

**APPENDIX 2: SOUTH COAST GSE MOU**

**RECORDKEEPING AND  
REPORTING INSTRUCTIONS**

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# South Coast GSE MOU

## Recordkeeping and Reporting Instructions

### HOW TO MAINTAIN DATA REQUIRED UNDER THE GSE MOU

#### A. Reason for Collecting and Maintaining Operating Data

The South Coast Ground Service Equipment Memorandum of Understanding (GSE MOU or MOU) requires Individual Participating Airlines to meet certain recordkeeping obligations (see MOU Section IV.A). This document explains the data required to be created and maintained to comply with the MOU recordkeeping obligations. For ease of reference, such data is referred to as a Participating Airline's Compliance Database. **Tables 1, 2, and 3** consist of data required to calculate the composite fleet average g/bhp-hr emission factor. Participating Airlines are not required to maintain or modify **Tables 1, 2, and 3**. **Tables 4, 5, 6 and 7** are the forms to be used to keep records necessary to demonstrate compliance with the MOU.

#### B. Compliance Database Contents

This section identifies which airports and which equipment must be tracked in the Compliance Database.

##### 1. Airports Included in the Compliance Database

The Compliance Database applies to all GSE operating at the following South Coast airports:

1. Los Angeles International Airport (LAX)
2. Burbank Glendale Pasadena Airport (BUR)
3. Ontario Airport (ONT)
4. Long Beach Airport (LGB)
5. John Wayne Airport (SNA)

**Note:** Should commercial aviation operations commence at another airport in the South Coast (e.g., El Toro), an Individual Participating Airline may have to include such an airport in its Compliance Database. Questions about whether an additional airport should be included in a Compliance Database should be referred to the ATA contact referenced in C. Support on Maintaining the Database, below..

##### 2. GSE Included in the Compliance Database

To be included in the Compliance Database, GSE must meet the following conditions:

- For the existing fleet Compliance Database (**Table 4**), the GSE must have been: operated by your company during 1997, or operated by another company in 1997

if you are responsible for such GSE because of a transaction in Section Q of the MOU; or replacements for such units.

- The GSE *do not* have license plates issued by the California Department of Motor Vehicles.
- The GSE are used to service aircraft operations at the airports listed in B.1 Airports Included in the Compliance Database, above.
- The engine(s) must be rated at least 25 horsepower.
- The units may not be used for compliance demonstrations with other SCAQMD regulations related to emission credits (*e.g.*, Rule 1620).
- The following power equipment are *not* included in the database:
  - Janitorial equipment (*e.g.*, gasoline powered vacuum cleaners and power spray washers used to clean work areas);
  - Power tools used in maintenance shops (*e.g.*, drills, saws, and welders); and
  - Stationary internal combustion engines, including engines used to provide emergency back-up power or pressurized water for fire-fighting purposes.

### 3. GSE Categories

GSE included in the Compliance Database must be categorized into one of the following:

#### Categories of Ground Service Equipment Included in the Compliance Database

Air conditioner	Cart	Lavatory Cart
Air start	Catering truck	Lavatory Truck
Aircraft tractor	De-icer	Lift
Baggage tractor	Fork Lift	Other
Belt loader	Fuel Truck	Passenger Stand
Bobtail	Generator	Service Truck
Cargo loader	Ground Power Unit	Sweeper
Cargo Tractor	Hydrant Truck	Water Truck

## C. Support on Maintaining the Database

All questions regarding the Compliance Database should be directed to:

Managing Director, Environmental Affairs  
Air Transport Association  
1301 Pennsylvania Avenue, Suite 1100  
Washington, DC 20004-1707

Telephone: 202.626.4000

## D. Compliance Database Workbook Tables

The Compliance Database consists of a series of Excel worksheets that provide and maintain data necessary and sufficient to comply with the MOU. **Tables 1, 2, and 3** consist of data required to calculate the composite fleet average g/bhp-hr emission factor. Participating Airlines are not required to maintain or modify **Tables 1, 2, and 3**. **Tables 4, 5, 6 and 7** track information on your specific GSE fleet. Each of these tables is summarized below:

- **Table 1 – Emission Factors** contains HC+NO<sub>x</sub> emission factors for all existing and new engines, and engines equipped with retrofit kits. This table will be periodically updated by ATA; no inputs are required of Participating Airlines (see M. Emission Factors, below).
- **Table 2 – Load Values** contains the load factors, by category, used in the emissions calculations. No inputs are required of Participating Airlines.
- **Table 3 – Default Values** contains average values, by category, for **Activity (hours/year)** and **Power (BHP)**; the horsepower listed here are also to be used for electric units. No inputs are required of Participating Airlines.
- **Table 4 – Existing Fleet Inventory, Including Replacements** contains a listing of all equipment in the 1997 Existing Fleet, and will be updated according to E. Tracking the South Coast Inventory and F. Data Entry - Existing Fleet Activities, below.
- **Table 5 – Growth Fleet Inventory** contains data regarding GSE added to the fleet after December 31, 2003 (*i.e.*, new units that are not included in **Table 4** and *do not* replace existing units).
- **Table 6 – Transferred Units** contains data on GSE sold or transferred outside of the five airports in the South Coast (see L. Fate of Old Equipment, below).
- **Table 7 – 1993-2003 Fleet Inventory** contains data on GSE added between January 1, 1998 and December 31, 2003 (see H. Tracking the Interstitial Fleet, below).

Note that the data provided in the attached **Tables 4** through **6** are examples only, to illustrate the content and format of the information.

## E. Tracking the South Coast Inventory

These worksheets will be used to track all data relative to the “existing fleet” (**Table 4**) and the “growth” (**Table 5**) inventories. **Table 4** includes all units in the 1997 baseline inventory fleet, as well as modifications or replacements to this fleet. **Table 5** is limited to those units purchased or relocated to South Coast airports after 1997, which did *not* replace existing units.

The fields to be completed are listed below, with reference to the column letters in the spreadsheet.

Fields in Table 4 and Table 5		
Column	Field	Description
A	Index	This is a unique tracking number assigned to each unit in the 1997 baseline fleet and modifications or replacements.
B	Description or ID #	The unique equipment code or internal tracking number that your company has assigned to each GSE.
C	Airport	The airport at which this GSE operates ( <i>i.e.</i> , LAX, BUR, ONT, LGB, or SNA).
D	GSE Category	The appropriate equipment category for the unit (from the list in B.3. GSE Categories, above).
E	Manufacturer	The manufacturer of the equipment or the engine used to power the GSE.
F	Year of Mfg.	Model year for the engine (this may or may not correspond with the model year of the equipment unit).
G	Power (BHP)	Manufacturer’s rated horsepower at full load for IC engine-powered equipment; average rated horsepower, by category, for electric equipment (see <b>Table 3</b> ); either actual or default values may be used, as described in K. Documentation of Horsepower, below.
H	Fuel	Type of fuel used to power the GSE ( <i>i.e.</i> , “gasoline,” “CNG/LPG,” “diesel,” “ELECTRIC,” “Hybrid”); together with horsepower, this is used to determine the appropriate emission factor from <b>Table 1</b> (see <b>Column O</b> , below).
I	Activity (hours/year)	Actual annual operating hours during the reporting period; either actual or default values from <b>Table 3</b> may be used; J. Documentation of Activity, below, explains how this data is to be determined.

<b>Fields in Table 4 and Table 5</b>		
<b>Column</b>	<b>Field</b>	<b>Description</b>
J	Basis for Estimate	Method used to determine annual activity (see J. Documentation of Activity, below).
K	Airline Identifier	This confidential code, which has been assigned to your company, is designed to assure the confidentiality of data provided on these forms.
L	Age (yrs)	The number of years elapsed from the year of manufacture of the engine to the compliance period. This value is calculated automatically based on the <b>Year of Mfg. (Column F)</b> .
M	Age (hrs)	This is the elapsed number of active hours since date of manufacture for the engine. This value is either determined based on elapsed hour meter readings, or estimated by multiplying <b>Activity (hours/year) (Column I)</b> with <b>Age (yrs) (Column L)</b> . These data are used to calculate deterioration, as appropriate.
N	Load	Automatically assigned. This value is the load factor reported in <b>Table 2</b> , by GSE category.
O	Factor Index	Index of the emission factor selected from <b>Table 1</b> (see M. Emission Factors, below).
P	On-road Correction	TRUE/FALSE value, assigned based on whether the unit is equipped with an engine certified to on-road emissions standards. This field only applies to 1997 baseline units.
Q	Turbine Correction	TRUE/FALSE value, assigned for certain turbine air starts. This field only applies to 1997 baseline units.
R	Overall EF	Automatically calculated based on the data above.

Fields in Table 4 and Table 5		
Column	Field	Description
S	Status	Identifies whether the unit is: <ul style="list-style-type: none"> <li>• Repowered,</li> <li>• Modified,</li> <li>• Replacement,</li> <li>• Growth (<b>Table 5</b> only),</li> <li>• 1998-2003 Fleet (<b>Table 7</b> only),</li> <li>• Sold,</li> <li>• Scrapped, <i>or</i></li> <li>• Transferred (also identify unit and complete data required in <b>Table 6</b>).</li> </ul>
T U	DOC/DPF Date Installed	Identifies whether a diesel engine has been fitted with either a diesel oxidation catalyst (DOC) or a diesel particulate filter (DPF), and the date installed.
V W	HC+NOx Retrofit Date Installed	Identifies the ARB-certified equipment or fuel modification used to reduce HC+NOx emissions, if applicable, and the date installed. If the retrofit device is not certified, reference the supporting documentation that establishes the claimed emissions reductions and resultant emission factor selected from <b>Table 1</b> .
X	Engine Family Name	Identifies the EPA Certified Nonroad Engine Standardized Engine Family Name. This is a 12-digit alphanumeric code to be read directly from the engine, typically found on the valve cover. These are generally available for 1997 model year and later, but may be present on some earlier models.

## F. Data Entry – Existing Fleet Activities

Document existing fleet activities in **Table 4** as follows:

### 1. Replacement or Repower of GSE Unit

The following example is provided to illustrate how to record data in **Table 4** for units that are replaced or repowered with new engines that meet ARB offroad emission standards.

- Enter “0” (zero) hours/year for **Activity (Column I)** for the unit being replaced or repowered. Indicate in **Status (Column S)** whether the unit was replaced or repowered. If sold or transferred, also complete **Table 6** for this unit (see L. Fate of Old Equipment, below).
- Create a new row immediately below the replaced unit.
- Assign the replacement unit a new index number, which must be the index of the replaced unit appended by a capital letter, beginning with “A.” For example (see **Table 4**):
  - Existing unit **Index 3549 (Column A)** is replaced; the new unit is identified with **Index 3549A (Column A)**.
  - Should 3549A be later replaced, identify the new unit as **Index 3549B (Column A)**.
- Identify all data for the columns listed above: **Description or ID# (Column B)**, **Airport (Column C)**, **GSE Category (Column D)**, **Manufacturer (Column E)**, **Year of Mfg. (Column F)**, **Power (BHP) (Column G)**, **Fuel (Column H)**, **Activity (hours/year) (Column I)**, **Basis of Estimate (Column J)**, **Airline Identifier (Column K)**, **Factor Index (Column O)**.

## 2. Modification of Existing GSE – DOC/DPF

The following example is provided to illustrate how to record data in **Table 4** for units that are retrofit with diesel oxidation catalysts (DOC) or diesel particulate filters (DPF).

- Enter “0” (zero) hours/year for **Activity (Column I)** for the unit being retrofit.
- Identify the **Status (Column S)** as “Modified.”
- Duplicate the existing unit row.
- Assign the modified unit a new index number, which must be the index of the replaced unit appended by a capital letter, beginning with “A.” For example (see **Table 4**):
  - Existing unit **Index 3550 (Column A)** is modified; the post-modification unit is identified with **Index 3550A (Column A)**.
  - Should 3550A be later replaced or retrofit, etc., identify the new/modified unit as **Index 3550B (Column A)**.
- Confirm all data for the columns listed above: **Description or ID# (Column B)**, **Airport (Column C)**, **GSE Category (Column D)**, **Manufacturer (Column E)**, **Year of Mfg. (Column F)**, **Power (BHP) (Column G)**, **Fuel Group (Column H)**, **Activity (hours/year) (Column I)**, **Basis of Estimate (Column J)**,

**Airline Identifier (Column K), Factor Index (Column O)**; these data should remain unchanged from the original entry.

- Enter the appropriate designation for the particulate control (DOC/DPF) and the corresponding ARB certification(s) (**Column T**).
- Indicate the **Date Installed (Column U)** of the particulate control (in this example, May 15, 2005).

### 3. Modification of Existing GSE – HC+NO<sub>x</sub>

The following example is provided to illustrate how to record data in **Table 4** for units that are retrofit with HC+NO<sub>x</sub> controls.

- Enter “0” (zero) hours/year for **Activity (Column I)** for the unit being retrofit.
- Identify the **Status (Column S)** as “Modified.”
- Duplicate the existing unit row.
- Assign the modified unit a new index number, which must be the index of the replaced unit appended by a capital letter, beginning with “A.” For example (see **Table 4**):
  - Existing unit **Index 3551 (Column A)** is modified; the post-modification unit is identified with **Index 3551A (Column A)**.
  - Should 3551A be later replaced or retrofit, etc., identify the new/modified unit as **Index 3551B (Column A)**.
- Confirm all data for the columns listed above: **Description or ID# (Column B), Airport (Column C), GSE Category (Column D), Manufacturer (Column E), Year of Mfg. (Column F), Power (BHP) (Column G), Fuel Group (Column H), Activity (hours/year) (Column I), Basis of Estimate (Column J), Airline Identifier (Column K)**; these data should remain unchanged from the original entry.
- Identify the appropriate Emission Factor Index from **Table 1** and insert the appropriate code into **Factor Index (Column O)**.
- Enter the appropriate designation for the HC+NO<sub>x</sub> control and the corresponding ARB certification(s) into **Column V** (in the example, “ARB Cert. #”). Where no certification number is available, reference the supporting documentation to establish the emission factor selected from **Table 1**.
- Indicate the date of installation of the HC+NO<sub>x</sub> control into **Date Installed (Column W)** (in this example, June 15, 2005).

#### 4. Scrap Existing Unit

The following example is provided to illustrate how to record data in **Table 4** for units that are scrapped.

- Enter “0” (zero) hours/year for **Activity (Column I)** for the unit being scrapped (see unit with **Index 3552** for an example).
- Identify the unit as “scrapped” under **Status (Column S)**.

For the purposes of the MOU, the following actions will constitute scrapping:

- Dismantling the GSE or engine;
- Rendering the GSE or engine inoperable (*e.g.*, permanently disconnecting / removing the fuel supply or drive train);
- Red-tagging the GSE, with appropriate lock-out / tag-out; note that the hour meter or odometer reading must be recorded on the red-tag.

#### 5. Sale or Transfer of Existing Unit

The following example is provided to illustrate how to record data in **Table 4** for units that are sold or transferred outside of the South Coast.

- Enter “0” (zero) hours/year for **Activity (Column I)** for the unit being sold or transferred (see unit with **Index 3553** for an example).
- Identify the unit as “sold” or “transferred” under **Status (Column S)**.
- For transferred units, provide the data required in **Table 6** (see L. Fate of Old Equipment, below).
- For units that are sold, retain a copy of the sales agreement.

### G. Data Entry – Growth Fleet Activities

For each unit added to the inventory as growth (*i.e.*, does not replace a unit in the existing inventory), perform the following operations in **Table 5**:

- Create a new row at the end of the database.
- Identify the unit as “Growth” under **Status (Column S)**.
- Fill in all fields listed in E. Tracking the South Coast Inventory, above.
- Identify the appropriate Emission Factor Index from **Table 1** and insert the appropriate code into **Factor Index (Column O)**.

## H. Tracking the 1998-2003 Fleet

These worksheets will be used to track all data relative to the 1998-2003 Fleet, which is GSE added between January 1, 1998 and December 31, 2003. **Table 7 – 1998-2003 Fleet Inventory** is to be used for this purpose. **Table 7** has the same format as Table 5 – Growth Fleet Inventory except that the Status (Column S) is “1998-2003 Fleet” and columns containing data fields not relevant to the 1998-2003 Fleet have been suppressed. As such, this fleet is not required to meet the g/bhp-hr target or the percent ZEV conversion targets. However, these units must be retrofitted with appropriate diesel particulate controls, and may be subject to an emissions trading rule if one is developed by the SCAQMD. For each unit added between January 1, 1998 and December 31, 2003, perform the following operations in **Table 7**:

- Create a new row at the end of the database.
- Identify the unit as “1998-2003 Fleet” under **Status (Column S)**.
- Fill in the relevant fields listed in E. Tracking the South Coast Inventory, above (**Columns A-H, K, and S** only).

## I. Gate Electrification and Pre-conditioned Air

Gate electrification and supply of pre-conditioned air will realize substantial emissions reductions from the decreased use of ground power units and air conditioners, respectively, after January 1, 1998. A simplified credit scheme is incorporated into the MOU, and no additional records are required of the Participating Airlines beyond the minimum records defined above. Credits are applied to the percent ZEV in the existing fleet and are calculated as defined in **Appendix 1**.

## J. Documentation of Activity

Activity (hours/year) (Column I) must be documented in Tables 4 and 5 as follows:

- Default activity values, by category, may be used until January 1, 2008; thereafter, companies may elect to either continue use of default values or use non-resettable elapsed time meters. Companies that have hour meters on GSE may still elect to use default values to reduce the level of effort required to comply with documentation of activity.
- The election to use elapsed time meters must be declared on or before July 1, 2007; installation of meters must be completed by December 1, 2007.
- If a company elects to use hour meters, activity data shall be collected as follows:
  - Data must be collected during the months of January at the beginning of and immediately following the reporting period (*e.g.*, for the final compliance report between January 1 and January 31, 2010 and between January 1 and January 31, 2011).

- The activity data is adjusted to a 365-day period as follows:

$$activity = \frac{(final\ meter\ reading) - (initial\ meter\ reading)}{(number\ of\ days\ between\ readings)} \times (365\ days)$$

- To ensure proper operation of hour meters, the meter reading should be recorded on the maintenance log each time the unit is serviced.
- If an elapsed time meter fails during the reporting period, activity for that unit is determined by using the default value for that category from **Table 3**.
- Enter the adjusted elapsed hours for the progress reporting period or final compliance year under **Activity (hours/year) (Column I)**.
- Indicate the selected method for determining activity under **Basis for Estimate (Column J)** (*i.e.*, hour meter readings, default value, or failed meter).

## K. Documentation of Horsepower

**Power (BHP) (Column G)** must be documented in **Tables 4 and 5** as follows:

- For internal combustion engine-powered units, the manufacturer’s full-load rated horsepower is used. Acceptable documentation includes manufacturer’s nameplate (preferred), engine specification sheet, and/or product brochures.
- For electric units, the average horsepower, by GSE category, from **Table 3** is used; this provides for equivalent weighting in the composite average emission factor calculations for demonstrating compliance with the g/bhp-hr targets of the MOU.

## L. Fate of Old Equipment

Under Section III.F of the MOU, each Individual Participating Airline may transfer a GSE unit to another airport in the United States for one of the following reasons:

1. It results in a net emissions benefit at the airport to which the GSE is transferred, as defined below.
2. It has been moved to accommodate growth for the Participating Airline at the airport in question, as defined in the MOU;
3. It has been moved to accommodate an equipment change, defined as the use of a new aircraft type by the Participating Airline at the airport in question that requires additional GSE; *or*
4. It has been retrofitted as described below in L.4. Retrofit, below.

For diesel units moved within California, the MOU also requires retrofitting with a verified diesel particulate filter (DPF), if available, or verified diesel oxidation catalyst (DOC).

**Table 6** will be used to track all data relative to units sold or transferred. The fields to be completed are listed below, with reference to the column letters in the spreadsheet; All data are required for each unit that is transferred during the period of the MOU.

Fields in Table 6		
Column	Field	Description
A	Index	This is the unique identifier previously assigned to this unit.
B	GSE Category	The appropriate equipment category previously assigned to this unit (from this list in B.3. GSE Categories, above).
C	Transferred From	The airport from which this unit was transferred ( <i>i.e.</i> , LAX, BUR, ONT, LGB, or SNA).
D	Transferred To	The first airport this unit was transferred to.
E	Date Transferred	The date the unit was transferred.
F	Reason Transferred	The eligible reason for transferring this unit ( <i>i.e.</i> , net emissions benefit, growth, equipment change, or retrofit).
G	Net Emissions Benefit? (Y/N)	Indicate whether documentation is on file demonstrating a net emissions benefit is achieved by this transfer. Not Applicable (NA) for growth units or for units retrofit or transferred to accommodate equipment change (see above).
H	Retrofit? (Y/N)	Indicate whether unit has been retrofit as described above ( <i>e.g.</i> , 3-way catalyst, 6.9 g/bhp-hr, etc.).
I	DOC/DPF	Indicate whether unit has been retrofit with a verified diesel particulate filter (DPF), if available, or verified diesel oxidation catalyst (DOC) (for California transfers)

The additional records required for each of the reasons for moving equipment are as follows:

### 1. Net Emissions Benefit

**Net Emissions Benefit** results if the outcome of the equation below is a positive number.

#### Equation 1: Net Emissions Benefit Calculation

$$Net = [(EF) \cdot (Power) \cdot (LF) \cdot (A)]_{old} - [(EF) \cdot (Power) \cdot (LF) \cdot (A)]_{new}$$

Where:

- Old = The piece of GSE that is to be replaced by a unit currently located in the South Coast Air Basin
- New = The piece of GSE currently located in the South Coast Air Basin
- EF = The appropriate overall Emission Factor (g/bhp-hr), which is to be calculated using the emission factors in **Table 1** and the methodology set forth in **Appendix 1** of the MOU, including the appropriate deterioration factors for each unit.
- Power = Reported brake-horsepower rating for each GSE (see K. Documentation of Horsepower, above).
- LF = The appropriate load factor for a given category of equipment as summarized in **Table 2**.
- A = Activity factor (hrs/yr) reported for each GSE (see J. Documentation of Activity, above).

## 2. Growth

To demonstrate that the GSE was moved to accommodate growth at the destination airport, the Individual Participating Airline must maintain documentation to support one of the following:

- Year-over-year increase in scheduled departures from the destination airport; *or*
- Year-over-year increase in cargo ton miles.

## 3. Equipment Change

To demonstrate that the GSE was moved to accommodate equipment change at the destination airport, the Participating Airline must maintain documentation that a new aircraft type has been introduced at the destination airport which requires use of additional GSE.

## 4. Retrofit

Finally, a GSE may be moved from the South Coast to any airport if it is retrofit as follows:

- For spark-ignition engines: retrofitted with a three-way catalyst with a minimum of 80% control of HC+NO<sub>x</sub>,
- For compression-ignition engines: meets 6.9 g/bhp-hr NO<sub>x</sub>, or is modified by 4 degrees injection timing retard, turbocharging, and aftercooling, unless demonstrated not to be feasible to the satisfaction of ARB.

Records documenting the retrofit must be maintained.

### **M. Emission Factors**

Participating Airlines will not be required to identify or modify emission factors in **Table 1** (also in **Table 1, Appendix 1**). ATA will add new emission factors to **Table 1** as new standards are promulgated, or as new technologies are developed. Appropriate emission factors will be determined by ATA in consultation with appropriate technical and agency contacts.

### **N. Low Sulfur Diesel**

Use of low sulfur diesel, where required, will be verified by retention of purchase invoices for three years from date of fuel delivery.

### **O. DPF Study**

Recordkeeping to be determined for the pending DPF study.

## P. Data Required for Specific Reporting Years

Under the MOU, a Progress Report is required for 2003; compliance reports are required for 2005, 2007 and 2010. The following summarizes the submittal dates and data.

Progress/Compliance Reports		
Report Date	Reporting Period	Required Data
7/1/04	2003	<ul style="list-style-type: none"> <li>• For those GSE replaced by new or retrofitted units between January 1, 1998 and December 31, 2003 only, all data identified above in <b>Table 4</b> (Existing Fleet), except with NA entered in the following columns:               <ul style="list-style-type: none"> <li>• I – Activity,</li> <li>• J – Basis for Estimate,</li> <li>• R – Overall EF,</li> <li>• T – DOC/DPF,</li> <li>• U – Date Installed,</li> <li>• V – HC+NO<sub>x</sub> Retrofit, <i>and</i></li> <li>• W – Date Installed.</li> </ul> </li> <li>• For those GSE added to the fleet between January 1, 1998 and December 31, 2003, and not replacing GSE in the existing fleet, all data in <b>Table 7</b> (1998-2003 Fleet).</li> <li>• Note: Summary of Compliance Data (composite g/bhp-hr emission factor, percent conversion, etc.) are <i>not</i> provided in this Progress Report (NA).</li> </ul>
7/1/06	2005	<ul style="list-style-type: none"> <li>• All data identified above in <b>Table 4</b> (Existing Fleet), <b>Table 5</b> (Growth Fleet), and <b>Table 6</b> (Transferred Units), including percent electric and data on DOC/DPF; <i>and</i></li> <li>• Fleet composite average emission factor (g/bhp-hr).</li> </ul>
7/1/08	2007	<ul style="list-style-type: none"> <li>• All data identified above in <b>Tables 4-6</b>, including percent electric and data on DOC/DPF; <i>and</i></li> <li>• Fleet composite average emission factor (g/bhp-hr).</li> </ul>
3/15/11	2010	<ul style="list-style-type: none"> <li>• All data identified above in <b>Tables 4-6</b>, including percent electric and data on DOC/DPF; <i>and</i></li> <li>• Fleet composite average emission factor (g/bhp-hr).</li> </ul>

Note that the content of these reports will be updated following the completion of the DPF demonstration project referenced in O. DPF Study, above.

## Q. Suggested Progress/Compliance Report Formats

The suggested formats of the 2003 Progress Report and the 2005, 2007, and 2010 Compliance Reports and the minimum recommended content are presented below.

### 1. 2003 Progress Report

#### GSE MOU 2003 Progress Report

Due Date: July 1, 2004

Introduction and Requirements:

This report is submitted to satisfy the requirements in Section IV.B.1 of the California GSE MOU, which calls for a 2003 Progress Report. Specifically, ...

Compliance Data:

*Existing Fleet:*

*Interstitial Fleet:*

[Note: For the 2003 Progress Report, Summary of Compliance Data (composite g/bhp-hr emission factor, percent conversion, etc.) are *not* required; NA should be entered in the appropriate locations at the end of Table 4 and Table 7.]

*Submitted by:* \_\_\_\_\_

*Signature:* \_\_\_\_\_

*Date* \_\_\_\_\_

cc: MOU Distribution List

**2. 2005 Compliance Report**

**GSE MOU  
2005 Compliance Report**

Due Date: July 1, 2006

Introduction and Requirements:

This report is submitted to satisfy the requirements in Section IV.B.2 of the California GSE MOU, which calls for a 2005 Compliance Report. Specifically, ...

Compliance Data:

As set forth in MOU Appendix 2 – South Coast GSE MOU Recordkeeping Instructions, the following data are to be submitted for this report.

*Existing Fleet:* [Include copy of **Table 4** incorporating changes through December 31, 2005.]

*Growth Fleet:* [Include copy of **Table 5** incorporating changes through December 31, 2005.]

*Transferred Units:* [Include copy of **Table 6** incorporating changes through December 31, 2005.]

The following data summarize the status of the inventory with respect to the established benchmarks:

2005 **Composite Average HC+NOx Emission Factor (g/bhp-hr):** \_\_\_\_\_

2005 **Percent ZEV in Existing Fleet:** \_\_\_\_\_

2005 **Percent ZEV in Growth Fleet:** \_\_\_\_\_

2005 **Percent Replaced, Converted, or Retrofitted in Existing Fleet:** \_\_\_\_\_

2005 **DOC/DPF data**

Analysis:

[Consistent with the MOU, explain how the 2007 Interim Goals will be met.]

*Submitted by:* \_\_\_\_\_

*Signature:* \_\_\_\_\_

*Date* \_\_\_\_\_

cc: MOU Distribution List

### 3. 2007 Compliance Report

#### GSE MOU 2007 Compliance Report

Due Date: July 1, 2008

Introduction and Requirements:

This report is submitted to satisfy the requirements in Section IV.B.3 of the California GSE MOU, which calls for a 2007 Compliance Report. Specifically, ...

Compliance Data:

As set forth in MOU Appendix 2 – South Coast GSE MOU Recordkeeping Instructions, the following data are to be submitted for this report.

*Existing Fleet:* [Include copy of **Table 4** incorporating changes through December 31, 2007.]

*Growth Fleet:* [Include copy of **Table 5** incorporating changes through December 31, 2007.]

*Transferred Units:* [Include copy of **Table 6** incorporating changes through December 31, 2007.]

*2007 Composite Average HC+NOx Emission Factor (g/bhp-hr):* \_\_\_\_\_

*2007 Percent ZEV in Existing Fleet:* \_\_\_\_\_

*2007 Percent ZEV in Growth Fleet:* \_\_\_\_\_

*2007 Percent Replaced, Converted, or Retrofitted in Existing Fleet:* \_\_\_\_\_

*2007 DOC/DPF data?*

Analysis:

[Demonstrate how the 2007 Interim Goals have been met.]

*Submitted by:* \_\_\_\_\_

*Signature:* \_\_\_\_\_

*Date* \_\_\_\_\_

cc: MOU Distribution List

#### 4. 2010 Final Compliance Report

### GSE MOU 2010 Final Compliance Report

Due Date: March 15, 2011

Introduction and Requirements:

This report is submitted to satisfy the requirements in Section IV.B.4 of the California GSE MOU for a 2010 Final Compliance Report. Specifically, ...

Compliance Data:

As set forth in MOU Appendix 2 – South Coast GSE MOU Recordkeeping Instructions, the following data are to be submitted for this report.

*Existing Fleet:* [Include copy of **Table 4** incorporating changes through December 31, 2010.]

*Growth Fleet:* [Include copy of **Table 5** incorporating changes through December 31, 2010.]

*Transferred Units:* [Include copy of **Table 6** incorporating changes through December 31, 2010.]

*2010 Composite Average HC+NOx Emission Factor (g/bhp-hr):* \_\_\_\_\_

*2010 Number of Electric in Existing Fleet:* \_\_\_\_\_

*2010 Percent Electric in Existing Fleet:* \_\_\_\_\_

*2010 Number of Electric in Growth Fleet:* \_\_\_\_\_

*2010 Percent Electric in Growth Fleet:* \_\_\_\_\_

*2010 Percent Replaced, Converted, or Retrofitted in Existing Fleet:* \_\_\_\_\_

*2010 DOC/DPF data*

Analysis:

[Demonstrate how the MOU Goals in Sections III.A. through III.E. have been met. Include Certification for diesel GSE.]

*Submitted by:* \_\_\_\_\_

*Signature:* \_\_\_\_\_

*Date* \_\_\_\_\_

cc: MOU Distribution List