

Appendix D3

Purpose and Rationale for Proposed Appendix A

Proposed Zero Emission Motorcycles Regulations

CCR, Title 13, section 1958.4, 1958.5, 1958.6, and 1958.7

California Government Code section 11346.2(b)(1) requires a description of the specific purpose for each proposed adoption, or amendment, the problem the agency intends to address with the proposed regulation, and the rationale for determining that each proposed adoption and amendment is reasonably necessary to both carry out the purposes of the California Air Resources Board (CARB) staff's Proposal and to address the problems for which it is proposed. **Applicable to all sections in this Appendix are the following:**

- It is necessary to create the "Zero-Emission Motorcycles Regulation," in order to reduce emissions and provide an avenue and incentive for manufacturers to increase production of zero-emission motorcycles (ZEMs).
- The provisions are necessary to provide clarity to the regulated industry.
- The general summary and rationale and descriptions of necessity in Section V of the Staff Report: Initial Statement of Reason are incorporated into this Appendix and apply to all provisions below.
- The provisions are necessary to implement and enforce the requirements.
- All timeframes specified were chosen to achieve consistency with similar provisions in the federal provisions, light-duty and medium-duty regulations. They were also chosen to provide the regulated industry with sufficient time to submit information or take certain actions while balancing CARB's need to receive information, engage in certification activities, and implement the regulations.

Section 1958.4

Purpose:

The purpose of this section is to describe the standards and certification procedures for model year 2028 and subsequent zero-emission motorcycles.

Rationale:

This section is necessary to describe the procedures that manufacturers need to follow as part of certification process when certifying zero-emission motorcycles and what standards apply to them.

Subsection 1958.4 (a)**Purpose:**

The purpose of this subsection is to define that these requirements shall apply to manufacturers that produce and deliver for sale in California model year 2028 and subsequent zero emission motorcycles.

Rationale:

This subsection is necessary to define to whom this section and its requirements apply, namely, manufacturers of zero-emission motorcycles for model years 2028 and subsequent.

Subsection 1958.4 (b)**Purpose:**

Subsection 1958.4(b) is added to define terms used throughout the new regulatory sections 1958.4 through 1958.7, related to zero-emission motorcycles. The rationale for this subsection and each specific term defined therein is included below.

Rationale:

Subsection 1958.4(b) is necessary to clarify the meaning of new terms used in new sections 1958.4 through 1958.7 relating to zero-emission motorcycles (ZEMs). Current regulations do not include any ZEM requirements, and there are several new terms used in these sections that are specific to ZEMs. Defining these terms will help to clarify the new ZEM regulatory requirements and how they must be met.

“Battery Electric Motorcycle” is necessary to specify the criteria that define a battery electric motorcycle in relation to their classification within the zero-emission motorcycle grouping. This definition is important to differentiate zero-emission motorcycles that incorporate batteries to store energy for propulsion verses zero-emission motorcycles that use other forms of energy storage. An example of this would be hydrogen fuel cell motorcycles. This term is also important for classifying zero-emission motorcycles for range testing and determining ZEM test groupings.

“Battery State of Health (SOH)” is necessary to describe the equation being used when determining how to calculate battery state of health of a battery electric ZEM. This is necessary so both manufacturers and ZEM end users understand how the

displayed battery state of health is determined and what criteria the value is based on. The ability to display the battery state of health will be a requirement for ZEM certification for model years 2028 and subsequent.

"Criteria Pollutants" is necessary to clarify that an on-road motorcycle cannot be considered zero-emissions if it produces any criteria pollutants under any operational modes or condition.

"Conductive Charger Inlet" is necessary to clarify a standardized method of connecting ZEMs to existing vehicle charging stations, thereby making use of existing infrastructure. While manufacturers are not required to comply with the conductive charger inlet standard, the regulation offers a fast charge bonus credit for ZEMs that do.

"Curb Mass" is necessary to specify the criteria that manufacturers will use when calculating the weight of their ZEM. The curb mass values will be used in calibrating the dynamometer when manufacturers are determining the range of their ZEMs.

"Greenhouse Gas" is necessary to clarify that an on-road motorcycle cannot be considered zero-emissions if it produces any greenhouse gases under any operational modes or condition.

"Highway Fuel Economy Drive Cycle (HFEDS)" is necessary to specify the drive cycle that will be used to determine the range of a ZEM that is classified as a hydrogen fuel cell motorcycle. Having a consistent test to determine range of a hydrogen fuel cell motorcycle is important because how a ZEM generates ZEM credits is based on overall range. Specifying a specific range test based on the type of ZEM being tested, allows for a consistent test procedure to be used by all manufacturers.

"Hydrogen Fuel Cell Motorcycle" is necessary to specify the criteria that define a hydrogen fuel cell motorcycle in relation to their classification within the zero-emission motorcycle grouping. This definition is important to differentiate zero-emission motorcycles that use compressed hydrogen gas to store energy for propulsion versus zero-emission motorcycles that use other forms of energy storage. An example of this would be battery electric motorcycles. This term is also important for classifying zero-emission motorcycles for range testing and determining ZEM test groupings.

"Off-board Charge Capable Motorcycles" is necessary to clarify to the manufacturers that if they produce a ZEM with a battery that can be removed from the frame of the motorcycle, and charged away from the ZEMs location, this feature will classify the ZEM as an off-board charge capable motorcycle.

"On-board charger" is necessary to explain the terminology that CARB uses to describe the on-board charger component of a ZEM which may have various names

depending on the manufacturer. On-board charger capability is required information when manufacturers are submitting data to CARB for certification of their ZEMs in model year 2028 and subsequent. The capability of the on-board charger can also determine if the ZEM qualifies for the fast charge ZEM credit bonus.

“Urban Dynamometer Driving Schedule (UDDS)” is necessary to specify the driving schedule used as part of SAE J2982 “Riding Range Test Procedure for On-Highway Electric Motorcycles” to determine the overall range of a battery electric ZEM. It is important to clarify all test criteria that the manufacturers will use to determine range. This regulation uses ZEM range data as one of the criteria for determining if a motorcycle is considered a ZEM. Also, ZEM range data will be used to determine the amount of ZEM credits a particular ZEM will be eligible to produce.

“Zero Emission Motorcycle (ZEM)” is necessary to clarify to the manufacturers the criteria that CARB staff will be using when determining if an on-road motorcycle is to be classified as a ZEM. These definitions are also used as a criteria to prevent vehicles that do not meet the specification to be excluded from the CARB ZEM program. Examples of excluded vehicles would be electric bicycles, electric stand-up scooters, and other two- and three-wheeled vehicles that do not meet all of the criteria that is used to define a ZEM. Excluding “electric bicycles” from the definition of ZEM is necessary since electric bicycles can have a top speed of up to 28 miles per hour, while Tier I ZEMs can have a top speed as low as 25 miles per hour. However, electric bicycles are not eligible for DMV registration and are not subject to federal motor vehicle safety standards and are therefore not to be included in CARB’s ZEM program.

“ZEM Traction Battery” is necessary to clarify that the term traction battery applies to the battery that is used to provide power to propel the battery electric ZEM. For a ZEM to be certified with CARB and generate ZEM credits, the manufacturer must meet minimum warranty requirements that are placed on the ZEM’s traction battery. This definition is important in differentiating the traction battery that is used to propel the ZEM verses any other on-board battery that may be used to operate electrical equipment.

Subsection 1958.4 (c)

The purpose of this subsection is to establish the requirement that model year 2028 and subsequent zero-emission motorcycles shall be certified by the Executive Officer. Further, this section reiterates that ZEM certified under this section must not produce any criteria pollutant or precursor emissions under any possible operational circumstances.

Rationale:

This subsection is necessary to establish the requirement for CARB certification and define the standards to which street use motorcycles will be certified as a ZEM under this regulation. ZEMs certified under this subsection will emit no criteria pollutant or greenhouse gas emissions from an engine exhaust, playing a critical role in reducing those emissions and helping to meet State and federal climate and air quality goals.

Subsection 1958.4 (d) 1 through 3**Purpose:**

The purpose of this section is to define the parameters of the different ZEM Tiers.

Rationale:

This subsection is necessary to provide manufacturers with the minimum specifications needed to establish what Tier their certified ZEM will be classified in. The different tiers are separated based minimum performance characteristics of ZEMs based on currently available testing criteria. Separating ZEMs into three different categories mimics current internal combustion motorcycle classifications, but classifications are based on performance criteria verses displacement as with internal combustion motorcycles. The criteria for determining Tier performance are based on testing specification within SAE J2982_202210 - Riding Range Test Procedure for On-Highway Electric Motorcycles, revised 10-13-2022. The three Tiers described in the regulation correspond with three test options outlined in the SAE J2982 procedure.

Subsections 1958.4 (e) (1) through (e)(3)**Purpose:**

The purpose of these subsections is to establish test procedures for various ZEM technologies to use when determining certified riding range of the ZEM.

Rationale:

These subsections are necessary to define the test procedures that manufacturers are to use, based on their ZEM propulsion technology, when certifying the riding range of their ZEMs. This subsection includes specific procedures for the most common current ZEM technology, battery-electric, as well as the most viable current alternative technology, hydrogen fuel cell. In both cases, staff has proposed to use industry standard test procedures developed by Society of Automotive Engineers. Subsection (e)(3) clarifies how a ZEM range test shall be performed when the ZEM falls into a different propulsion technology category than those ZEMs with already established test plans. For alternative ZEM range testing methods, this subsection gives the

manufacturer the timeline to submit their proposal of alternative test method and the timeframe for EO response.

For battery-electric and hydrogen fuel cell ZEMs, subsections (e)(1) and (e)(2) specify the allowable dynamometer drive cycles and loading parameters. These options have been tested by CARB staff and shown to produce range results that reasonably correspond to real world ranges likely to be experienced by actual ZEM riders.

Subsection 1958.4(f)

Purpose:

The purpose of this subsection is to establish the requirements for ZEMs with traction batteries.

Rationale:

This subsection is necessary to clarify what is required of manufacturers that produce ZEMs that use traction batteries. Battery-electric ZEMs are currently the most common type of ZEM. The requirements listed in this subsection are intended to ensure a positive customer experience for battery-electric ZEM owners and ensure that ZEM traction batteries can be recycled at the end of their useful life.

Subsection 1958.4 (f)(1)

Purpose:

The purpose of this subsection is to specify that ZEMs must meet the battery labeling requirements set forth in proposed CCR, title 13, section 1962.6, in order to be certified for sale in California.

Rationale:

This subsection is necessary because proper battery labeling ensures that consumers, aftermarket servicers, and end users are aware of a battery's contents for proper handling and are provided convenient access to more information. The subsection will also ensure that manufacturers are labeling their batteries consistently and uniformly. This will facilitate proper battery servicing and recycling, and support consumer confidence in ZEVs by assuring servicers have access to the information needed. Not doing so would substantially undermine the benefits of this proposal and potentially create challenges with proper disposal and recycling at the end of their useful life. Requirements in this subsection are similar to battery labeling requirements for battery-electric passenger cars, but with provisions to allow flexibility in label locations as appropriate for motorcycles.

Subsection 1958.4 (f) (2) through (f)(6)

Purpose:

The purpose of these subsections is to clarify how manufacturers must calculate and display a ZEM's battery state of health.

Rationale:

These subsections are necessary to define the processes that are to be used by the manufacturer in fulfilling their requirement to display the battery state of health to the consumer. The requirements are based on similar CARB regulations for battery-electric passenger cars. Potential ZEM buyers may be worried about how durable and long-lasting the traction battery will be. Traction battery health is critical to ZEM range and performance, and replacing a failed traction battery can be quite costly. To help improve customer confidence, the regulations specify that manufacturers must monitor battery state-of-health and make that information accessible to the ZEM owner without a specialized tool. This ability to display the state of health of the battery is important to allow consumers to have confidence in battery longevity of their ZEM. State-of-health reporting is also critical to support the used ZEM market, since used ZEM buyers will have the ability to consider ZEM battery health when shopping for models on the used market.

Subsection 1958.4 (f)(7)**Purpose:**

The purpose of this subsection is to define the terms of the ZEM warranty requirement, and the warranty distance and duration amounts by ZEM tier.

Rationale:

This subsection is necessary to clarify that ZEM manufacturers must provide minimum traction battery warranties in order to be certified for sale in California and generate ZEM credits. Warranty requirements ensure that manufacturers are responsible for traction batteries failures on individual motorcycles. The minimum warranty distance and duration are consistent with useful life requirements for gasoline-powered internal combustion motorcycles, and do not exceed the warranties currently being offered by leading ZEM manufacturers. Requiring a robust traction battery warranty should help to promote consumer confidence and increase the likelihood that consumers will purchase a ZEM.

Subsection 1958.4 (f)(8)

Purpose: The purpose of this subsection is to clarify that ZEMs with exchangeable batteries not owned or leased by the ultimate purchaser are not required to monitor battery state-of-health or provide a warranty for the traction battery.

Rationale:

This subsection is necessary because ZEM owners that do not own the traction battery do not have any financial investment in the long-term state-of-health of the battery. Although not currently available in California, some ZEM markets around the globe have established battery swapping services where ZEM owners remove their discharged battery and exchange it for a fully charged battery. Under this arrangement, the ZEM owner uses a different battery pack each time they deplete their charge and make an exchange. Long-term battery health for swappable batteries is the responsibility of the organization that owns and manages the battery exchange network, not the ZEM owner. Furthermore, battery state-of-health monitoring requires comparison of a battery's current storage capacity against its initial storage capacity at the time of manufacture. It wouldn't be practical or beneficial to incorporate this into a ZEM that uses swappable batteries.

Subsection 1958.4 (g)**Purpose:**

The purpose of this subsection is to notify the manufacturer they must submit an application to CARB to certify their model year 2028 or subsequent ZEM.

Rationale:

This subsection is necessary to establish the criteria manufacturers must follow to certify a ZEM to be sold or offered for sale in California. Currently, CARB defers to U.S. EPA for ZEM certification. However, for model year 2028 and subsequent, CARB certification will be required because U.S. EPA certification does not include range testing or ZEM quality assurance measures that are included in this proposal and critical for accelerated consumer adoption of ZEMs.

Subsection 1958.4 (g)(1) and (g)(2)**Purpose:**

The purpose of these subsections is to describe the process for certifying ZEMs by ZEM test group and how to apply the range test results to a ZEM test group.

Rationale:

These subsections are necessary to define the parameters that manufacturers will use to classify their ZEMs into test groups for the certification process. ZEM manufacturers can reduce their required range testing and certification fees by grouping multiple ZEM models into a single ZEM test group, so long as all those models share the common characteristics outlined in these subsections.

Subsection 1958.4 (h)(1) through (h)(12)

D3-8

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Purpose:

The purpose of these subsections is to describe in detail what information is required to be included in the CARB certification application submitted by ZEM manufacturers.

Rationale:

These subsections are necessary to give in detail what information is required from the manufacturer when they are applying to certify their ZEM for sale in California. The U.S. EPA ZEM application process requires manufacturers to submit only basic information about the company and ZEM model. CARB has additional standards and requirements for ZEMs, such as labeling, warranty, range results, and battery state-of-health monitoring. The additional information required to be submitted, as listed in these subsections, will allow CARB staff to evaluate whether the ZEM meets all applicable requirements.

Subsection 1958.4 (i)**Purpose:**

The purpose of this subsection is to clarify that certified ZEMs are subject to compliance and enforcement testing, corrective actions and recall provisions and describes where the detailed language is within the regulation.

Rationale:

This subsection is necessary to establish the process that CARB will use to determine whether manufacturers are out of compliance with ZEM requirements, and the actions that will be taken when non-compliance is determined.

Subsection 1958.4 (j)**Purpose:**

The purpose of this subsection is to inform manufacturers that they may be subject to penalties if they violate this regulation.

Rationale:

This subsection is necessary to inform manufacturers that they are subject to penalties if they are found to be out of compliance with these regulations.

Subsection 1958.4 (k)**Purpose:**

The purpose of this subsection is to establish that each provision of this section is severable and that if any provision of this section is invalid, the remainder of the sections will remain in full force and effect.

Rationale:

This subsection is necessary to provide a procedure to retain the language of the section in case a section needs to be removed at a future date.

Section 1958.5**Purpose:**

The purpose of this section is to describe in detail how zero-emission motorcycle credits are generated, transferred and how they expire.

Rationale:

This section is necessary to describe the process of how manufacturers will generate ZEM credits by producing ZEMs for the California market, and how those credits can be used for compliance with ZEM credit obligations outlined in section 1958.6. This section details how manufacturers can transfer excess credits to other manufacturers who may be credit deficient. This section also covers the lifespan of the ZEM credits.

Subsection 1958.5 (a)**Purpose:**

The purpose of this section is to describe how a ZEM produced and delivered for sale in California, starting in model year 2024, can generate ZEM credits for the manufacturer. It also clarifies that vehicles earning ZEM credits cannot also earn credits under CARB's zero-emission light duty vehicle program. Finally, this section describes how the ZEM credits generated during this time can be used to comply with future ZEM credit obligations.

Rationale:

This section is necessary to describe when manufacturers can start generating ZEM credits, and how those credits can be used for future compliance with the regulation. This section clarifies that vehicles earning ZEM credits cannot also earn credits under CARB's zero-emission light duty vehicle program. This clarification is necessary to address three-wheeled vehicles that meet the legal definition of a motorcycle but have some attributes that are commonly found on passenger cars, such as side-by-side seating and a traditional steering wheel.

Subsection 1958.5 (a)(1) and (a)(2)**Purpose:**

The purpose of these subsection is to describe what requirements are to be followed by the manufacturers if they want to generate ZEM credits during model years 2024-

2027. It also directs manufacturers to the other sections with details for model years 2028 and subsequent ZEMs.

Rationale:

This subsection is necessary to describe, in detail, all the requirements that manufacturers will need to follow to start generating ZEM credits for ZEMs sold or offered for sale in California during the model years 2024-2027. This subsection also references the other sections manufacturers will need to follow for model year 2028 and subsequent.

For model year 2024 through 2027, the ZEM program is focused on encouraging manufacturers to bring as many ZEMs to the California market as possible. There are only minimal requirements for ZEMs, so as not to create any unnecessary barriers to entering the market. The only requirements are range testing data specified in subsection (a)(1)(C), which is necessary in order to calculate the number of ZEM credits earned per ZEM sold, and a basic warranty requirement in subsection (a)(1)(D), which is intended to provide some assurance of quality and long-term performance. Additional requirements for ZEMs become effective in model year 2028 and subsequent, and are supported by a CARB certification program as noted in subsection (a)(2).

Subsection 1958.5 (b)(1) through (b)(4)

Purpose:

The purpose of these subsections is to give manufacturers information on how the different tiers of ZEMs will proportionately earn credits for model years 2024-2035.

Rationale:

These subsections are necessary because they cover all the details of how each ZEM will generate credits relative to their tier and what additional ZEM credit bonuses may apply to them. This allows manufacturers to predict how many ZEM credits their ZEM may produce, and to develop and market enough ZEMs to generate adequate credits for compliance with future credit obligations.

In general, the proposal provides more ZEM credits for motorcycles with higher top speed and greater riding range. This is intended to acknowledge the likelihood that ZEMs with greater on-road performance will displace more miles ridden on gasoline-powered internal combustion motorcycles, thereby delivering greater emission reductions. Furthermore, staff analysis of the cost differential between ZEMs and comparable gasoline-powered internal combustion motorcycles found that the price difference increases as ZEM performance and corresponding battery capacity increases. Offering more ZEM credits for greater speed and range will incentivize

manufacturers to improve performance of their current and future ZEM models, making them more attractive for a wider range of riders.

Subsection 1958.5 (c)(1) through (c)(4)

Purpose:

The purpose of these subsections is to describe the parameters manufacturers must meet to qualify for the fast charge bonus and earn additional ZEM credits.

Rationale:

These subsections are necessary to describe to the manufacturers the specifications their ZEMs will be required meet to qualify for the fast charge bonus on top of the normal ZEM base credit. CARB staff has concluded that the ability to quickly and conveniently recharge or refuel a ZEM will tend to result in more miles ridden, thereby providing greater emission reductions as compared to gasoline-powered internal combustion motorcycles. Accordingly, the proposal provides fast charge bonus credits to encourage manufacturers to develop ZEMs that can be recharged quickly. Subsections (1)(A) and (1)(B) outline minimum fast charge criteria for battery electric ZEMs, which are based on the most common charging standards for light duty vehicles. Subsection (2) recognizes the benefit of instant recharging that can be achieved through a battery exchange network. Subsection (3) recognizes that hydrogen fueling can be a viable alternative to battery-electric ZEMs. Subsection (4) is intended to capture any new ZEM technologies that achieve similar performance to the fast charge criteria outlined in subsections (1) through (3). This could include alternative battery-electric charging standards such as the North American Charging Standard (NACS) that is emerging among passenger car manufacturers as a popular alternative to the SAE J1772 standard.

Subsections 1958.5 (d)(1) through (d)(3)

Purpose:

The purpose of these subsections is to describe to manufacturers how the Tier II and Tier III ZEM base credit multiplier is applied to applicable ZEMs from model year 2024 through 2030.

Rationale:

This subsection is necessary to describe the details of how Tier II and Tier III ZEMs, produced between model year 2024 and 2030, qualify for an additional multiplier on top of their base credits generated. These multipliers are applied to incentivize early adoption of ZEMs and to increase credit production in the early years of the program. These early adoption multipliers will encourage manufacturers to quickly bring more ZEMs to the California market, with particular focus on higher performance Tier II and

Tier II ZEMs. The early adoption multipliers are largest from 2024 through 2027 and reduce for model years 2028 through 2030, by which time it is expected that ZEMs will be closer to parity with gasoline-powered internal combustion motorcycles in terms of cost and performance.

Subsection 1958.5 (e)

Purpose:

The purpose of this subsection is to define the ZEM credit value for ZEMs manufactured in model year 2036 and subsequent.

Rationale:

This subsection is necessary to define the changes to the ZEM credits earned by ZEMs manufactured in model year 2036 and subsequent. Credits earned will correlate with the base value of each ZEM tier, with no additional credits awarded for range or fast charging. This flat credit formula was developed with the expectation that ZEMs will have reached parity with gasoline-powered internal combustion motorcycles in terms of cost and performance by 2036, and will no longer need any credit multipliers or bonuses to meet the required minimum 50% ZEM sales level.

Subsection 1958.5 (f)(1) and (f)(2)

Purpose:

The purpose of these subsections is to notify the manufacturers of how to submit their end of model year report to the Executive Officer and what details need to be included.

Rationale:

These subsections are necessary to give the manufacturers details of all the requirements they need to include in their end of model year report they will submit to the Executive Officer including earned ZEM credits based on the ZEMs they produce. The information that must be submitted is necessary for CARB staff to calculate ZEM credits and verify the manufacturers reported ZEM sales. The full details of the required reporting by the manufacturers are listed in section 1958.1.

Subsection 1958.5 (g)

Purpose:

The purpose of this subsection is to inform the manufacturer that they are required to maintain the information they used to compile their end of model year report for five years after submitting the report. It also informs them of the required timeline to comply if the Executive Officer requests that information.

Rationale:

This subsection is necessary to notify the manufacturer the timespan they must maintain their submitted documents and information related to their end of model year report and how quickly they need to make that information available when requested. This is so CARB staff can verify information submitted by the manufacturer, which may be needed in cases where there is a dispute about the number of ZEM credits that a manufacturer has generated and has available to meet credit obligations.

Subsection 1958.5 (h)**Purpose:**

The purpose of this subsection is to inform the manufacturers that they may be able to use any ZEM credits they generate for up to 5 years after generation. Also, any credits that are generated prior to 2028 can still be used for credit obligation or transferred to another manufacturer up until model year 2033.

Rationale:

This subsection is necessary to inform manufacturers that ZEM credits have an expiration date of five years after generation except for any credits generated before model year 2028. Credits generated before model year 2028 have an extended expiration date of model year 2033. This is because prior to model year 2028, there is no credit obligation, so those previous credits should not be penalized with an earlier expiration date when they cannot be spent until the start of the ZEM credit obligation period in model year 2028. The credit expiration after five years is intended to allow manufacturers flexibility in how they meet ZEM credit obligations, while not allowing an excess of credits generated via large early adoption multipliers to linger indefinitely thereby diminishing the need for increased ZEM sales in subsequent years.

Subsection 1958.5 (i)**Purpose:**

The purpose of this subsection is to give manufacturers details on the process of transferring ZEM credits to another manufacturer.

Rationale:

This subsection is necessary to notify the manufacturers of process and the limitations of transferring excess ZEM credits to another manufacturer. It also informs manufacturers that they cannot transfer credits until they have met their own credit obligations. The option to trade credits is intended to provide manufacturers with

flexibility in how they meet their credit obligations while still ensuring that ZEM sales increase progressively across the industry.

Subsection 1958.5 (j)

Purpose: The purpose of this subsection is to establish that only manufacturers can hold, transfer, or use ZEM credits

Rationale:

This subsection is necessary to provide language to clarify what entities may bank, transfer or use ZEM credits. This prevents non-manufacturers from entering and possibly manipulating the ZEM credit market.

Subsection 1958.5 (k)(1) through (k)(3)

Purpose:

The purpose of these subsections is to notify manufacturers what parts of the data they submit to CARB for compliance with the regulation is subject to disclosure as public records.

Rationale:

These subsections are necessary to describe to the manufacturer in detail about how ZEM production data, ZEM credits earned, and ZEM credit transfers are subject to disclosure as public records.

Subsection 1958.5 (l)

Purpose:

The purpose of this subsection is to notify the manufacturer that records in CARBs possession are subject to disclosure to the federal EPA.

Rationale:

This subsection is necessary to inform the manufacture that any data they submit to CARB is subject to disclosure to the U.S. EPA, but the U.S. EPA is obliged to protect trade secrets.

Subsection 1958.5 (m)(1) through (m)(3)

Purpose:

The purpose of this subsection is to notify manufacturers the penalty for submitting incorrect information or failing to submit required information.

Rationale:

This subsection is necessary to provide details to the manufacturers the penalties they may face for submitting incorrect information or failing to submit required information. This subsection gives manufacturers the necessary details of the timeline required to submit the required information and the response time the Executive Officer will provide the initial and final decision. Timeframes specified were chosen to achieve consistency with similar provisions in the federal provisions, light duty and medium duty regulations. They were also chosen to provide the regulated industry with sufficient time to submit information or take certain actions while balancing CARB's need to receive information, engage in certification activities, and implement the regulations. This subsection also describes how the manufacturer will be notified of the final decision.

Subsection 1958.5 (n)**Purpose:**

The purpose of this subsection is to establish that each provision of this section is severable and that if any provision of this section is invalid, the remainder of the sections will remain in full force and effect.

Rationale:

This subsection is necessary to provide a procedure to retain the language of the section in case a section needs to be removed at a future date.

Section 1958.6**Purpose:**

The purpose of this section is to describe in detail the ZEM credit obligation that applies to manufactures starting in model year 2028.

Rationale:

This section is necessary because manufacturers must know how the ZEM credit obligation applies to their production and how they must comply with the requirements. ZEM credit obligations are intended to gradually increase the percentage of new motorcycles sold in California that are ZEMs, while providing individual manufacturers flexibility to produce more or fewer ZEMs in any given model year.

Subsection 1958.6 (a)

Purpose:

The purpose of this subsection is to describe the criteria of the ZEM credit obligation that applies only to the manufacturers that are classified as large.

Rationale:

This subsection is necessary to specify that this section and criteria only apply to manufacturers that are classified as large for model years 2028 and beyond. Manufacturers that are not classified as large are not subject to the required ZEM credit obligation since they may lack the financial and technical resources to develop new ZEMs quickly or obtain sufficient credits to remain in compliance.

Subsection 1958.6 (a)(1)**Purpose:**

The purpose of this subsection is to define how a manufacturer is considered large and what model years this definition covers.

Rationale:

This subsection is necessary to specify the sales volume threshold that puts a manufacturer in the large category. It also specifies what sales volume calculation is used to determine sales numbers. The threshold for large manufacturer is based on staff projection of sales volume numbers that encompass 90% of the on-road motorcycle market. The manufacturers that are impacted by this threshold are better equipped to handle the requirement than those with lower sales volume and fewer resources. Large manufacturer status is based on two consecutive years of a three-year rolling average in order to provide manufacturers with ample time to anticipate their pending credit obligations and earn or trade for the credits necessary for compliance.

Subsection 1958.6 (a)(2)**Purpose:**

The purpose of this subsection is to define what manufacturers are considered large starting in model year 2036.

Rationale:

This subsection is necessary to specify the change in sales threshold that defines a large manufacturer in model year 2036 and beyond. It also specifies what sales volume calculation is used to determine sales numbers. The threshold for large manufacturer in 2036 and beyond drops from 750 to 100, which staff expects will encompass approximately 98% of the on-road motorcycle market, thereby moving

the California on-road motorcycle market closer to a true 50% ZEM sales ratio. Staff projects that ZEM costs at this time will be closer in parity with gasoline-powered motorcycle. As ZEM technology improves and ZEM component costs come down, smaller manufacturers will be more able to participate in the ZEM market. Having the lower sales threshold requirement (100 versus 750) for manufacturers start in 2036 avoids placing unreasonable burden on smaller manufacturers in the early years of the ZEM program while ensuring that they play a part in overall ZEM program goals in later years when the burden is more manageable.

Subsection 1958.6 (a)(3)

Purpose:

The purpose of this subsection is to define the terms sales or sold.

Rationale:

This subsection is necessary to define how the terms sales and sold are used when applied to the section. The term “produced and delivered for sale” is chosen since it includes only motorcycles entering the California market and can be readily accounted for by manufacturers at the time of production or shipping. Staff considered basing ZEM requirements on actual motorcycles sold in California rather than delivered for sale, but this would require manufacturers to provide a detailed accounting of their final California sales from a vast network of dealerships and other distribution channels and could create confusion as some motorcycles may be transferred between dealerships or remain in a dealer’s inventory for several months or even years before final sale.

Subsection 1958.6 (a)(4)

Purpose:

The purpose of this subsection is to clarify that sales volume values outlined in a previous subsection are not to be used to determine large manufacturer status.

Rationale:

This subsection is necessary to help avoid confusion in how sales volume is applied differently when determining ZEM credit obligation verses determining large manufacturer status. Manufacturer status (either large or not large) is based on total motorcycles sales, independent of the Class or Tier of motorcycles being sold.

Subsection 1958.6 (a)(5)

Purpose:

The purpose of this subsection is to define the terms of how a manufacturer may be exempt or no longer exempt from large manufacturer status.

Rationale:

This subsection is necessary to specify what criteria is being used to determine if a manufacturer falls into the large manufacturer status.

Subsection 1958.6 (a)(6)**Purpose:**

The purpose of this subsection is to define how the changes in large manufacturer status are determined in the case when annual sales falls below the applicable “large manufacturer” threshold.

Rationale:

This subsection is necessary to describe the scenario when a manufacturer’s annual California sales drops to a level that moves them out of being classified as a large manufacturer. Three consecutive years of sales below the threshold are required in order to provide stability for manufacturers in planning their California product offerings and ZEM credit compliance strategy.

Subsection 1958.6 (a)(7)**Purpose:**

The purpose of this subsection is to define the large manufacturer criteria for manufacturers seeking certification for the first time in California.

Rationale:

This subsection is to be used by manufacturers that are new to the California motorcycle market to determine whether they are to be classified as a large manufacturer. This subsection contains the criteria to make that determination relying on projected sales in cases where there are no historical California sales figures available.

Subsection 1958.6 (a)(8)**Purpose:**

The purpose of this subsection is to specify how to determine large manufacturer status when there is a change in ownership through a merger.

Rationale:

This subsection is necessary to define how to determine a manufacturer's large manufacturer status in a change of ownership scenario that was accomplished via merger. This subsection defines how to calculate the manufacturer's new status after the merger. The requirements in this subsection will allow manufacturers to consider California production levels and corresponding ZEM credit obligations when evaluating whether a merger or acquisition is in their best interest.

Subsection 1958.6 (b)

Purpose:

The purpose of this subsection is to specify that manufacturers that have annual sales volumes that does not classify them into the large manufacturer category are not obligated to meet the annual ZEM credit obligations.

Rationale:

This subsection is necessary to specify what criteria, starting in model year 2028, apply to manufacturers that do not fall into the large manufacturer category. Although these manufacturers are not subject to credit obligations, they can earn still ZEM credits and either hold those credits to meet future obligations or trade them to another manufacturer. This incentivizes smaller ZEM manufacturers to market more ZEMs in California, and allows their sales to be counted towards the industry's overall progress in reaching minimum 50% ZEM sales by 2035.

Subsection 1958.6 (c)

Purpose:

This subsection specifies the basic ZEM credit obligations that are applicable to manufacturers that will be classified as large.

Rationale:

This subsection is necessary to define what the ZEM credit obligation percentage will be for large manufacturers by model year. Percentages are based on a starting point in model year 2028 of 10% ZEM credit obligation and increasing annually to 50% ZEM credit obligation by model year 2035. This subsection is also necessary to describes how a large manufacture's annual ZEM credit obligation can be met by producing ZEMs or purchasing credits from a ZEM manufacturer. The credit obligation percentage increases gradually each year from 2028 through 2035, thereby encouraging the motorcycle industry to develop more ZEM models over time. Higher percentages are required in later years as ZEM technologies are expected to improve and ZEM costs will decrease, approaching parity with gasoline-powered internal combustion engine motorcycles.

The maximum percentage is only 50% because staff anticipates some California motorcycle buyers will continue to demand gasoline-powered internal combustion engine motorcycles to meet satisfy their riding range requirements or esthetic preferences. Those buyers will continue to have the option to purchase new CARB-certified gasoline-powered motorcycles rather than retain their current high-emitting models or bringing in a used high-emitting motorcycle from out of state. A ZEM credit obligation of greater than 50% may be appropriate in the future when ZEM technology is available to meet all buyers' needs and low-emissions or zero-emissions requirements are put in place for motorcycles at the federal level.

Subsection 1958.6 (d)(1)

Purpose:

The purpose of this subsection describes how a large manufacturer will calculate their annual ZEM credit obligation. A sample calculation is included for clarity.

Rationale:

This subsection is necessary to specify how the large manufacturer will use their model year three-year rolling average of annual calculated sales volumes to calculate their ZEM credit obligation starting in model year 2028 and subsequent model years. By relying on three-year average sales for the prior year, manufacturers will have adequate lead time to determine their ZEM credit obligation and obtain the credits needed for compliance.

Subsection 1958.6 (d)(2)

Purpose:

The purpose of this section is to clarify the process for manufacturers seeking certification for the first time in California. A sample calculation is included for clarity.

Rationale:

This subsection is necessary to specify the ZEM credit obligation requirements for a new to California manufacturer that is classified as large. In cases when new manufacturers do not have historical California sales figures, they must rely on projected sales figures to calculate their ZEM credit obligations.

Subsection 1958.6 (e)

Purpose:

The purpose of this subsection is to define how the different classes of gasoline-powered motorcycles and tiers of ZEM will be factored into calculating model year sales volume for model year 2024 through model year 2035. This subsection also

defines how the same classes and tiers model year sales volume values are applied in model year 2036 and subsequent. Sample calculations are included for clarity.

Rationale:

This subsection is necessary because it defines the model year sales volume values of both gasoline-powered and zero emission motorcycles. These values will be used to calculate large manufacturers credit obligations. Gasoline-powered motorcycles are assigned a value that is proportional to the smog-forming emissions that are expected to be produced during their useful life. Class I motorcycles are generally ridden fewer miles than Class II or Class III, so their weighting value is lower. For model years 2024-2035, ZEMs are assigned a weighting value of zero, meaning there are no credit obligations associated with ZEM sales for these years. This will help motorcycle manufacturers to build up a surplus balance of credits in the early years of the program, providing flexibility for compliance in the later years as credit obligation percentages increase. For model year 2036 and beyond, ZEM sales are assigned a weighted value that is equivalent to their gasoline-powered internal combustion counterparts. This ensures that California's motorcycle market will reach a true 50% ZEM ratio beyond 2036 as surplus credits earned in the early years of the program are used or expire.

Subsection 1958.6(f)

Purpose:

The purpose of this section is to clarify what a manufacturer must do to make up a ZEM credit deficit.

Rationale:

This subsection is necessary to explain to manufacturers the process of making up a ZEM credit deficit and the deadlines to remain in compliance. By providing an additional model year to make up any credit deficits, manufacturers have adequate opportunity to comply in the event that they may be short of ZEM credits to meet their obligations in a given model year. This provides additional flexibility, which may be needed in years when sales deviate from the manufacturers expectations.

Subsection 1958.6 (g)

Purpose:

The purpose of this subsection is to notify manufacturers the penalty for failing to meet the ZEM requirements.

Rationale:

This subsection is to clarify to manufacturer the penalties that will be incurred by the manufacturer if they fail to make up their ZEM credit deficit within the timeline that is specified. Penalties are intended to promote compliance and ensure that more ZEMs enter California's motorcycle market over time as projected by CARB staff, which is necessary to reduce smog-forming emissions. This subsection also specifies the authority that CARB has when enforcing the penalties.

Subsection 1958.6 (h)

Purpose:

The purpose of this subsection is to verify the status of each manufacturer's compliance with the ZEM requirements by requiring manufacturers to submit a ZEM status report by a given deadline each year.

Rationale:

This subsection is necessary to ensure CARB receives all the information necessary to verify that manufacturers are complying with the ZEM requirements of this regulation. This subsection also defines what criteria is to be included in the report and the deadlines of when the report is to be submitted to CARB's executive officer. The full details of the required reporting by the manufacturers, including instructions on how to submit the report, are listed in section 1958.1.

Subsection 1958.6 (i)(1) through (3)

Purpose:

The purpose of this subsection is to notify manufacturers the penalty for submitting incorrect information or failing to submit required information and what recourse the manufacturer has if they are found in violation.

Rationale:

This subsection is necessary to provide details to the manufacturers the penalties they may face for submitting incorrect information or failing to submit required information. This subsection gives manufacturers the necessary details of the timeline required to submit the required information and the response time the Executive Officer will provide the initial and final decisions. This subsection also describes how the manufacturer will be notified of the final decision.

Subsection 1958.6 (j)

Purpose:

The purpose of this subsection is to establish that each provision of this section is severable and that if any provision of this section is invalid, the remainder of the sections will remain in full force and effect.

Rationale:

This subsection is necessary to provide a procedure to retain the language of the section in case a section needs to be removed at a future date.

Section 1958.7

Purpose:

The purpose of this section is to describe in detail the enforcement testing, corrective action and recall procedures for 2028 and subsequent model year ZEMs.

Rationale:

This section is necessary to inform manufacturers the process CARB will be using for enforcement testing, corrective action, and recall protocols.

Subsection 1958.7 (a)

Purpose:

The purpose of this subsection is to define that these procedures shall apply to 2028 and subsequent model year zero-emission ZEMs certified for sale in California.

Rationale:

This subsection is necessary to define that these compliance requirements will apply to ZEMs that are certified for sale in California for model year 2028 and subsequent.

Subsection 1958.7 (b)

Purpose:

The purpose of this subsection is to explain the goals of this section: to implement authority for CARB to monitor vehicles from manufacture through distribution to consumers to determine compliance with applicable laws, to establish a zero-emission in-use verification report to be submitted by the manufacturer to CARB, to establish enforcement testing procedures to be used by CARB to periodically evaluate vehicles for compliance, and to establish procedures and requirements for corrective actions.

Rationale:

This subsection is necessary to state CARB's authority to determine compliance and monitor vehicles from manufacture through distribution and to provide a roadmap of

this section. CARB has broad authority under Health and Safety Code section 39600 to do such acts as may be necessary for the proper execution of its duties. This authorizes CARB to engage in a variety of actions to collect information regarding and confirm compliance with emission standards and related requirements.

Subsection 1958.7 (c)

Purpose:

The purpose of this subsection is to add appropriate definitions for terms used in this section 1958.7.

Rationale:

This subsection is necessary to define terms additional to those defined in CCR, title 13, section 1958 and incorporated test procedures. These additional terms are integral to this section, so it is important to define them for clarity and comprehension.

“Corrective action” is necessary because this is the mechanism by which manufacturers remedy noncompliance or nonconformity, and “corrective action campaign” is necessary to identify the total period of implementation of corrective action. Further definition of the three categories of corrective action is necessary to identify the circumstances under which each category of corrective action provided in this section applies. The definitions of “voluntary corrective action” and “influenced corrective action” include “or other program” because manufacturers engaging in those types of corrective action can propose other types of actions (e.g., extended warranty) in their corrective action plans. The definition of “ordered corrective action” does not include “or other action” because CARB orders only the listed actions.

“Motor vehicle class” is necessary because it refers to the group of vehicles that must undergo enforcement testing, distinguished from other groups of vehicles under the regulations, like test groups, durability groups, and engine families.

“Nonconformity,” “nonconformance,” or “noncompliance” are necessary to define as the conditions that can trigger corrective action.

“Test Sample Group” is necessary to distinguish the group of vehicles that is used for CARB’s enforcement testing program.

“Vehicle owner” is necessary to define because it identifies the person a manufacturer is required to notify under this section.

Subsection 1958.7(d)

Purpose:

The purpose of this subsection is to notify manufacturers that their ZEMs are subject to periodic evaluation by CARB to verify compliance.

Rationale:

This subsection is necessary to explain how CARB will test zero-emission motorcycles certified for sale in California to determine compliance with the regulation and how CARB will notify manufacturers of any noncompliance. This authorizes CARB to test ZEMs to collect information regarding and to confirm compliance with related requirements. This subsection is necessary to disclose to interested persons how CARB will test vehicles subject to the ZEM regulations.

Subsection 1958.7(d)(1)(A)

Purpose:

The purpose of this subsection is to disclose that CARB may test any production vehicle that has been certified for sale in California for compliance with the applicable requirements.

Rationale:

CARB reiterates its right and intention to test certified vehicles in California to confirm compliance with applicable requirements. This subsection is necessary to disclose that it may test any zero-emission vehicle that has been certified for sale in California. This subsection is also necessary to make clear that CARB's exercise of such authority does not impose any additional obligations upon a manufacturer and cannot on its own be a basis for finding any nonconformity; rather, the testing of vehicles under this subsection is entirely undertaken by CARB to be a basis for conducting further enforcement testing.

Subsection 1958.7(d)(1)(B)

Purpose:

The purpose of this subsection is to define enforcement and compliance testing that may occur pursuant to subsections (d)(2) through (d)(4).

Rationale:

This subsection is necessary to disclose that enforcement testing may occur in response to compliance testing data or other information, including warranty information reports, and field information reports. Enforcement testing is necessary to ensure compliance.

Subsection 1958.7(d)(2), (d)(2)(A), and (d)(2)(A)1

Purpose:

Subsections (d)(2) and (d)(2)(A) organize and title the following subsections. The purpose of this subsection (d)(2)(A)1 is to define the criteria for determining the motor vehicle class that will undergo the enforcement testing.

Rationale:

This subsection is necessary to make explicit the criteria for determining the motor vehicle class undergoing enforcement testing from considering propulsion related hardware/electric drive components, battery chemistries, battery thermal management, or control strategies. These characteristics were chosen because vehicles with these similar technologies should have similar performance characteristics. The failure to meet applicable requirements by vehicles sharing these characteristics provides evidence the failures are pervasive.

Subsection 1958.7(d)(2)(A)2

Purpose:

The purpose of this subsection is to define the default motor vehicle class, which is the ZEM test group.

Rationale:

This subsection is necessary to define that the default motor vehicle class is the ZEM test group used by the manufacturer to certify the vehicles to be tested.

Subsection 1958.7(d)(2)(A)3

Purpose:

The purpose of this subsection is to disclose that CARB may select a subgroup of vehicles from within a ZEM test group if there are reasons the performance of a subgroup may differ from that of the other vehicles in a ZEM test group.

Rationale:

This subsection is necessary for CARB to effectively test vehicles for compliance with the proposed regulations. There are instances when a subgroup of vehicles within a ZEM test group does not comply with the applicable requirements to the same extent as the remainder of the ZEM test group. A subgroup of a ZEM test group may be appropriate for enforcement testing where the root of noncompliance exists only in specific configurations, especially with respect to software versions, within a ZEM test group. This ability to focus testing is necessary to ensure compliance is evaluated at the appropriate level considering the circumstances of a given instance. It is necessary for the Executive Officer to make a determination that a subgroup of the ZEM test group is the appropriate motor vehicle class for testing using good engineering judgment and on a case-by-case basis because such a determination is

dependent on the specific characteristics of the nonconformity, the subgroup, and the ZEM test group.

Subsection 1958.7(d)(2)(A)4

Purpose:

The purpose of this subsection is to define the determination criteria needed for the Executive Officer to conduct enforcement testing on a motor vehicle class that includes vehicles from multiple ZEM test groups.

Rationale:

This subsection is necessary for CARB to efficiently test vehicles for compliance with the proposed regulations. It allows CARB to create a motor vehicle class for enforcement testing when vehicles from several ZEM test groups, including from different model years, share common characteristics that indicate that the compliance status of the vehicles would be similar. This ability to create a motor vehicle class from multiple ZEM test groups is necessary to efficiently ensure compliance when CARB has reason to believe similar non-compliance issues are present in several similar ZEM test groups. This allows CARB to test vehicles simultaneously. It is necessary for the Executive Officer to make a determination that a combination of multiple ZEM test groups is the appropriate motor vehicle class for testing using good engineering judgment and on a case-by-case basis because such a determination is dependent on the specific characteristics of the nonconformity and the ZEM test groups.

Subsection 1958.7(d)(2)(B)

Purpose:

The purpose of this subsection is to specify and define the criteria to determine the number of vehicles to include in ZEM test sample groups for enforcement testing.

Rationale:

This subsection is necessary to disclose the process by which the Executive Officer shall determine the size of the ZEM Test Sample Group.

Subsection 1958.7(d)(2)(C)

Purpose:

The purpose of this subsection is to define the procurement process for vehicles for enforcement and confirmatory testing. The selection criteria are set forth in subsection (d)(2)(D)1. to ensure results are valid.

Rationale:

This section is necessary to define the procurement process for vehicles for enforcement testing and SOH to ensure they are representative of vehicles sold in California. Vehicles will be selected at random from those that responded to request from the California Department of Motor Vehicles (DMV) to provide their vehicles for testing and that meet the specified criteria to ensure testing results are valid.

Subsection 1958.7(d)(2)(D)1.a through (d)(2)(D)1.d

Purpose:

The purpose of this subsection is to define the vehicles selected for the test sample group for enforcement testing by listing the characteristics that will ensure valid results.

Rationale:

This section is necessary to ensure vehicles selected in the test sample group are California certified and registered, have not been tampered with or equipped with add-on or modified parts that would have a permanent effect on battery degradation or vehicle range, have no detected or known malfunction(s) that would affect the electric range, have no problem that might jeopardize the safety of laboratory personnel, These criteria are similar to those for testing gasoline-powered vehicles to minimize burden and ensure consistency. These factors must be specified because they could have an undue effect on compliance if not controlled for.

Subsection 1958.7(d)(2)(D)2

Purpose:

The purpose of this subsection is to specify the result of a vehicle failing to meet one or more of the applicable criteria of subsections (d)(2)(D)1. The failing vehicle shall be removed from the ZEM test sample group. A removed vehicle can be replaced with an additional vehicle selected in accordance with subsections (d)(2)(C) and (d)(2)(D) to ensure reliable results are obtained from an appropriate number of vehicles. Test results relying on data from the removed vehicle shall be recalculated without using the data from the removed vehicle.

Rationale:

This section is necessary as it defines the ability to remove vehicles from a ZEM test sample group if they fail to meet the criteria of subsection (d)(2)(D)1 . Data from that removed vehicle must also be removed from test results. This section also allows for that vehicle to be replaced in accordance with subsections (d)(2)(C) and (d)(2)(D) and based on the Executive Officer's good engineering judgment. This is necessary on a case-by-case basis because removing a vehicle may adversely impact the ZEM test sample group's representativeness; such an impact cannot be known without first

knowing the size of the ZEM test sample group. Provisions for replacing the vehicle and the data obtained from it ensure that testing produces reliable data while minimizing the burden of testing.

Subsection 1958.7(d)(3)

Purpose:

The purpose of this subsection is to define that the Executive Officer shall conduct testing necessary to assess compliance with requirements of title 13, CCR sections 1958.4, or 1958.5.

Rationale:

This section is necessary to require the Executive Officer to test vehicles as determined necessary for assessing compliance with the requirements of CCR, title 13, sections 1958.4, 1958.5, under a condition for which a manufacturer must meet the requirement. This requirement is necessary for the Executive Officer to have all relevant information regarding compliance. Because the testing needed will vary given the particular standardized data parameter, nature of potential noncompliance, and motor vehicle class, it is necessary for the Executive Officer to determine the specific testing means or procedures.

Subsection 1958.7(d)(4)(A)

Purpose:

The purpose of this subsection is to describe that the Executive Officer may conduct additional testing on a subgroup of the motor vehicle class when testing pursuant to subsection (d)(3) or information available suggest that some vehicles sufficiently differ from those otherwise defined by a class in a way that suggests the subgroup is noncompliant while the class is not.

Rationale:

This section is necessary to explain to interested persons the circumstances under which the Executive Officer may conduct additional testing on a subgroup of the vehicles tested pursuant to subsection (d)(3). After enforcement testing conducted under subsection (d)(3), it may become apparent that a subgroup of the motor vehicle class tested may have issues unique from the rest of the class such that further testing may help determine compliance. The appropriateness or necessity of additional testing on the subgroup is dependent on and cannot be known until enforcement testing pursuant to subsection (d)(3) is concluded. Therefore, it is necessary that additional testing on a subgroup be determined on a case-by-case basis based on good engineering judgment where a subgroup of vehicles within the motor vehicle class differ sufficiently enough from the rest of the class and a

reasonable basis exists to determine that the difference indicates the subgroup may be noncompliant while the class as a whole may not be.

Subsection 1958.7(d)(4)(B)

Purpose:

The purpose of this subsection is to define that vehicle selection and testing procedures shall follow subsections (d)(2) and (d)(3).

Rationale:

This section is necessary to set the requirements of the vehicle selection and testing procedures for any additional testing to ensure testing data is representative of vehicles in use in California and additional testing is done consistently with its preceding enforcement testing.

Subsection 1958.7(d)(5)

Purpose:

The purpose of this subsection is to introduce and define the criteria for finding nonconformance after enforcement testing.

Rationale:

This subsection is necessary to disclose to interested persons the requirements and criteria for the Executive Officer to find noncompliance based on enforcement testing pursuant to subsection (d)(3) or (d)(4). As with similar CARB requirements for other vehicle classes, a failure of 30% or more of the ZEMs tested would trigger a finding of nonconformance.

Subsection 1958.7(d)(6)(A)

Purpose:

The purpose of this section is to disclose that the Executive Officer will notify a manufacturer in writing upon making a determination of nonconformance under subsection (d)(5).

Rationale:

This section is necessary to inform the regulated party that it will be notified of nonconformance under the testing described in section (d)(5).

Subsection 1958.7(d)(6)(B)1. Through 5.

Purpose:

The purpose of this section is to disclose the information that the Executive Officer will include in the notice of determination of nonconformance. This information will be sufficient describe the nonconformance and the basis for it. The information will include a description of each group or set of vehicles in the motor vehicle class covered by the determination; the factual basis for the determination, including a summary of the test results relied upon for the determination; a statement that the Executive Officer shall provide to the manufacturer, upon request and consistent with the California Public Records Act, a provision allowing the manufacturer no less than 90 days from the date of issuance of the notice to provide the Executive Officer with any information contesting the findings set forth in the notice; and a statement that if a final determination is made that the motor vehicle class is nonconforming, the manufacturer may be subject to appropriate corrective action along with monetary penalties.

Rationale:

This section is necessary to inform the manufacturer it will be provided with appropriate information when it receives the notice of determination of nonconformance to enable it to respond and correct the nonconformance.

Subsection 1958.7(d)(6)(C)

Purpose:

The purpose of this section is to define the kind of evidence manufacturers may provide to rebut or mitigate results of CARB testing and deadlines for doing so.

Rationale:

This section is necessary to provide manufacturers the opportunity to respond and rebut or mitigate CARB's determination of nonconformance with additional evidence, including test results, data, or other information derived from vehicle testing or data collection. The deadlines are necessary to ensure that any information is provided promptly so, if the determination of nonconformance remains, any appropriate corrective action can also be undertaken promptly.

Subsection 1958.7(d)(6)(D)

Purpose:

The purpose of this section is to provide an opportunity and the conditions under which a manufacturer may submit information after the deadlines established in the regulation.

Rationale:

The purpose of this section is to provide an opportunity and the conditions under which a manufacturer may submit information after the deadlines established in the regulation.

Subsection 1958.7(d)(6)(E)

Purpose:

The purpose of this subsection is to define additional testing and deadlines for notification after receipt of any information submitted pursuant to subsection (d)(6)(C).

Rationale:

This section is necessary to provide that additional testing may be conducted after the manufacturer submits information as allowed by subsection (e)(6)(C) that demonstrates the need for additional testing to ensure testing results are valid. This may be necessary for a variety of reasons; for example, vehicles may have needed to be removed from the sample ZEM test group and replaced with other vehicles that do not violate vehicle selection requirements.

Subsection 1958.7(d)(6)(F)1

Purpose:

The purpose of this section is to disclose that the Executive Office will consider all relevant information when issuing a final determination of noncompliance and define the time by which the Executive Officer shall notify the manufacturer after completing any additional testing.

Rationale:

This section is necessary ensure that all relevant information is considered before the Executive Officer issues a final determination of nonconformity and that it is issued in a timely manner. The time period is consistent with current light-duty enforcement regulations and CARB's practices.

Subsection 1958.7(d)(6)(F)2

Purpose:

The purpose of this section is to disclose that notice of final determination must include a description of each ZEM test group that is nonconforming and set forth the factual bases for determination.

Rationale:

This section is necessary to ensure the Executive Officer provides a detailed description of nonconformance and the factual bases for the determination to the manufacturer. This will ensure the record of the nonconformance supports appropriate actions to remedy the nonconformance and deter future instances of nonconformance.

Subsection 1958.7(d)(6)(G)

Purpose:

The purpose of this section is to implement the option for the Executive Officer to extend the time requirements set forth in (d)(6) to a manufacturer.

Rationale:

This section is necessary so the manufacturer may request a time extension if needed and the Executive Officer may grant it for good cause.

Subsection 1958.7(e)(1)

Purpose:

The purpose of this subsection is to define the requirements for a manufacturer's voluntary corrective action campaign.

Rationale:

This section is necessary to establish procedures for a manufacturer's voluntary corrective action campaign. These procedures are necessary to ensure that the manufacturer notifies CARB of the nonconformance and ensure that CARB has the opportunity to review the manufacturer's voluntary corrective action plan in time to ensure its efficacy at remedying the nonconformance.

Subsection 1958.7(e)(2)

Purpose:

The purpose of this subsection is to define that within 45 days of nonconformance notification a manufacturer may conduct influenced corrective action of all vehicles within a vehicle class.

Rationale:

This section is necessary to allow a manufacturer to elect to conduct an influenced corrective action, within 45 days of nonconformance notification, of all vehicles within the vehicle class for the purpose of correcting the nonconformance. Before this can happen, the manufacturer must submit an influenced corrective action plan for approval to ensure its efficacy at remedying the nonconformance. Influenced

corrective action allow manufacturers to act before being ordered to do so to remedy non-compliant vehicles.

Subsection 1958.7(e)(3)(A)

Purpose:

The purpose of this subsection is to define that the Executive Officer may order the manufacturer to undertake appropriate corrective action if the manufacturer elects not to conduct an influenced corrective action. The purpose of this subsection is to define that the manufacturer may be required to take action if a motor vehicle class is found to be nonconforming.

Rationale:

This section is necessary to make explicit the Executive Officer's ability to require the manufacturer to undertake corrective action if it is determined that a motor vehicle class is nonconforming.

Subsection 1958.7(e)(3)(B), (e)(3)(B)1. through (e)(3)(B)5.

Purpose:

The purpose of this subsection is to define the basis upon which the determination shall be made regarding corrective action.

Rationale:

This section is necessary to ensure that the Executive Officer orders corrective action based upon all relevant and appropriate metrics, criteria, and circumstances, as set forth in this subsection. This includes specified factors like the impact of the non-compliance, such as drivability of the vehicle and its ability to be repaired, and consideration of whether the manufacturer submitted incorrect or incomplete information at the time of certification. This information is necessary to determine the appropriate scope of corrective action to be ordered.

Subsection 1958.7(e)(4)(A) and (B)1. though 4.

Purpose:

The purpose of these subsections is to define the process in which the manufacturer will be notified of the type of corrective action being ordered, and what will be included in the notice to take such action.

Rationale:

This section is necessary to provide the process through which a manufacturer will be notified of the type of corrective action to be taken. The information included in the

notice is necessary to provide the basis for such an order, the violation of the test group in question, and the requirements for the manufacturer to submit a plan to execute the corrective action being ordered.

Subsection 1958.7(e)(5)

Purpose:

The purpose of this subsection is to define the process of a manufacturer requesting a hearing and the procedures and deadlines that need to be adhered to.

Rationale:

This section is necessary to set the deadline for a manufacturer to request a hearing to contest the findings of nonconformity and the necessity for or the scope of any ordered corrective action. This section is also necessary to provide notice of the process by which the hearing is held. It also provides notice that if the Executive Officer's determination of nonconformity is confirmed, then the manufacturer must submit the required corrective action plan in accordance with section (f)(1) below within 30 days after receipt of the Board's decision affirming the determination.

Subsection 1958.7(f)(1)(A) and (f)(1)(A)1. Through 11.

Purpose:

The purpose of this subsection is to define the requirements for corrective action plans to ensure they will correct instances of nonconformance.

Rationale:

This section is necessary to establish the contents of corrective action plans that manufacturers are required to prepare and submit to ensure that, and allow the Executive Officer to fully evaluate whether, the plans will correct the underlying nonconformance. Each required element of the plan reflects an aspect of a manufacturer's intended corrective action implementation or documentation that is necessary for the Executive Officer to consider in determining whether the plan effectively corrects the nonconformity and shall be approved under subsection (f)(1)(B). This subsection is consistent with and generally mirrors requirements in existing regulations for petroleum-fueled vehicles to minimize burdens from varying procedures and promote compliance. It is necessary to require that the Executive Officer request additional information as needed on a case-by-case basis to adequately evaluate a corrective action plan to avoid inadequate information necessitating rejection of a corrective action plan and the delay of the corrective action caused by that rejection and subsequent resubmittal.

Subsection 1958.7(f)(1)(B)1. Through 6.

Purpose:

The purpose of this subsection is to define the process in which a corrective action plan by a manufacturer gets approved or disapproved and the procedures followed. This subsection also requires manufacturers to implement the corrective action plan as approved and at no cost to vehicle owners and provides that failure to do so is a violation of this section.

Rationale:

This subsection is necessary to set the requirement that a corrective action plan compiled and submitted by a manufacturer must get approved before implementation can begin. The information considered by the Executive Officer for approval of influenced and ordered corrective action plans is necessary to ensure CARB is aware of all plans of the violating manufacturer, that the plan will be reasonably effective and expeditious, and that correction will begin within the necessary timeframe. It is necessary for the Executive Officer to approve influenced and ordered corrective action plans in writing within 30 days of receipt to provide adequate time for the Executive Officer to review and consider the plan while ensuring that the manufacturer is notified of the approval or disapproval within a limited timeframe and the corrective action can be initiated promptly if the plan is approved. The default approval of voluntary corrective action plans unless disapproved within 30 days is necessary because detailed Executive Officer scrutiny may not be needed or appropriate for the generally relatively minor nonconformities addressed via voluntary corrective action plans. Moreover, default approval of voluntary corrective action plans is necessary and appropriate to help incentivize manufacturers to propose voluntary corrective action upon discovering a nonconformance. This subsection is also necessary to set forth the process by which the Executive Officer can disapprove a voluntary or ordered corrective action plans. The deadlines for resubmittal of a revised corrective action plan following the Executive Officer's disapproval are necessary to ensure that the manufacturers can make the necessary revisions to the respective corrective action plans while ensuring that the corrective action can be initiated promptly (once the revised plan is approved). It is necessary for a manufacturer to begin to notify vehicle owners and implement an ordered corrective action plan within 45 days of its approval to give the manufacturer time to perform necessary preliminary logistical activities while ensuring that the corrective action is performed promptly. This subsection is generally consistent with existing regulations for petroleum-fueled vehicles to minimize burdens from varying procedures and promote compliance. Specifying that manufacturers must implement the corrective action plan as approved and that failure to do so is a violation of this section is necessary to ensure that the corrective action plans are implemented as approved (in order to ensure their efficacy) and that

manufacturers are aware of their obligations and the consequences for failing to meet those obligations. It is also necessary to specify that corrective actions must be made at the expense of the nonconforming manufacturer and not the vehicle owners; it would be unfair for manufacturers to charge vehicle owners for fixing nonconformities for which the manufacturers were responsible. It is necessary to include this cost provision for corrective action in addition to the warranty provisions of section 1958.4 and 1958.5 because corrective action may not always align with warranted conditions and timeframes.

Subsection 1958.7(f)(2)(A) and (B)

Purpose:

The purpose of this subsection is to allow the manufacturer to submit a modified corrective action plan if needed, subject to the requirements of subsection (f)(1)(A) and the approval and implementation process of (f)(1)(B). This subsection also provides for when the Executive Officer may require a corrective action plan to be modified.

Rationale:

There may be instances where, though a manufacturer is exercising reasonable diligence in carrying out the corrective action plan, the plan nevertheless is not effectively correcting the nonconformance as anticipated. Because manufacturers must implement the plan as approved, it is necessary to provide a process by which a manufacturer may submit, or CARB may require a modified corrective action plan. A modified corrective action plan must still satisfy the requirements of subsection (f)(1)(A) and be approved according to (f)(1)(B), for simplicity and consistency.

Subsection 1958.7(f)(3)(A) and (B)

Purpose:

The purpose of these subsections is to make explicit manufacturers may not condition eligibility for participation in the corrective action on the proper maintenance or use of the vehicle. The purpose of subsection (f)(2)(B) is to not obligate manufacturers to perform repairs if the vehicle has been modified in such a way as to require additional cost for the corrective action that the manufacturer must perform.

Rationale:

These subsections are necessary to ensure eligible vehicles are included in the corrective action being performed by the manufacturer and that vehicles are not unduly excluded.

Subsection 1958.7(f)(4)(A) through (D)

Purpose:

The purpose of these subsections is to define the process in which a manufacturer must notify vehicle owners, the information the notice must contain, and any other requirements that shall be included in the corrective action campaign.

Rationale:

These subsections are necessary to set the requirements that ensure owners of vehicles with corrective action are effectively notified, the notice has the types of information needed from the manufacturer for the vehicle owner to obtain corrective action, and other requirements to be included in a corrective action campaign. It is necessary to establish a default process for manufacturers to provide notice to vehicle owners and reasonable to identify first-class mail as a standard, reliable, and inexpensive default notification option. It is also necessary to notify manufacturers that the Executive Officer, on a case-by-case basis, may approve or require alternative or additional notification methods as necessary for effective and timely notification of the specific class of vehicle owners regarding the specific nonconformance. For example, a particular nonconformance may create safety hazards that necessitate both the most rapid and the most reliable forms of notification. Similarly, it is necessary to notify manufacturers that the Executive Officer, on a case-by-case basis, may include additional content- or process-related notice requirements as necessary and reasonable to assure the effectiveness of the specific corrective action campaign (e.g., if the nonconformance implicates safety or otherwise necessitates additional information or procedures). While such additional notice elements generally would be required, on a case-by-case basis, in the corrective action plan or through a plan modification, it is necessary to provide for the Executive Officer to require additional notice elements outside those processes, on a case-by-case basis, in case the nonconformance implicates safety or rapid additional notice otherwise becomes necessary. It is also necessary to explicitly require manufacturers use all reasonable means necessary to locate vehicle owners and prohibit manufacturers from providing any statement to vehicle owners suggesting the nonconforming vehicles are compliant. These provisions clarify manufacturers' obligations when implementing a corrective action and serve to protect affect consumers as reasonably necessary.

Subsection 1958.7(f)(5)(A) through (E)

Purpose:

The purpose of these subsections is to define that a manufacturer shall require those performing corrective action to place a label on inspected or repaired vehicles. The label must be in a location commonly accessed by repair technicians when verifying

key parameters or configuration specifications of the vehicle and must contain a corrective action campaign number and a code for the facility.

Rationale:

This section is necessary to ensure that those performing corrective action are labeling and placing labels in accessible locations on the vehicle undergoing the inspection or repair. The label is necessary to ensure that service technicians, inspectors, and prospective owners are aware that corrective actions have been performed. The corrective action campaign number and facility code are necessary to ensure that the manufacturer, service technicians, and inspectors, have the ability to track this information for each vehicle for which corrective action has been performed. It is necessary and appropriate to provide an exemption from the label requirement when the corrective action involves only software, the manufacturer keeps a record of the VINs, and the manufacturer provides certain information to the Executive Officer because a future technician or inspector can learn the details of prior software repairs from the software itself, and the conditions of the exemption ensure that information that would otherwise be on the label is available if a need for the information does materialize.

Subsection 1958.7(f)(6)

Purpose:

The purpose of this subsection is to require certificates confirming corrective actions under a recall have been performed.

Rationale:

This section is necessary to ensure manufacturers provide a certificate confirming that corrective action was performed on a vehicle when it has been the subject of a recall. This ensures owners, prospective buyers, service technicians, and inspectors are aware that a vehicle subject to a recall has been repaired. The requirement for the format of the certificate ensures it has been validly issued under existing regulatory requirements.

Subsection 1958.7(f)(7)(A) through (D)

Purpose:

The purpose of this subsection is to define the record keeping and reporting requirements to document in a consistent and reliable manner that manufacturers have met their obligations under the regulation.

Rationale:

This section is necessary to ensure manufacturers collect and maintain evidence of corrective action and provide it to the Executive Officer to verify compliance. Prompt quarterly reporting is necessary to enable the Executive Officer to identify and respond to any failure to meet a requirement or address a new issue as soon as reasonably possible. Information about the scope and progress of the corrective action and affected vehicles is necessary to provide the Executive Officer with information about the pervasiveness of the problem to promote effective regulatory actions, such as whether additional investigation is necessary for a more widespread problem, whether the regulatory program should be amended, or whether the corrective action should be adjusted. The requirements for standardized data reporting ensure the Executive Officer may efficiently analyze the data and conduct comparative analyses. The requirements for record keeping are necessary to ensure that manufacturers are capable of retrieving additional information about their implementation of corrective action if needed to verify compliance or take further related corrective action. The record keeping requirements apply to a broader set of records than the reporting requirements because the additional records may or may not become relevant to, for example, potential corrective action plan modification, and therefore are necessary to retain but not to submit to the Executive Officer by default. The retained record format is necessary to ensure that the Executive Officer can practicably obtain and consult the records as needed to implement the remainder of this section. The requirement to provide the retained records to the Executive Officer upon request is necessary to ensure that the Executive Officer can consult the records as needed to implement the remainder of this section. The retention period is necessary to specify the length of time record retention is required, and the timeframe is necessary and appropriate to ensure that records are available if relevant and necessary for review without requiring retention beyond the period that the records may be relevant and necessary for review.

Subsection 1958.7(f)(8)

Purpose:

The purpose of this subsection is to define the Executive Officer's ability to extend any deadline set forth in subsection (f) if requested by the manufacturer. The subsection provides that manufacturers may request an extension at least 20 days before the deadline and that, along with an extension request, the manufacturer must provide documentation regarding the time that the manufacturer reasonably believes is necessary to comply with the requirement and an explanation of why compliance is not or could not be timely. The subsection requires the Executive Officer to grant the request if the manufacturer has demonstrated inability to comply despite exercising reasonable diligence. The subsection identifies the factors the Executive Officer must consider in making a case-by-case determination of the duration of an extension and

requires the Executive Officer to notify the manufacturer of their decision in writing at least 7 days before the applicable deadline.

Rationale:

This subsection is necessary to define the ability and circumstances in which a manufacturer may request and obtain the extension of a deadline in subsection (f). Extension of a deadline may be necessary and reasonable for effective implementation without undue burden when the manufacturer has exercised reasonable diligence to comply and is unable to comply with the applicable deadline. The subsection is necessary to define the process for a manufacturer to make the request, the Executive Officer to review the request and determine the duration of an extension, if granted, and the Executive Officer to issue a decision on the request. The information and documentation the manufacturer must provide is necessary for the Executive Officer to confirm that the manufacturer is unable to comply by the deadline despite exercising reasonable diligence and to allow the Executive Officer to determine the duration of any extension provided. The factors the Executive Officer must consider in making a case-by-case determination regarding the duration of any extension are necessary to allow for effective implementation that avoids undue burden on manufacturers that have exercised reasonable diligence while accounting for adverse impacts from delay. The deadlines for the manufacturer to make the request and for the Executive Officer to issue a decision are necessary and reasonable balances of the needs to ensure that manufacturers prepare for deadlines well in advance, that the extension process can apply when (despite a manufacturer's reasonable diligence) compliance difficulties arise closer to the compliance deadline, and that the Executive Officer responds to an extension request in time that a manufacturer whose request is denied can still comply with the original deadline.

Subsection 1958.7(g)(1)

Purpose:

The purpose of this subsection is to disclose the potential penalties for violations of this section, and the factors that shall be considered when determining the amount of the penalty under the requirements of the Health and Safety Code.

Rationale:

This section is necessary to disclose the potential penalties and the factors that shall be considered when determining the amount of the penalty for violations of this section. Health and Safety Code sections 43016 and 43212 provide for civil penalties against persons and manufacturers for violations of the proposed regulations.

Subsection 1958.7(g)(2)

Purpose:

The purpose of this subsection is to disclose the potential penalties for violations of this section specifically for submitting incorrect information or failing to submit required information.

Rationale:

This section is necessary to disclose the potential penalties and the factors that shall be considered when determining the amount of the penalty for violations of this section.

Subsection 1958.7(h)**Purpose:**

The purpose of this subsection is to define the mechanism by which manufacturers must submit documents, reports, information, and requests (hereinafter, "documents") under the proposed regulations. The subsection provides that manufacturers must submit documents electronically using CARB's E-File system, an electronic system that allows manufacturers to send documents to CARB via the internet.

Rationale:

This subsection is necessary to provide manufacturers with a designated mechanism to submit required or optional documents under the proposed regulations. It is necessary for CARB to require manufacturers to submit documents under this section through CARB's Document Management System, which manufacturers already must use to submit certification documents to CARB, because it supports efficient transmittal and review, provides manufacturers with a consistent submittal mechanism across regulations, and reduces the bulk of paper. It is necessary to provide the website address <https://login.arb.ca.gov/>. An explanation of the E-File system, instructions, support information, and a prominent link to log-in page for the system at are available at <https://ww2.arb.ca.gov/procedure-obtain-modify-efile-account>. The E-File system is already being used by on-road motorcycle manufacturers to provide certification application information and annual sales data to CARB, so it is convenient for manufacturers and CARB staff to continue using the established E-File system for future data submission.

Subsection 1958.7(i)**Purpose:**

The purpose of this subsection is to define that each provision of this section is severable and if any provision of this section is held to be invalid or unenforceable, the remainder of the article remains in full force and effect.

Rationale:

This subsection is necessary to preserve the overall intent of what the proposed regulation is set to achieve, even if unforeseen issues arise with enforcing any individual term of the proposed regulation.