Appendix B

Existing Regulation Summary

The existing Truck and Bus regulation applies to nearly one million diesel vehicles that annually operate in California with a manufacturer's GVWR greater than 14,000 pounds, two-engine sweepers, yard trucks with on-road or off-road engines, and all diesel-fueled shuttle vehicles that frequent transit centers. The regulation does not include vehicles subject to previously adopted fleet regulations except for drayage trucks and utility-owned vehicles that become subject to the Truck and Bus regulation beginning January 1, 2021.

Starting January 1, 2012, fleets were required to install PM filters for certain engine model years and to begin accelerating engine or vehicle replacement starting January 1, 2015 for their heavier trucks. Most heavier trucks and buses (with a GVWR greater than 26,000 pounds) are required to have a PM filter by January 1, 2014. PM filters include those that are originally installed by the manufacturer and those that are installed afterwards (PM filter retrofit). After 2014, fleets are required to phase-in additional 2010 model year or newer engines such that by 2023 all engines operating in California and subject to the regulation will be model year 2010 or newer.

The current regulation has several compliance options for fleets to choose from, and some fleets may change compliance options from one year to the next. Compliance options are detailed below.

1. Engine Model Year Schedule for Lighter Trucks

Lighter trucks and buses with a GVWR of 14,001 to 26,000 pounds do not have compliance requirements until 2015 and must follow the Engine Model Year Schedule for Lighter Trucks (see Table B- 1 below). Starting January 1, 2015, lighter trucks with engines that are 20 years or older would need to be replaced with newer trucks. Starting January 1, 2020, all remaining trucks and buses would need to be replaced so that they would all have 2010 model year engines or equivalent emissions by 2023.

Table B- 1. Engine Model Year Schedule for Lighter Trucks

Engine Model Year	Replacement Date
1995 and older	January 1, 2015
1996	January 1, 2016
1997	January 1, 2017
1998	January 1, 2018
1999	January 1, 2019
2003 and older	January 1, 2020
2004-2006	January 1, 2021
2007-2009	January 1, 2023

2. Engine Model Year Schedule for Heavier Trucks

The engine model year schedule (see Table B- 2 below) for heavier trucks (GVWR greater than 26,000 pounds) is a schedule that specifies which vehicles must be equipped with a PM filter or replaced with 2010 model year engines to meet PM and NOx emission requirements based on engine model year. Fleets using the engine model year compliance schedule are not required to report.

Table B- 2. Engine Model Year Schedule for Heavier Trucks

Engine Model Year	Requirement from January 1
Pre-1994	No requirements until 2015, then 2010 engine
1994-1995	No requirements until 2016, then 2010 engine
1996-1999	PM filter from 2012 to 2020, then 2010 engine
2000-2004	PM filter from 2013 to 2021, then 2010 engine
2005-2006	PM filter from 2014 to 2022, then 2010 engine
2007-2009	No requirements until 2023, then 2010 engine
2010 or newer	Meets final requirements

3. Phase-In (Percentage) Option

The PM filter phase-in option is a compliance option based on the entire fleet of heavier trucks that operate in California. This option allows fleet owners to decide which heavier vehicles to retrofit or replace to meet an annual PM filter percentage requirement from January 1, 2012 to January 1, 2016, and defers all truck replacements until January 1, 2020, or later. Beginning January 1, 2020, all trucks and buses will need to be upgraded to 2010 model year engines according to the engine model year schedule for heavier trucks. Fleets must be able to meet PM filter percentage requirements, shown in Table B- 3 below, for the fleet of heavier trucks that operate in California. Fleet owners must report to demonstrate compliance.

Table B- 3. PM Filter Phase In Option for Heavier Trucks

Compliance Date	Percentage of Trucks with PM Filters
January 1, 2012	30%
January 1, 2013	60%
January 1, 2014	90%
January 1, 2015	90%
January 1, 2016	100%

The phase-in option requirements are also adjusted with credits for early action or adding advanced technology vehicles. Here is a summary of each of the credits that when used with the phase-in option can delay compliance for vehicles in the fleet.

a) Downsizing Credit

If an existing fleet has fewer heavier vehicles than were registered on October 1, 2006, the fleet can get PM filter credits to delay compliance for a portion of the fleet until January 1, 2016. The credit reduces the PM filter percentage requirement for the fleet. For example, if the compliance requirement is 90 percent but the fleet has 25 percent fewer heavier trucks in its existing fleet than it did in 2006, then the required percentage is reduced to 65 percent (90 percent – 25 percent = 65 percent). The credit is recalculated when vehicles are added or removed from the fleet.

b) Alternative Fueled or Hybrid Credit

For each heavier vehicle that fleet owners have in the fleet that operates on a dedicated alternative fueled like propane or natural gas, a fleet owner can get PM filter credits to reduce the percentage requirement for the fleet until January 1, 2017. For each alternative fueled vehicle added, compliance is delayed for another diesel vehicle in the fleet. More credits can be earned as more vehicles are added to the fleet. To avoid double counting of credits, alternative fueled vehicles that are used for credits are counted in the fleet size when determining the downsizing credit.

c) Early Installation of PM Filters Credit.

For each PM filter retrofit that was in the fleet on July 1, 2011, a fleet owner can get a PM filter credit that delays compliance for another truck until January 1, 2017. Credit can also be earned if a PM filter retrofit was ordered before May 1, 2011 and installed before October 1, 2011. The fleet owner must report information about early PM filter retrofits along with the California fleet information.

d) Early Addition of Vehicles with Originally Equipped PM Filters Credit

If a fleet owner purchased vehicles that have PM filters as standard equipment (2007 model year and newer engines) before January 1, 2012 and the average age of the fleet of existing engines is newer than it was on October 1, 2006, the fleet owner can get PM filter credits to reduce the percentage requirement for the fleet until January 1, 2017. The credit is calculated by multiplying the difference in the fleet age by 5 percent [(existing average age minus the 2006 average age) * 5 percent]. For example, if the average age of the engines in the fleet was 12.2 years old in 2006 and is now 10 years old, the fleet is now 2.2 years younger; therefore, the credit is 2.2 * 5 percent = 11 percent. The credit can change as vehicles are added or removed from the fleet, but it cannot be higher than established on January 1, 2012.

e) In-Use Off-Road Diesel Vehicle Regulation Excess Credit Exchange.

Fleets that have excess PM filter credits granted in the In-Use Off-Road diesel vehicle regulation (title 13, CCR, section 2449) may be used in the Truck and Bus regulation until January 1, 2017. Excess PM filter credits granted in the Truck and Bus regulation may also be used in the In-Use Off-Road diesel vehicle regulation until January 1, 2017.

4. Small Fleet Option

Small fleets with three or fewer vehicles with a GVWR greater than 14,000 pounds have an alternative compliance option that delayed the first compliance date until January 1, 2014. To use this option, heavier vehicles in the fleet must comply with the following schedule:

One vehicle must have a PM filter by January 1, 2014.
Two vehicles must have PM filters by January 1, 2015.
Three vehicles must have PM filters by January 1, 2016.

All small fleets would need to meet the same Engine Model Year schedule as other fleets starting January 1, 2020.

5. Low-use vehicles

Vehicles operated less than 1000 miles per year or less than 100 hours per year are exempt from the engine requirements of the regulation. To use this option, fleets must report annual mileage and hour readings of the vehicles. Vehicles that also operate less than 1000 miles per year in the State also can be designated as low use vehicles and be exempt from the engine requirements of the regulation.

6. Low Mileage Construction Trucks

The low mileage construction truck extension delays the PM filter requirements for certain low mileage construction trucks with a GVWR greater than 26,000 pounds and requires PM filters to be phase-in from 2014 to 2016 delays their replacement until January 1, 2020 or later. Dump trucks that transport construction materials such as dirt, asphalt, rock or construction debris and include a transfer truck, or a tractor trailer combination used exclusively to pull bottom dump, end dump or side dump trailers are eligible if they travel less than 20,000 miles per year. Other construction trucks must operate less than 15,000 miles per year and include all vocational trucks that are owned by a contractor that holds a valid license issued by the California Contractors State License Board or certain truck body types, regardless of who owns them, including concrete mixers, concrete pump trucks, water trucks, single engine cranes with a load rating of 35 tons or more, or tractors that exclusively pull low-boy trailers. Fleets with low-mileage construction trucks must phase-in PM filters from 2014 to 2016 as shown in the table below. As shown in Table B- 4 below, compliance is determined by applying the minimum percentage to all vehicles in the fleet (except for low-use vehicles). Therefore, other vehicles in the fleet that do not use extensions and have PM filters can be counted towards compliance. In addition, a single truck owner with a low-mileage construction truck can delay the PM filter requirement until January 1, 2016. Starting January 1, 2020, all low-mileage construction trucks must comply with the engine model year schedule like other trucks.

Table B- 4. Low Mileage Construction Truck Extension Compliance Schedule

Compliance Date	Minimum PM Filters*
January 1, 2014	33%
January 1, 2015	66%
January 1, 2016	100%

* Applies to entire fleet of heavier trucks (except low-use).

7. Log Truck Phase-in Option

Log trucks are eligible for the log truck phase-in option if they are heavy-duty vehicles with a GVWR greater than 33,000 lbs., exclusively transport logs, and have permanently attached log bunks. The log truck phase-in option allows log truck fleet owners to opt-in to a compliance schedule to upgrade to 2010 model year engines on a separate schedule shown in the Table B- 5 below and does not require the use of PM filters. The option can be used by log trucks that operate statewide, and there are no mileage limits. However, the total number of trucks using the log truck phase-in option and agricultural vehicle extensions cannot be higher than the number of trucks owned by the fleet on January 1, 2009. Trucks that comply with the log-truck phase-in option do not count towards compliance with other flexibility options.

Table B- 5. Log Truck Phase in Option Schedule

Compliance Deadline as of January 1	Percent of Log Trucks with 2010 Model Year Engines
2012	0%
2013	0%
2014	10%
2015	20%
2016	30%
2017	40%
2018	50%
2019	60%
2020	70%
2021	80%

8. Agricultural Vehicles

The agricultural vehicle extension delays compliance for agricultural vehicles that operate less than specified mileage thresholds and for a limited number of specialized trucks. It applies to diesel trucks and buses that are exclusively use for agricultural operations with a manufacturer gross vehicle weight rating greater than 14,000 pounds. The total number of trucks using the agricultural vehicle extension cannot be higher than the number of trucks owned by the fleet on January 1, 2009. The agricultural vehicle extension also includes agricultural vehicles such as trucks and buses owned by log harvest operations or farming businesses and certain trucks that are not farmer-

owned but are dedicated to supporting agricultural operations. Pickups are not subject to the regulation. Owners must report odometer readings annually to remain eligible.

Starting in 2011, all eligible vehicles must stay below the annual mileage limits as shown in Table B- 6 to remain eligible for the extension except for trucks approved for the specialty agricultural vehicle exemption. Owners must update their odometer reading for January 1 each year and when a vehicle is removed from the fleet. Until January 1, 2017, eligible vehicles must stay below the limits shown in the table. Starting January 1, 2017, only vehicles that operate less than 10,000 miles every year since January 1, 2011, can continue to use the extension until January 1, 2023. The extension expires immediately when a vehicle exceeds the mileage limits in any year or if it is used for non-agricultural purposes.

Table B- 6. Mileage Threshold for Agricultural Vehicle Extension

Engine Model Year	Annual Mileage Limit
2006 or newer	25,000
1996 to 2005	20,000
1995 and older	15,000

9. Vehicles operating exclusively in designated NOx exempt areas

Vehicles with a GVWR greater than 14,000 pounds that are operated exclusively in the existing NOx exempt areas are exempt from any replacement requirements. The existing NOx exempt areas are the following counties: Alpine, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Monterey, Northern Sonoma (as defined in title 17, CCR section 60100(e)), Plumas, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Trinity, Tehama, and Yuba. Any vehicle with a GVWR greater than 14,000 lbs that is used exclusively in NOx exempt areas are exempt from meeting the 2010 model year replacement requirements if the vehicle meets PM BACT by the compliance date that the engine would otherwise be required to be upgraded to a 2010 model year engine. Heavier trucks with a GVWR greater than 26,000 pounds that operate exclusively in the NOx exempt areas, except for low-use vehicles, must meet the following phase-in schedule as shown in Table B- 7 below.

Table B- 7. Compliance Schedule for NOx Exempt Area Fleets

Compliance Deadline as of January 1	Percent of Fleet with PM Filters
2014	33%
2015	66%
2016	100%

10. Credit for installation of PM Filters by January 1, 2014

Any vehicle that is equipped with a PM filter before January 1, 2014 would comply until 2020 regardless of model year. In addition, fleet owners that install PM filters on all vehicles in their fleet by January 1, 2014 have delayed replacement on all of the

vehicles until January 1, 2023 regardless of the model year of the engine. This applies to any vehicle with a GVWR greater than 14,000 pounds. Reporting requirements apply in order to earn the delayed replacement.

11. School Buses

School buses are exempt from any NOx reduction (replacement) requirements but must meet the PM filter requirements. All school buses must have PM filters installed by 2014. An extension is provided for school buses that cannot be retrofitted such that by January 1, 2018, these buses must be replaced or repowered with an engine on which a PM filter is or can be installed. Recordkeeping and reporting requirements apply until the school bus is brought into compliance.