spray deicing fluid on aircraft; list both engines in the inventory	 <p>FMC LMD, Dual engines: www.airport-technology.com</p>
		 <p>FMC Tempest II, single engine: www.fsm-vienna.at</p>





Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Fork Lift	All fork lifts are included in this category, including aircraft engine fork lifts	 <p>Toyota 5,000 lb: www.loadstarmhe.com</p>
Fuel Truck	ORE	 <p>F750, DART: www.dukestransportation.com</p>
		 <p>DART 10,000 gal: www.dukestransportation.com</p>
Generator	PORTABLE; includes welders, light stands, etc.; only include portable generators in the inventory; stationary emergency backup generators, shop generators, and handheld generators smaller than the threshold cutoff (25 hp) should not be listed	 <p>MD-3: www.victorygse.com</p>

Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Ground Power Unit	PORTABLE; provides electrical power to aircraft located in remote areas, when the APU is not operational, or when the gate does not supply power	 <p>Series GPU-4000</p> <p>TLD GPU-4000: www.tld-gse.com</p>
		 <p>ACE 28.5VDC</p> <p>TLD ACE: www.tld-gse.com</p>
		 <p>GPU-4090-DUT</p> <p>TLD GPU-4090: www.tld-gse.com</p>
Hydrant Truck	ORE; do not include non-motorized hydrant carts	Ford F250/F350 chassis








Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Lavatory Truck	ORE	 <p>ACE 1410</p> <p>TLD ACE-1410: www.tld-gse.com</p>
		 <p>Wollard TLS-770/F350 chassis: www.gseservices-llc.com</p>
Lift		 <p>ML15-20: www.tescohilift.com</p>
Passenger Stand	Indicate whether unit is ORE or not	 <p>Wollard CMPS170/228: www.nmc-wollard.com</p>

Table 2-1. GSE Categories, Descriptions, and Examples		
GSE Category	Description	Reference Model/Picture
Service Truck	ORE; this category is broad, but does <i>not</i> include passenger cars, vans, or buses (those units should be classified as “Other ORE”)	 <p>Ford F250/F350: www.contentedits.com</p>
Sweeper	Street and shop sweepers	 <p>Tennant: www.tennantco.com</p>
Water Truck	ORE	 <p>Wollard TWS-402, F250/F350 chassis: www.nmc-wollard.com</p>
Other ORE	ORE; any ORE that absolutely does not fit into a category listed above (e.g., cars, buses, vans)	Only categorize it as “Other” if it does not fit into another category. Examples include: Ford E350 vans, passenger cars, Blue Bird buses, etc.
Other	Anything that absolutely does not fit into a category listed above; do <i>not</i> include ORE in this category (see “Other ORE”)	Only categorize it as “Other” if it does not fit into another category.

This page intentionally left blank

Section 3

LAX GSE REPORTING FORMS AND EMISSION FACTOR MODEL

3.1 Model Overview and Availability

The LAX GSE Emission Factor Model consists of a Microsoft Excel™ workbook with a worksheets for the user (i.e., GSE Operator) to enter specific data for each piece of equipment such as GSE category, engine fuel type (i.e., diesel, gasoline, LNG/CNG, electric), engine horsepower, engine manufacture year, whether it is an “On-Road Equivalent” (ORE), and other information, as described below, which are linked to other worksheets that contain emission factors specific to the engine characteristics for each piece of equipment entered in the input worksheets, and embedded formulas that calculate the overall composite emission factor for the GSE Operator’s fleet. The input worksheets also provide the ability for the user to enter certain equipment-specific emission factors in lieu of default emission factors when justified.

A copy of the LAX GSE Reporting Forms and Emission Factor Model can be downloaded at <http://www.lawa.org/gse/>. The LAX GSE Emission Factor Model was set up in Microsoft Excel 2010 operating in Microsoft Windows 7. Given the long history and widespread availability and use of Windows and Excel, it is generally anticipated that the LAX GSE Emission Factor Model will run satisfactorily on other recent versions of Windows and Excel, as well as on MS Office for MAC.

3.2 Information Required and Data Input

The intent and design of the LAX GSE Reporting Forms and Emission Factor Model are to rely on the data already provided to CARB in their ORD and PERP ATCM fleet emission calculators. In general, the GSE Operator should be able to cut and paste the data provided in the ORD Fleet Average Calculators for Large, Medium and Small Off-Road Fleets into the “ORD and LSI Equipment” tab of the LAX GSE Calculator file. In addition, the operator should be able to cut and past the data provided in the Portable Diesel Engine Emissions Report spreadsheets into the “Diesel PERP_ATCM Equipment” tab of the LAX GSE Calculator file.

The required items of information necessary to allow the calculator to work include: (1) Engine Model Year, (2) Engine Horsepower, (3) Fuel Type (diesel, gasoline, CNG, etc.), (4) whether or not the engine meets On-Road Engine emission standards, and (5) whether or not the engine is in a designated low-use piece of equipment.

Table 3-1 describes the types of information required for GSE subject to the ORD and LSI rules as input into the LAX GSE Reporting Forms and Emission Factor Model, which is reflected by column headings in the worksheet tab titled “ORD and LSI Equipment.” Also indicated below is a delineation of whether information specific to each piece of equipment is User Defined, such as in the case of indicating the equipment type, engine horsepower, engine manufacture year, etc., or is Auto-Generated within the Model, such as in the case of “HP Bin” which will automatically determine the horsepower range to be used in selecting the emission factor based on the horsepower entered by the user (see description below).

It is anticipated that the information for equipment subject to the ORD Rule would be contained in one of the CARB developed calculators for Fleet Average Emission Factors for large, medium or small fleets. Therefore, the information for several columns of the LAX GSE Emission Factor Model should be cut and pasted from the GSE Operator’s ORD Rule fleet emission factor calculator for off-road diesel equipment. The Operator will need to obtain the information for equipment subject to the LSI rule from other sources.

Table 3-1. ORD and LSI Equipment Input Data		
Column Heading	User Defined (UD) or Auto-Generated (AG)	Description and Data Source
Owner GSE Type Designation	UD	Owner’s or operator’s GSE type designation, such as air start unit, baggage tug, belt loader, pushback, cargo loader, fuel truck, etc. This information may need to be obtained from the Operator’s asset management data for the equipment. Use the most appropriate designation from Lookup Table 5 or Lookup Table 6 in the Model under the tab titled “DefaultHP&GSECategories.” If none of the categories match the unit function, then use either “Other ORE” for equipment with engines certified to meet on-road vehicle emission standards, or “Other” for equipment with engines that meet off-road (ORD or LSI) standards.
GSE Category	AG	GSE category included in the California Air Resources Board GSE MOU. The owner’s GSE type designation is used to assign the GSE category to each equipment item.
Vehicle Type (or number, manufacturer, or model)	UD	The next three columns are to help keep track of each vehicle while working in the calculator. Entering data into these columns is optional. The column headings can be changed to keep track of Vehicle EIN, Vehicle Serial Number, Owner’s Vehicle Number, Vehicle Type, Vehicle Manufacturer, or Vehicle Model by clicking on headings in the "ORD and LSI Equipment" tab and choosing the desired option from the drop-down menu.
Vehicle Manufacturer (or number, type, or model)	UD	
Your Vehicle Number (or type, serial number, manufacturer, or model)	UD	
Engine Model Year	UD	
Engine Horsepower	UD	This column is for entering the engine model year of each vehicle as it appears in the Operator’s DOORS account for equipment subject to the ORD rule. This information made need to be obtained from the Operator’s asset management data for equipment subject to the LSI rule. An engine repower by replacing the current engine model year with the model year of the new engine.
		Enter the horsepower of each vehicle as it appears in the Operator’s DOORS account into this column for equipment subject to the ORD rule. This information may need to be obtained from the Operator’s asset management data for equipment subject to the LSI rule.

Column Heading	User Defined (UD) or Auto-Generated (AG)	Description and Data Source
Designated Low-Use?	UD	Vehicles may be designated as Permanent or Year-by-Year Low-Use under the ORD rule and as Low-Use under the LSI rule. Low-use equipment is designated by typing "Yes" in the appropriate cell.
On-Road Engine?	UD	Some off-road vehicles have engines that were certified to on-road standards. If a vehicle's engine is certified to on-road standards, indicate as such here by typing "Yes" in the appropriate cell.
Emission Factor if Non-standard	UD	If your vehicle's engine was certified to a different emissions standard than usual, enter its NOx+HC Emission Factor into the appropriate cell in this column. Examples include equipment retrofitted with a filter or catalyst that reduces NOx and/or HC – the reduced NOx+HC emission factor would be entered in this column.
Fuel	UD	Equipment subject to the ORD Rule is assumed to be Diesel. This tab also captures the emission factors for equipment subject to the LSI rule, which may be gasoline, CNG, or LPG/Propane. Finally, electric equipment is also noted in this column.
HP Bin	AG	The Horsepower provide by the user in the fifth column above is binned into specific size categories consistent with the ORD rule for calculating emission factors.
Rule (ORD or LSI)	AG	Based on the user-input data provided above, the calculator determines whether ORD or LSI rule emission factors will be determined for each vehicle.
Type (Off-Road or On-Road)	AG	Based on the input to the "On-Road Engine?" column, the calculator uses off-road or on-road emission factor tables to calculate emission factors.
NOx+HC EF	AG	The NOx+HC emission factor, in grams/bhp-hr, is obtained based on the model year, horsepower, on-road or off-road standard, and fuel type.

Table 3-2 describes the types of information required for GSE subject to the PERP ATCM as input into the LAX GSE Reporting Forms and Emission Factor Model, which is reflected by column headings in the worksheet tab titled "Diesel PERP_ATCM Equipment."

It is anticipated that the information for equipment subject to the ATCM would be contained in the CARB developed calculator for the Portable Equipment Fleet Emissions Report. Therefore, the information for most of the columns of the LAX GSE Model should be cut and pasted from the GSE Operator's ATCM fleet emission factor calculator for portable diesel equipment.

GSE owners/operators that add grid-based power and/or preconditioned air to an aircraft gate or parking location after the 2015 reporting period which substantially reduces the use of combustion engine GSE, will have the opportunity to take credit for the gate conversion in the emission factor model. Credit will be given to those PERP ATCM GSE removed from service or reduced to "low-use

only” status – the equipment removed or reduced in use will be treated as “Electric” GSE in the emission factor model. The owner/operator will need to coordinate the gate power conversion with LAWA. This coordination will need to include documentation that the GSE were used more than the “low-use only” designation prior to the conversion, and that the specified GSE have either been re-designated to “low-use only” (demonstrated by non-resettable hour or fuel meters), or been removed from service at LAX.

Table 3-2. ATCM Portable Equipment Input Data		
Column Heading	User Defined (UD) or Auto-Generated (AG)	Description and Data Source
GSE Category	UD	GSE category included in the California Air Resources Board GSE MOU. See the Lookup Table 5 in the “DefaultHP&GSECategories” tab of the calculator for acceptable categories. This information may need to be obtained from the Operator’s asset management data for the equipment.
PERP Registration Number or District Permit Number	UD	This information should be contained in the PERP calculator from CARB, under the “Enter <175”, Enter 175-750”, “Enter >750”, and “Non-Fleet Inventory” tabs.
Your Company Unit I.D. No. (Optional)	UD	Optional input: Enter your firm’s unit identification number for each PERP unit located at LAX.
Engine Family Name OR Engine Model Year	UD	Enter the Engine Family Name into this column LAX GSE Model. OR For data contained in the PERP calculator from CARB, under the tab “Non-Fleet Inventory”, copy the data under the Engine Manufacturer column into the LAX GSE Model.
Horsepower	UD	Enter the PERP unit Horsepower into this column of the LAX GSE Model. If the horsepower is not known, the GSE Category in the first column must be completed, and the horsepower column can be left blank. The model will use the default HP for the GSE category from the “DefaultHP&GSECategories tab in the model file.
Designated for Emergency Only Use	UD	For those PERP equipment at LAX which are designated as emergency-use only or low-use only in the reports to CARB, place an “x” in the appropriate column of the model.
Designated for Low-Use Only	UD	
Original GSE replaced with Gate Power and/or PC Air – Requires LAWA Approval*	UD	For those PERP equipment at LAX which have removed or re-designated as “low-use only” due the addition of grid-generated gate power or preconditioned air to the gate or aircraft parking location, place an “x” in the appropriate column of the model. Note that the GSE owner will need to demonstrate to LAWA that the GSE were being used more than low-use levels, and the removal or reduced use of the GSE was due to the addition of grid power and/or PC air to the gate.

Table 3-2. ATCM Portable Equipment Input Data		
Column Heading	User Defined (UD) or Auto-Generated (AG)	Description and Data Source
HP	AG	The model either selects the HP from the Horsepower column, or selects the default HP based on the GSE Category.
HP Bin	AG	The HP is binned into specific size categories consistent with the ORD rule for calculating NOx+HC emission factors.
Engine Model Year	AG	The engine model year is determined from the first letter/number in the Engine Family Name or Engine Model Year.
Fuel	UD	Enter Diesel for PERP Diesel Equipment or other fuel if PERP equipment is using a different fuel..
NOx+HC EF	AG	The NOx+HC emission factor, in grams/bhp-hr, is obtained based on the model year, horsepower, on-road or off-road standard, and fuel type.

Section 4

SUBMITTAL OF CALCULATOR MODEL RESULTS FOR ANNUAL REPORT

4.1 Submittal of Model Results in Annual Reports for Existing GSE Operators

Each existing GSE Operator is required to submit annual reports to LAWA documenting the composition of its GSE Fleet at LAX, validating its composite emissions factor, and attesting to the accuracy of the information provided. The Annual Report shall be due on or before January 22nd of each year for the prior year, starting in 2016 e.g. reporting for the fleet as it was on December 31st of the previous year (e.g., December 31, 2015 for reporting year 2015).

Information documenting the composition of its GSE Fleet at LAX and validating its composite emissions factor will be provided through submittal of the completed LAX GSE Emission Factor Model, based on the instructions provided above in Section 3. Submittal of the Excel file shall occur by emailing to gsereporting@lawa.org. Any questions regarding that electronic submittal, or problems associated therewith, can be directed to either Amylou Canonizado, eMail: gsereporting@lawa.org, Phone: (424) 646-6483 or Norene Hastings, eMail: gsereporting@lawa.org, Phone: (424) 646-6487.

4.2 Submittal of Model Results in Annual Reports for New GSE Operators

A GSE Operator who plans to begin operations at LAX after the effective date of the GSE Emissions Reduction Policy (i.e., July 1, 2015), but prior to December 1, 2018, will be required to comply with the reporting requirements described above in Section 4.1, as of the next reporting due date. For example, a new GSE Operator who plans to begin operations at LAX on August 31, 2017, would be required to submit its inventory, emissions calculation, and attestation to LAWA no later than January 22, 2018.

A GSE Operator who plans to begin operations at LAX on or after December 1, 2018, will be required to submit an inventory of its planned GSE Fleet and calculation of its composite emissions factor, as would be reflected through completion of the LAX GSE Reporting Forms and Emission Factor Model, and a written statement attesting to the accuracy of the information provided to LAWA at least 30 days prior to commencement of operations at LAX. If the new Operator's composite emissions factor is greater than 3.0 g/bhp-hr of HC plus NO_x, the new Operator will be required to submit an Action Plan that complies with the requirements set forth in the LAX Rules and Regulations related the LAX GSE Emissions Reduction Policy (<http://www.lawa.org/gse/>) before the new Operator will be allowed to commence operations at LAX.

The means of submitting the LAX GSE Emission Factor Model results for a new GSE Operator is the same as described above in Section 4.1.

This page intentionally left blank

