

April 13, 2021

Brandi Jones
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Dear Brandi Jones:

Thank you for providing the California Air Resources Board (CARB) with the opportunity to comment on the 5175 Vincent Avenue Project (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2018121056. The Project consists of the construction and operation of approximately 545,735 square feet of high-cube industrial warehouse space. Implementation of the Project would require a portion of the existing land use designation to be changed from "Residential" to "Industrial/Business Park." Once in operation, the Project would introduce 2,708 daily vehicle trips, including 580 daily heavy-duty truck trips, along local roadways. The Project is located within the City of Irwindale (City), California, which is the lead agency for California Environmental Quality Act (CEQA) purposes.

CARB submitted a comment letter, which is attached to this letter, on the Notice of Preparation (NOP) for the DEIR released in February 2020. CARB's comments, dated March 10, 2020, highlighted the need for preparing a health risk assessment (HRA) for the Project and encouraged the City and applicant to implement all existing and emerging zero-emission technologies to minimize exposure to diesel particulate matter (diesel PM) and nitrogen oxide (NO_x) emissions for all neighboring communities, and to minimize the greenhouse gases that contribute to climate change. Due to the Project's proximity to residences already disproportionately burdened by multiple sources of pollution, CARB's comments expressed concerns with the potential cumulative health risks associated with the construction and operation of the Project.

The Final Environmental Impact Report Should Restrict the Operation of Transport Refrigeration Units within the Project Area

Chapter 2.0 (Introduction) of the DEIR states that the proposed Project would not include the operation of on-site cold storage uses. Should the Project later include cold storage uses, residences near the Project-site could be exposed to significantly higher levels of toxic diesel PM and NO_x, and greenhouse gases than trucks and trailers without TRUs. To ensure TRUs will not operate within the Project site without first quantifying and mitigating their potential impacts, CARB urges the City to include one of the following design measures in the Final Environmental Impact Report (FEIR):

- A Project design measure requiring contractual language in tenant lease agreements that prohibits tenants from operating TRUs within the Project-site; or
- A condition requiring a restrictive covenant over the parcel that prohibits the applicant's use of TRUs on the property, unless the applicant seeks and receives an amendment to its conditional use permit allowing such use.

If the City later chooses to allow TRUs to operate within the Project site, CARB urges the City to re-model the Project's air quality impact analysis and HRA to account for potential health risks. The updated air quality impact analysis and HRA should include the following air pollutant emission reduction measures:

- Include contractual language in tenant lease agreements that requires all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with TRU or auxiliary power units. This requirement will substantially decrease the amount of time that a TRU powered by a fossil-fueled internal combustion engine can operate at the Project-site. Use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration, and cryogenic transport refrigeration are encouraged and can also be included in lease agreements.¹
- Include contractual language in tenant lease agreements that requires all TRUs entering the project site be plug-in capable.

The Health Risk Assessment Used Inappropriate Assumptions When Modeling the Project's Health Risk Impacts

The HRA prepared for the Project and presented in Appendix B.4 (Air Toxics Health Risk Assessment) of the DEIR, concluded that residences near the Project site would be exposed to diesel PM emissions that would result in cancer risks of 3.73 chances per million during Project operation. Since the Project's cancer risks are below the South Coast Air Quality Management District's (SCAQMD) 10 chances per million significance threshold, the DEIR concluded that the Project would result in a less than significant impact on public health. CARB has reviewed the Project's HRA and is concerned that the Project's cancer risk impacts may have been underestimated for the reasons detailed below.

The cancer risk impacts presented in the HRA should have been based on PM₁₀ idling emissions factors obtained from the latest version of CARB's Emission Factors model (EMFAC). As shown in Table 3 (Emission Rates by Source) of the HRA, the City used a 0.0035 grams per hour PM₁₀ idling emission factor to calculate the cancer risk impacts while trucks are idling within the Project site. This PM₁₀ idling emission factor was based on idling test data found in the EMFAC2014 Volume III - Technical Documentation Guidebook. Since the public release of EMFAC2014 in May 2015, CARB has made many updates to the EMFAC

¹ CARB's Technology Assessment for Transport Refrigerators provides information on the current and projected development of TRUs, including current and anticipated costs. The assessment is available at: https://www.arb.ca.gov/msprog/tech/techreport/tru_07292015.pdf.

model and has released two updated versions: EMFAC2017, released in May 2018, and EMFAC2021, released in January 2021. Some of the updates to the EMFAC model included updates to the heavy-duty truck activity and emission rates, and implementation of CARB's latest regulations. EMFAC2014 underestimated diesel PM emission rates from diesel heavy-duty trucks due to limited in-use test data for engine model year 2010 and newer, thus the Project's mobile source diesel PM emissions are likely underestimated in the DEIR. CARB urges the City and applicant to model and report the Project's air pollution emissions from mobile sources using emission factors found in CARB's latest EMFAC2021. Emission factors can be easily obtained by running the EMFAC2021 Web Database:

<https://arb.ca.gov/emfac/emissions-inventory>.

In the HRA, the City and applicant used mobile emission factors from EMFAC2017 to model cancer risk impacts from trucks traveling within the Project site and along local roadways. The HRA assumed exclusively heavy heavy-duty trucks would serve the proposed warehouse development. According to Appendix D (Traffic Impact Analysis), the Project's total average daily traffic would consist of 9.5 percent heavy heavy-duty trucks, 3.9 percent medium heavy-duty trucks, and 8 percent light heavy-duty trucks. In the latest version of EMFAC, light heavy-duty trucks tend to have higher PM₁₀ idling emission rates and mobile emission rates at lower speeds than larger medium and heavy heavy-duty trucks. Since all trucks servicing the Project were assumed to be heavy-duty trucks, CARB is concerned that the City may have underestimated cancer risks in the Project's HRA.

The Project truck trip roadway distribution presented in the HRA is not consistent with the Project's traffic report. According to Figure 12 (Project Trip Distribution-Trucks) of Appendix D (Traffic Impact Analysis), 85 percent of the Project's total 580 average daily truck trips would travel along Vincent Avenue, between the Project's northern accesses to Arrow Highway. However, the modeling presented in the HRA assumes 45 percent of the Project's total average daily truck trips would travel along this segment of roadway. Since the HRA does not account for 232 heavy-duty truck trips along roadways adjacent to existing residences, CARB is concerned that the City may have underestimated cancer risks in the Project's HRA.

Recommended Mitigation Measures

The DEIR includes two mitigation measures (3.2-1 and 3.2-2) to reduce the Project's significant impact on air quality. These mitigation measures include: ensuring the cleanest possible practices and equipment are used during Project construction; installing the necessary infrastructure to support on-site zero and near-zero emission technology; and requiring all service equipment used within the Project-site to be electric or compressed natural gas-powered. Although these mitigation measures would reduce the Project's air pollutant emissions, the DEIR concludes that the Project's impact on air quality would remain significant after mitigation. Even where impacts will remain significant and unavoidable after mitigation, CEQA requires that all feasible mitigation measures be incorporated (see California Public Resources Code § 21081; 14 CCR § 15126.2(b)). To meet this requirement,

CARB urges the City and applicant to add the emission reduction measures listed below in the FEIR.

- In construction contracts, include language that requires all off-road diesel powered equipment used during Project construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits that achieve emission reductions that equal or exceed that of a Tier 4 engine.
- In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery powered.
- In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-NO_x standard starting in the year 2022.²
- Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the Project site to be model year 2014 or later, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030.
- Including language in tenant lease agreements, requiring the installing of vegetative walls³ or other effective barriers that separate loading docks and people living or working nearby.

Conclusion

CARB is concerned about the potential public health impacts should the City approve the Project. As concluded in Chapter 3.2 (Air Quality) of the DEIR, the Project's operation would expose residences to NO_x emissions that would result in a significant and unavoidable impact on air quality. To fully understand the Project's environmental impacts, the HRA should be revised in the FEIR using mobile and idling PM₁₀ emission factors obtained from the latest version of EMFAC (i.e., EMFAC2021). The truck fleet mix and truck trip roadway distribution presented in the HRA should be consistent with the Project's traffic report. Should the City allow the operation of TRUs within the Project site, the City should update the Project's air quality analysis and HRA to account for the increase in air pollution and cancer risks resulting from trucks and trailers with TRUs visiting the Project site. Lastly, to reduce the Project's impact on public health, CARB urges the City to implement the mitigation measures listed in Section III of this letter.

² In 2013, CARB adopted optional low-NO_x emission standards for on-road heavy-duty engines. CARB encourages engine manufacturers to introduce new technologies to reduce NO_x emissions below the current mandatory on-road heavy-duty diesel engine emission standards for model-year 2010 and later. CARB's optional low-NO_x emission standard is available at: <https://ww2.arb.ca.gov/our-work/programs/optional-reduced-nox-standards>

³ Effectiveness of Sound Wall-Vegetation Combination Barriers as Near-Roadway Pollutant Mitigation Strategies (2017) is available at: <https://ww2.arb.ca.gov/sites/default/files/classic/research/apr/past/13-306.pdf>.

Given the breadth and scope of projects subject to CEQA review throughout California that have air quality and greenhouse gas impacts, coupled with CARB's limited staff resources to substantively respond to all issues associated with a project, CARB must prioritize its substantive comments here based on staff time, resources, and its assessment of impacts. CARB's deliberate decision to substantively comment on some issues does not constitute an admission or concession that it substantively agrees with the lead agency's findings and conclusions on any issues on which CARB does not substantively submit comments.

CARB appreciates the opportunity to comment on the DEIR for the Project and can provide assistance on zero-emission technologies and emission reduction strategies, as needed. If you have questions, please contact Stanley Armstrong, Air Pollution Specialist, via email at stanley.armstrong@arb.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'R. Krieger', is positioned below the word 'Sincerely,'.

Robert Krieger, Branch Chief, Risk Reduction Branch

Attachment

cc: See next page.

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Stanley Armstrong, Air Pollution Specialist, Risk Reduction Branch

ATTACHMENT A

March 10, 2020

Brandi Jones
Senior Planner
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5050 North Irwindale Avenue
Irwindale, California 91706

Dear Brandi Jones:

Thank you for providing the California Air Resources Board (CARB) with the opportunity to comment on the Notice of Preparation (NOP) for the 5175 Vincent Avenue Project (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2018121056. The Project consists of the construction and operation of approximately 545,735 square feet of high-cube industrial warehouse space. The Project is proposed within the City of Irwindale (City), California, which is the lead agency for California Environmental Quality Act (CEQA) purposes. Implementation of the Project would require a change to the existing land use designation from "Residential" to "Industrial/Business Park".

Freight facilities, such as warehouse facilities, can result in high daily volumes of heavy-duty diesel truck traffic and operation of on-site equipment (e.g., forklifts and yard tractors) that emit toxic diesel emissions, and contribute to regional air pollution and global climate change.¹ CARB has reviewed the NOP and is concerned about the air pollution and health risk impacts that would result should the City approve the Project, and the land-use change from "Residential" to "Industrial/Business Park", to build the proposed high-cube industrial warehouse building.

I. The Project Would Increase Exposure to Air Pollution in Disadvantaged Communities

The Project, if approved, will expose nearby disadvantaged communities to elevated air pollution. Residences are located south, east, and west of the Project site, with the closest residences situated approximately 85 feet from the Project's eastern boundary. In addition to residences, four schools (Alice M. Ellington Elementary School, Merwin Elementary School, Northview High School, and Las Palmas Middle School), two daycare centers (Covina KinderCare and Kiddie Cove Daycare) and a senior center (Irwindale Senior Center) are located within 1 mile of the Project. The community is

¹ With regard to greenhouse gas emissions from this project, CARB has been clear that local governments and project proponents have a responsibility to properly mitigate these impacts. CARB's guidance, set out in detail in the Scoping Plan issued in 2017, makes clear that in CARB's expert view local mitigation is critical to achieving climate goals and reducing greenhouse gases below levels of significance.

surrounded by existing toxic diesel particulate matter (diesel PM) emission sources, which include existing industrial uses and vehicular traffic along Interstate 210 (I-210), Interstate 605 (I-605), and Interstate 10 (I-10). Due to the Project's proximity to residences, schools, daycare centers, and a senior center already disproportionately burdened by multiple sources of air pollution, CARB is concerned with the potential cumulative health impacts associated with the construction and operation of the Project.

The State of California has placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those in which the Project is located. Diesel PM emissions generated during the construction and operation of the Project would negatively impact the community, which is already disproportionately impacted by air pollution from existing industrial uses, and traffic on I-210, I-605, and I-10.

Through its authority under Health and Safety Code section 39711, the California Environmental Protection Agency (CalEPA) is charged with the duty to identify disadvantaged communities. CalEPA bases its identification of these communities on geographic, socioeconomic, public health, and environmental hazard criteria (Health and Safety Code, section 39711, subsection (a)). In this capacity, CalEPA currently defines a disadvantaged community, from an environmental hazard and socioeconomic standpoint, as a community that scores within the top 25 percent of the census tracts, as analyzed by the California Communities Environmental Health Screening Tool Version 3.0 (CalEnviroScreen). CalEnviroScreen uses a screening methodology to help identify California communities currently disproportionately burdened by multiple sources of pollution. The census tract containing the Project is within the top 5 percent for Pollution Burden² and is considered a disadvantaged community; therefore, CARB urges the City to ensure that the Project does not adversely impact neighboring disadvantaged communities.

II. The DEIR Should Quantify and Discuss the Potential Cancer Risks at Residential and Other Sensitive Receptors in the Vicinity of the Proposed Industrial Building

The Project, as proposed in the NOP, will not include refrigerated storage. The operation of cold storage warehouses would include trucks with transportation refrigeration units (TRU)³ that emit significantly higher levels of toxic diesel emissions, oxides of nitrogen (NO_x), and greenhouse gases than trucks without TRUs. To ensure TRUs will not operate within the Project site, CARB urges the City to include one of the following design measures in a revised DEIR:

² Pollution Burden represents the potential exposures to pollutants and the adverse environmental conditions caused by pollution.

³ TRUs are refrigeration systems powered by diesel internal combustion engines that protect perishable goods during transport in an insulated truck and trailer vans, rail cars, and domestic shipping containers.

- A Project design measure requiring contractual language in tenant lease agreements that prohibits tenants from operating TRUs within the Project site; or
- A condition requiring a restrictive covenant over the parcel that prohibits the applicant's use of TRUs on the property, unless the applicant seeks and receives an amendment to its conditional use permit allowing such use.

If the City chooses to allow TRUs within the Project site, CARB urges the City to model air pollutant emissions from on-site TRUs, as well as prepare a health risk assessment (HRA) that shows the potential health risks. The DEIR should also include the air pollutant reduction measures listed in Attachment A.

In addition to the health risk associated with operations, construction health risks should be included in the air quality section of the DEIR and the Project's HRA. Construction of the Project would result in short-term diesel emissions from the use of both on-road and off-road diesel equipment. The Office of Environmental Health Hazard Assessment's (OEHHA) guidance recommends assessing cancer risks for construction projects lasting longer than two months. Since construction would very likely occur over a period lasting longer than two months, the HRA prepared for the Project should include health risks for existing residences near the Project site during construction.

The HRA prepared in support of the Project should be based on the latest OEHHA guidance (2015 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments),⁴ and the South Coast Air Quality Management District's (SCAQMD) CEQA Air Quality Handbook.⁵ The HRA should evaluate and present the existing baseline (current conditions), future baseline (full build-out year, without the Project), and future year with the Project. The health risks modeled under both the existing and the future baselines should reflect all applicable federal, state, and local rules and regulations. By evaluating health risks using both baselines, the public and City planners will have a complete understanding of the potential health impacts that would result from the Project.

III. Conclusion

To reduce the exposure of toxic diesel emissions in disadvantaged communities already disproportionately impacted by air pollution, the final design of the Project should include all existing and emerging zero-emission technologies to minimize diesel and NO_x emission exposure to all neighboring communities, as well as the greenhouse gases that contribute to climate change. CARB encourages the City and applicant to

⁴ Office of Environmental Health Hazard Assessment (OEHHA). Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February 2015. Accessed at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>.

⁵ SCAQMD's 1993 Handbook can be found at: <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook>.

Brandi Jones
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implement the measures listed in Attachment A of this comment letter to reduce the Project's construction and operational air pollution emissions.

Given the breadth and scope of projects subject to CEQA review throughout California that have air quality and greenhouse gas impacts, coupled with CARB's limited staff resources to substantively respond to all issues associated with a project, CARB must prioritize its substantive comments here based on staff time, resources, and its assessment of impacts. CARB's deliberate decision to substantively comment on some issues does not constitute an admission or concession that it substantively agrees with the lead agency's findings and conclusions on any issues on which CARB does not substantively submit comments.

CARB appreciates the opportunity to comment on the NOP for the Project and can provide assistance on zero-emission technologies and emission reduction strategies, as needed. Please include CARB on your State Clearinghouse list of selected State agencies that will receive the DEIR as part of the comment period. If you have questions, please contact Stanley Armstrong, Air Pollution Specialist, at (916) 440-8242 or via email at stanley.armstrong@arb.ca.gov.

Sincerely,



Richard Boyd, Chief
Risk Reduction Branch
Transportation and Toxics Division

Attachment

cc: See next page.

Brandi Jones
March 10, 2020
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ATTACHMENT A

Recommended Air Pollution Emission Reduction Measures for Warehouses and Distribution Centers

The California Air Resources Board (CARB) recommends developers and government planners use all existing and emerging zero to near-zero emission technologies during project construction and operation to minimize public exposure to air pollution. Below are some measures, currently recommended by CARB, specific to warehouse and distribution center projects. These recommendations are subject to change as new zero-emission technologies become available.

Recommended Construction Measures

1. Ensure the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero equipment and tools.
2. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology vehicles and equipment that will be operating on site. Necessary infrastructure may include the physical (e.g., needed footprint), energy, and fueling infrastructure for construction equipment, on-site vehicles and equipment, and medium-heavy and heavy-heavy duty trucks.
3. In construction contracts, include language that requires all off-road diesel-powered equipment used during construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits, such that, emission reductions achieved equal or exceed that of a Tier 4 engine.
4. In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery powered.
5. In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-NO_x standard starting in the year 2022.¹

¹ In 2013, CARB adopted optional low-NO_x emission standards for on-road heavy-duty engines. CARB encourages engine manufacturers to introduce new technologies to reduce NO_x emissions below the current mandatory on-road heavy-duty diesel engine emission standards for model year 2010 and later. CARB's optional low-NO_x emission standard is available at: <https://www.arb.ca.gov/msprog/onroad/optionnox/optionnox.htm>.

6. In construction contracts, include language that requires all construction equipment and fleets to be in compliance with all current air quality regulations. CARB staff is available to assist in implementing this recommendation.

Recommended Operation Measures

1. Include contractual language in tenant lease agreements that requires tenants to use the cleanest technologies available, and to provide the necessary infrastructure to support zero-emission vehicles and equipment that will be operating on site.
2. Include contractual language in tenant lease agreements that requires all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with transport refrigeration units (TRU) or auxiliary power units. This requirement will substantially decrease the amount of time that a TRU powered by a fossil-fueled internal combustion engine can operate at the project site. Use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration, and cryogenic transport refrigeration are encouraged and can also be included in lease agreements.²
3. Include contractual language in tenant lease agreements that requires all TRUs entering the project site be plug-in capable.
4. Include contractual language in tenant lease agreements that requires future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans.
5. Include contractual language in tenant lease agreements requiring all TRUs, trucks, and cars entering the Project site be zero-emission.
6. Include contractual language in tenant lease agreements that requires all service equipment (e.g., yard hostlers, yard equipment, forklifts, and pallet jacks) used within the project site to be zero-emission. This equipment is widely available.
7. Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the project site to be model year 2014 or later, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030.

² CARB's Technology Assessment for Transport Refrigerators provides information on the current and projected development of TRUs, including current and anticipated costs. The assessment is available at: https://www.arb.ca.gov/msprog/tech/techreport/tru_07292015.pdf.

8. Include contractual language in tenant lease agreements that requires the tenant be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation,³ Periodic Smoke Inspection Program (PSIP),⁴ and the Statewide Truck and Bus Regulation.⁵
9. Include contractual language in tenant lease agreements restricting trucks and support equipment from idling longer than five minutes while on site.
10. Include contractual language in tenant lease agreements that limits on-site TRU diesel engine runtime to no longer than 15 minutes. If no cold storage operations are planned, include contractual language and permit conditions that prohibit cold storage operations unless a health risk assessment is conducted and the health impacts fully mitigated.
11. Include rooftop solar panels for each proposed warehouse to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.

³ In December 2008, CARB adopted a regulation to reduce greenhouse gas emissions by improving the fuel efficiency of heavy-duty tractors that pull 53-foot or longer box-type trailers. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation is available at: <https://www.arb.ca.gov/cc/hdghg/hdghg.htm>.

⁴ The PSIP program requires that diesel and bus fleet owners conduct annual smoke opacity inspections of their vehicles and repair those with excessive smoke emissions to ensure compliance. CARB's PSIP program is available at: <https://www.arb.ca.gov/enf/hdvp/hdvp.htm>.

⁵ The regulation requires that newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. CARB's Statewide Truck and Bus Regulation is available at: <https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>.

