

Re: *Moreno Valley Logistics Center, SCH No. 2015061040*

On behalf of the Golden State Environmental & Social Justice Alliance (formerly So Cal Environmental Justice Alliance), a California Non-Profit Corporation Entity #C3740027, we hereby submit further comments under the California Environmental Quality Act ("CEQA") on the Draft Environmental Impact Report ("EIR") for the Moreno Valley Logistics Center.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The EIR uses the U.S. EPA's AERMOD software program to model emissions and evaluate whether mobile source diesel particulate matter (DPM) emissions resulting from Project construction and operation would pose a significant health risk to nearby sensitive receptors (DEIR, p. 4.3-23). According to Table ES-3 in Appendix B-2, the calculated cancer risk to nearby sensitive receptors from exposure to DPM emissions during Project construction and operation for residential, worker, and school children receptors is 9.5 in one million, 0.31 in one million, and 0.60 in one million, respectively, which is below the South Coast Air Quality Management District's (SCAQMD) significance threshold of ten in one million (see excerpt below) (Appendix B-2, pp. 13).

TABLE ES-3: SUMMARY OF RISK ATTRIBUTABLE TO THE PROJECT – WITHOUT INDIAN STREET BRIDGE
(2015 OEHHA GUIDELINES)

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure (2017 to 2046)	Maximum Exposed Sensitive Receptor	9.5	1.0	NO
25 Year Exposure (2017 to 2041)	Maximum Exposed Worker Receptor	0.31	1.0	NO
9 Year Exposure (2017 to 2025)	Maximum Exposed School Child	0.60	1.0	NO
Time Period	Location	Maximum Hazard Index	Significance Threshold	Exceeds Significance Threshold
30 Year Exposure (2017 to 2046)	Maximum Exposed Sensitive Receptor	0.005	1.0	NO
25 Year Exposure (2017 to 2041)	Maximum Exposed Worker Receptor	0.0009	1.0	NO
9 Year Exposure (2017 to 2025)	Maximum Exposed School Child	0.001	1.0	NO

As a result, EIR concludes that, “the Project will not cause a significant human health or cancer risk” (Appendix B-2, p. 5). This conclusion, however, is incorrect. In February 2015, the California Environmental Protection Agency’s Office of Environmental Health Hazard Assessment (OEHHA) released updated health risk assessment guidelines that require risk calculations for specific age groupings that incorporate several age specific factors in the cancer risk calculation to adjust for early in life exposure to carcinogens.¹ According to the EIR, “applicable ASFs and breathing rates consistent with 2015 OEHHA Guidelines were applied” to the Project’s health risk assessment (HRA) (Appendix B-2, p. 39). Review of the Project’s HRA, however, demonstrates that not only did the EIR apply an incorrect age sensitivity factor (ASF) when calculating the Project’s total cancer risk, but it also failed to use age specific breathing rates for the 3rd Trimester, infant, and child age groups. As a result, the potential excess cancer risk posed to children and infants is not accurately represented and therefore, the health risk assessment in the EIR should not be relied upon to determine Project significance.

Age Sensitivity Factors

OEHHA was tasked with developing guidelines for conducting health risk assessments under the Air Toxics Hot Spots Program (Health and Safety Code Section 43360(b)(2)). OEHHA initially developed Technical Support Documents (TSDs) in 1999-2000 in response to this statutory requirement. Since 2000, they have revised and adopted TSDs in an effort to present updated methodologies that reflect scientific knowledge and techniques developed since the previous guidelines were prepared; in particular, to explicitly include consideration of possible differential effects on the health of infants, children and other sensitive

¹ “Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessment.” Office of Environmental Health Hazard Assessment, February 2015, available at: http://oehha.ca.gov/air/hot_spots/hotspots2015.html

subpopulations, in accordance with the mandate of the Children’s Environmental Health Protection Act (Senate Bill 25, Escutia, Chapter 731, Statutes of 1999, Health and Safety Code Sections 39669.5 et seq.).²

In 2009 OEHHA assessed the impact of cancer potency on age of exposure and concluded that, “the potency of carcinogens, and thus cancer risk, varies based on the lifestage at exposure... accounting for effects of early-in- life exposure requires accounting for both the increased potency of early in life exposure to carcinogens and the greater exposure on a per kg body weight that occurs early in life due to behavioral and physiological differences between infants and children, and adults”.³ The guidance document continues on to explain that “in the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, and an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood.”⁴ To address this issue, OEHHA released updated risk exposure guidelines requiring an Age Sensitivity Factors (ASF) to be applied to early life exposures in the absence of chemical-specific data.⁵ These factors, as summarized in the table below, were incorporated into OEHHA’s most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was formally adopted in March of 2015 (see excerpt below).⁶

Table 8.3 Age Sensitivity Factors by Age Group for Cancer Risk Assessment

Age Group	Age Sensitivity Factor (unitless)
3rd Trimester	10
0<2 years	10
2<9 years	3
2<16 years	3
16<30 years	1
16-70 years	1

Therefore, to provide an appropriate analysis of the increased sensitivity to carcinogens during early-in-life exposure, ASFs should have been applied to the Project’s health risk assessment at the time the analysis was conducted. Review of the EIR’s HRA demonstrates that instead of applying the appropriate ASFs to

² *Adoption of the Revised Air Toxics Hot Spots Program Technical Support Document for Cancer Potency Factors*, Office of Environmental Health Hazard Assessment, June 1, 2009, available at: http://www.oehha.ca.gov/air/hot_spots/tsd052909.html

³ *Technical Support Document for Exposure Assessment and Stochastic Analysis FINAL*, Office of Environmental Health Hazard Assessment, August 2012, available at: <http://oehha.ca.gov/media/downloads/crn/chapter32012.pdf>

⁴ *Ibid.*, p. 8-4

⁵ *Guidance Manual for Preparation of Health Risk Assessments*, Office of Environmental Health Hazard Assessment, February 2015, available at: <http://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>

⁶ “Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: http://oehha.ca.gov/air/hot_spots/hotspots2015.html

each age group, the EIR utilized a single weighted ASF to calculate the lifetime residential cancer risk (see excerpt below) (Appendix B-2, pp. 2959).

Note:	Exposure factors used to calculate contaminant intake	
	exposure frequency (days/year)	350
	exposure duration (years)	30
	inhalation rate (L/kg-day)	352
	inhalation absorption factor	1
	averaging time (years)	70
	fraction of time at home	1
	age sensitivity factor (age third trimester to 2 years)	10
	age sensitivity factor (ages 2 to 16 years old)	3
	weighted age sensitivity factor	2.6

As demonstrated above, the HRA relies upon a weighted age sensitivity factor of 2.6 to calculate the Project's total residential cancer risk. The EIR's use of a weighted ASF to account for the health risk posed to infants and children, instead of applying the proper ASF to each age group bin, however, is entirely incorrect. The use of age bins when estimating exposure and the potential for developing cancer over a lifetime allows more refined exposure information to be used.⁷ OEHHA recommends that the health risk impacts be calculated by each age group and then summed to estimate the potential cancer risk over a lifetime. The method used by the EIR significantly underestimates the residential lifetime cancer risk, as it fails to individually assess the 3rd Trimester, infant, and child's health risk. Therefore, the EIR's application of a weighted ASF is improper, and as a result, the potential excess cancer risk posed to children and infants is not accurately represented. As such, prior to certification of the EIR, an updated health risk assessment should be prepared to include these updated values.

Omission of Age-Specific Breathing Rates

Not only does the EIR's HRA fail to apply ASFs when estimating the total residential cancer risk, but it also fails to use age-specific breathing rates for infants and children. As previously stated, the EIR asserts that breathing rates consistent with 2015 OEHHA Guidelines were applied to the Project's HRA (Appendix B-2, p. 39). Review of the EIR's HRA, however, demonstrates that this is not the case. Rather, the HRA uses a breathing rate of 352 L/kg-day, which reflects the inhalation rate of an adult, in order to estimate the total residential cancer risk. By doing this, the HRA fails to account for the variability in infant and children breathing rates. As a result, we find the Project's health-related impact to be misrepresented and should not be relied upon to determine Project significance.

In August of 2012, OEHHA formally adopted the *Technical Support Document for Exposure Assessment and Stochastic Analysis*.⁸ Chapter three of this document discusses "age-specific breathing rates for use in health risk assessments for short-term exposure...and for long-term daily average exposures

⁷ "Risk Management Guidance for Stationary Sources of Air Toxics Discussion Draft." ARB and CAPCOA, May 27, 2015, available at: https://www.arb.ca.gov/toxics/rma/rma_guidancedraft052715.pdf, p. 12

⁸ http://www.oehha.ca.gov/air/hot_spots/tsd082712.html

resulting from continuous or repeated 8-hour exposure.”⁹ OEHHA recommends the long-term daily breathing rates in Table 3.1 of this document (see excerpt below).

Table 3.1. Recommended Point Estimates for Long-Term Daily Breathing Rates

	3 rd Trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
L/kg-day						
Mean	225	658	535	452	210	185
95th Percentile	361	1090	861	745	335	290
m³/day						
Mean	15.3	6.2	10.7	13.3	15.0	13.9
95th Percentile	23.4	11.2	16.4	22.6	23.5	22.9

Therefore, to provide an appropriate analysis of the health effects on infants and children, the 95th percentile breathing rates for the 3rd Trimester, infants, and children should have been applied at the time the analysis was conducted. Review of the EIR and associated appendices, however, demonstrate that an 80th percentile breathing rate of 352 L/kg-day was used to estimate the Project’s health risk impacts, rather than the 95th percentile breathing rates according to each age category, as outlined in the table above (Appendix B-2, p. 30). According to OEHHA guidance, breathing rates for the inhalation pathway are used in order to avoid underestimating the cancer risk to the public, specifically children. Therefore, by failing to use age specific breathing rates when calculating the Project’s total cancer risk, the Project’s health risk impact is underestimated. These age specific breathing rates should be applied in an updated health risk assessment in an effort to accurately determine the potential cancer risk posed to infants and children residing near the Project site. Until an updated HRA is prepared, the Project should not be approved.

Failure to Implement All Feasible Mitigation Measures to Reduce Emissions

The EIR determines that mass daily NO_x construction-related emissions generated during Project construction “are concluded to result in a significant and unavoidable impact” (DEIR, p. 4.3-49). Additionally, the EIR finds that “the Project’s long-term operational activities (i.e., full buildout) would exceed the regional thresholds for daily VOC and NO_x emissions” (DEIR, p. 4.3-41).

Furthermore, the EIR states,

“After the application of Project design features, mandatory regulatory compliance measures, and feasible mitigation measures, short-term construction-related NO_x emissions and long-term operational-related VOC and NO_x emissions would still exceed the SCAQMD numerical thresholds for daily emissions” (DEIR, p. 5-1).

⁹ http://www.oehha.ca.gov/air/hot_spots/pdf/2012tsd/Chapter3_2012.pdf p. 3-1

As a result, the EIR concludes that “no other mitigation measures are available that are feasible for the Project Applicant to implement and for the City of Moreno Valley to enforce that have a proportional nexus to the Project’s level of impact” and therefore, the Project’s operational air quality impact is significant and unavoidable (DEIR, p. 4.3-49). While it is true that the Project would result in a significant construction-related NO_x impact and a significant operational VOC and NO_x impact, the EIR’s conclusion that these impacts are “significant and unavoidable” and that “no other feasible mitigation measures are available” is entirely incorrect. According to CEQA, and as stated by the San Joaquin Valley Air Pollution Control District (SJVAPCD),

“CEQA requires Lead Agencies to mitigate or avoid significant environmental impacts associated with discretionary projects. Environmental documents for projects that have any significant environmental impacts must identify all feasible mitigation measures or alternatives to reduce the impacts below a level of significance. If after the identification of all feasible mitigation measures, a project is still deemed to have significant environmental impacts, the Lead Agency can approve a project, but must adopt a Statement of Overriding Consideration to explain why further mitigation measures are not feasible and why approval of a project with significant unavoidable impacts is warranted.”¹⁰

Therefore, an impact can only be labeled as significant and unavoidable after all available, feasible mitigation is considered. Review of the Project’s VOC and NO_x mitigation measures, however, demonstrates that not all feasible mitigation is being implemented. As a result, additional mitigation measures should be identified and incorporated in order to reduce the Project’s air quality impacts to the maximum extent possible. Until all feasible mitigation is reviewed and incorporated into the Project design, impacts from construction-related NO_x emissions and operational VOC and NO_x emissions cannot be considered as significant and unavoidable.

Additional mitigation measures can be found in CAPCOA’s *Quantifying Greenhouse Gas Mitigation Measures*, which attempt to reduce Greenhouse Gas (GHG) levels, as well as reduce Criteria Air Pollutants such as particulate matter and NO_x.¹¹ NO_x is a byproduct of diesel fuel combustion, and is emitted by on-road vehicles and by off-road construction equipment. Mitigation for criteria pollutant emissions should include consideration of the following measures in an effort to reduce construction emissions:

Require Implementation of Diesel Control Measures

The Northeast Diesel Collaborative (NEDC) is a regionally coordinated initiative to reduce diesel emissions, improve public health, and promote clean diesel

¹⁰ http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, p. 115 of 125

¹¹ <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

technology. The NEDC recommends that contracts for all construction projects require the following diesel control measures:¹²

- All diesel onroad vehicles on site for more than 10 total days must have either (1) engines that meet EPA 2007 onroad emissions standards or (2) emission control technology verified by EPA¹³ or the California Air Resources Board (CARB)¹⁴ to reduce PM emissions by a minimum of 85 percent.
- All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85 percent.
- All diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85 percent for engines 50 horse power (hp) and greater and by a minimum of 20 percent for engines less than 50 hp.
- All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend¹⁵ approved by the original engine manufacturer with sulfur content of 15 parts per million (ppm) or less.

Repower or Replace Older Construction Equipment Engines

The NEDC recognizes that availability of equipment that meets the EPA's newer standards is limited.¹⁶ Due to this limitation, the NEDC proposes actions that can be taken to reduce emissions from existing equipment in the *Best Practices for Clean Diesel Construction* report.¹⁷ These actions include but are not limited to:

- Repowering equipment (i.e. replacing older engines with newer, cleaner engines and leaving the body of the equipment intact).

Engine repower may be a cost-effective emissions reduction strategy when a vehicle or machine has a long useful life and the cost of the engine does not approach the cost of the entire vehicle or machine. Examples of good potential replacement candidates include marine vessels, locomotives, and large

¹² Diesel Emission Controls in Construction Projects, *available at*:<http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-specification.pdf>

¹³ For EPA's list of verified technology: <http://www3.epa.gov/otaq/diesel/verification/verif-list.htm>

¹⁴ For CARB's list of verified technology: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

¹⁵ Biodiesel blends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements:

<http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf>

¹⁶ <http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf>

¹⁷ <http://northeastdiesel.org/pdf/BestPractices4CleanDieselConstructionAug2012.pdf>

construction machines.¹⁸ Older diesel vehicles or machines can be repowered with newer diesel engines or in some cases with engines that operate on alternative fuels (see section “Use Alternative Fuels for Construction Equipment” for details). The original engine is taken out of service and a new engine with reduced emission characteristics is installed. Significant emission reductions can be achieved, depending on the newer engine and the vehicle or machine’s ability to accept a more modern engine and emission control system. It should be noted, however, that newer engines or higher tier engines are not necessarily cleaner engines, so it is important that the Project Applicant check the actual emission standard level of the current (existing) and new engines to ensure the repower product is reducing emissions for DPM.¹⁹

- Replacement of older equipment with equipment meeting the latest emission standards.

Engine replacement can include substituting a cleaner highway engine for a nonroad engine. Diesel equipment may also be replaced with other technologies or fuels. Examples include hybrid switcher locomotives, electric cranes, LNG, CNG, LPG or propane yard tractors, forklifts or loaders. Replacements using natural gas may require changes to fueling infrastructure.²⁰ Replacements often require some re-engineering work due to differences in size and configuration. Typically, there are benefits in fuel efficiency, reliability, warranty, and maintenance costs.²¹

Install Retrofit Devices on Existing Construction Equipment

PM emissions from alternatively-fueled construction equipment can be further reduced by installing retrofit devices on existing and/or new equipment. The most common retrofit technologies are retrofit devices for engine exhaust after-treatment. These devices are installed in the exhaust system to reduce emissions and should not impact engine or vehicle operation.²² Below is a table, prepared by the EPA, that summarizes the commonly used retrofit technologies and the typical cost and emission reductions associated with each technology.²³ It should be noted that actual emissions reductions and costs will depend on specific manufacturers, technologies and applications.

¹⁸ Repair, Rebuild, and Repower, EPA, *available at*:<https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#repair>

¹⁹ Diesel Emissions Reduction Program (DERA): Technologies, Fleets and Projects Information, *available at*:<http://www2.epa.gov/sites/production/files/2015-09/documents/420p11001.pdf>

²⁰ Alternative Fuel Conversion, EPA, *available at*:
<https://www3.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm#fact>

²¹ Cleaner Fuels, EPA, *available at*:<https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#cleaner>

²² Retrofit Technologies, EPA, *available at*:<https://www.epa.gov/verified-diesel-tech/learn-about-verified-technologies-clean-diesel#retrofit>

²³ Cleaner Diesels: Low Cost Ways to Reduce Emissions from Construction Equipment, March 2007, *available at*:<https://www.epa.gov/sites/production/files/2015-09/documents/cleaner-diesels-low-cost-ways-to-reduce-emissions-from-construction-equipment.pdf>, p. 26

Technology	Typical Emissions Reductions (percent)				Typical Costs (\$)
	PM	NO _x	HC	CO	
Diesel Oxidation Catalyst (DOC)	20-40	-	40-70	40-60	Material: \$600-\$4,000 Installation: 1-3 hours
Diesel Particulate Filter (DPF)	85-95	-	85-95	50-90	Material: \$8,000-\$50,000 Installation: 6-8 hours
Partial Diesel Particulate Filter (pDPF)	up to 60	-	40-75	10-60	Material: \$4,000-\$6,000 Installation: 6-8 hours
Selective Catalyst Reduction (SCR)	-	up to 75	-	-	\$10,000-\$20,000; Urea \$0.80/gal
Closed Crankcase Ventilation (CCV)	varies	-	-	-	-
Exhaust Gas Recirculation (EGR)	-	25-40	-	-	-
Lean NO _x Catalyst (LNC)	-	5-40	-	-	\$6,500-\$10,000

Use Electric and Hybrid Construction Equipment

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*²⁴ report also proposes the use of electric and/or hybrid construction equipment as a way to mitigate DPM emissions. When construction equipment is powered by grid electricity rather than fossil fuel, direct emissions from fuel combustion are replaced with indirect emissions associated with the electricity used to power the equipment. Furthermore, when construction equipment is powered by hybrid-electric drives, emissions from fuel combustion are also greatly reduced. Electric construction equipment is available commercially from companies such as Peterson Pacific Corporation,²⁵ which specialize in the mechanical processing equipment like grinders and shredders. Construction equipment powered by hybrid-electric drives is also commercially available from companies such as Caterpillar²⁶. For example, Caterpillar reports that during an 8-hour shift, its D7E hybrid dozer burns 19.5 percent fewer gallons of fuel than a conventional dozer

²⁴<http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

²⁵ Peterson Electric Grinders Brochure, available at:http://www.petersoncorp.com/wp-content/uploads/peterson_electric_grinders1.pdf

²⁶ Electric Power Products, available at:http://www.cat.com/en_US/products/new/power-systems/electric-power-generation.html

while achieving a 10.3 percent increase in productivity. The D7E model burns 6.2 gallons per hour compared to a conventional dozer which burns 7.7 gallons per hour.²⁷ Fuel usage and savings are dependent on the make and model of the construction equipment used. The Project Applicant should calculate project-specific savings and provide manufacturer specifications indicating fuel burned per hour.

Implement a Construction Vehicle Inventory Tracking System

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*²⁸ report recommends that the Project Applicant provide a detailed plan that discusses a construction vehicle inventory tracking system to ensure compliances with construction mitigation measures. The system should include strategies such as requiring engine run time meters on equipment, documenting the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment and daily logging of the operating hours of the equipment. Specifically, for each onroad construction vehicle, nonroad construction equipment, or generator, the contractor should submit to the developer's representative a report prior to bringing said equipment on site that includes:²⁹

- Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number.
- The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level.
- The Certification Statement³⁰ signed and printed on the contractor's letterhead.

Furthermore, the contractor should submit to the developer's representative a monthly report that, for each onroad construction vehicle, nonroad construction equipment, or generator onsite, includes: ³¹

- Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
- Any problems with the equipment or emission controls.
- Certified copies of fuel deliveries for the time period that identify:
 - Source of supply

²⁷<http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

²⁸<http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

²⁹ Diesel Emission Controls in Construction Projects, *available*

at:<http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-specification.pdf>

³⁰ Diesel Emission Controls in Construction Projects, *available*

at:<http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-specification.pdf> The NEDC Model Certification Statement can be found in Appendix A.

³¹ Diesel Emission Controls in Construction Projects, *available*

at:<http://www2.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-specification.pdf>

- Quantity of fuel
- Quality of fuel, including sulfur content (percent by weight).

In addition to these measures, we also recommend that the Applicant implement the following mitigation measures, called “Enhanced Exhaust Control Practices,”³² that are recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD):

1. The project representative shall submit to the lead agency a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project.
 - The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.
 - The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.
 - This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment.
 - The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
2. The project representative shall provide a plan for approval by the lead agency demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20% NO_x reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average.
 - This plan shall be submitted in conjunction with the equipment inventory.
 - Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.
 - The District’s Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.
3. The project representative shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour.

³²http://www.airquality.org/ceqa/Ch3EnhancedExhaustControl_10-2013.pdf

- Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Non-compliant equipment will be documented and a summary provided to the lead agency monthly.
 - A visual survey of all in-operation equipment shall be made at least weekly.
 - A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.
4. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supersede other District, state or federal rules or regulations.

In addition to the measures discussed above, the SCAQMD has previously recommended additional mitigation measures for operational NO_x emissions that result primarily from truck activity emissions for similar projects. Measures recommended for the Waterman Logistic Center that are also applicable for this Project include³³:

- Provide electric vehicle charging stations that are accessible for trucks. Mitigation Measure 4.3-16 states “the building plans shall include conduit and plug-in locations for electric yard tractors, for lifts, reach stackers, and sweepers” (p. ES-23). We propose that this measure be extended to include charging stations accessible to all heavy-duty trucks accessing the site.
- Provide electrical hookups at the onsite loading docks and at the truck stops for truckers to plug in any onboard auxiliary equipment
- Provide minimum buffer zone of 300 meters (approximately 1,000 feet) between truck traffic and sensitive receptors.
- Limit the daily number of trucks allowed at the facility to levels analyzed in the DEIR. If higher daily truck volumes are anticipated to visit the site, the Lead Agency should commit to re-evaluating the project through CEQA prior to allowing this higher activity level.
- Design the site such that any check-in point for trucks is well inside the facility to ensure that there are no trucks queuing outside of the facility.
- On-site equipment should be alternative fueled.

³³ SCAQMD Comment Letter in Response to MND for the Waterman Logistic Center, January 2018, available at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/january/mndwaterman.pdf>

- Provide food options, fueling, truck repair and or convenience stores on-site to minimize the need for trucks to travel through residential neighborhoods.
- Improve traffic flow by signal synchronization.
- Have truck routes clearly marked with trailblazer signs, so that trucks will not enter residential areas.
- Should the proposed Project generate significant emissions, the Lead Agency should require mitigation that requires accelerated phase-in for non-diesel powered trucks. For example, natural gas trucks, including Class 8 HHD trucks, are commercially available today. Natural gas trucks can provide a substantial reduction in emissions, and may be more financially feasible today due to reduced fuel costs compared to diesel. In the Final CEQA document, the Lead Agency should require a phase-in schedule for these cleaner operating trucks to reduce project impacts.

Finally, in order to reduce the Project's operational VOC emissions, we recommend that the Applicant implement the mitigation measures listed below.

Use of Zero-VOC Emissions Paint

The Project Applicant should consider the use of zero-VOC emission paints for operation, which has been required for numerous projects that have undergone CEQA review. Zero-VOC emission paints are commercially available. Other low-VOC standards should be incorporated into mitigation including use of "super-compliant" paints, which have a VOC standard of less than 10 g/L. The DEIR includes Mitigation Measure MM 4.3-1, which would require use of "low-volatile organic compound paint products (no more than 50 gram/liter of VOC)" (p. ES-13). However, the DEIR should restrict all architectural coatings to zero-VOC or super-compliant coatings to ensure that the most stringent coatings are being utilized and to reduce VOC emissions to the maximum extent possible.

Use of Material that do Not Require Paint

Using materials that do not require painting is a common mitigation measure where VOC emissions are a concern. Interior and exterior surfaces, such as concrete, can be left unpainted. Therefore, no architectural coatings will need to be reapplied during operation.

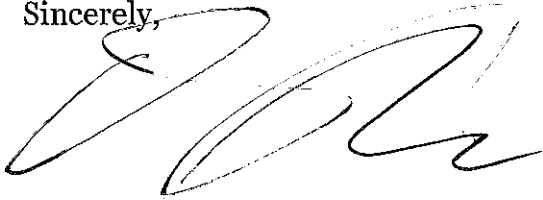
Use of Spray Equipment with Greater Transfer Efficiencies

Various coatings and adhesives are required to be applied by specified methods such as electrostatic spray, high-volume, low-pressure (HVLP) spray, roll coater, flow coater, dip coater, etc. in order to maximize the transfer efficiency. Transfer efficiency is typically defined as the ratio of the weight of coating solids adhering to an object to the total weight of coating solids used in the application process, expressed as a percentage. When it comes to spray applications, the rules typically require the use of either electrostatic spray equipment or HVLP spray

equipment. The SCAQMD is now able to certify HVLP spray applicators and other application technologies at efficiency rates of 65 percent or greater.³⁴ When reapplying architectural coatings to building surfaces during operation of the Project, utilizing application technologies with high efficiency rates will decrease emissions.

When combined together, these measures offer a feasible way to effectively reduce the Project's construction-related NO_x emissions and operational VOC and NO_x emissions, potentially to less than significant levels. As such, an updated EIR must be prepared to include additional mitigation measures to ensure that the necessary mitigation measures are implemented to reduce construction and operational emissions. Furthermore, the Project Applicant needs to demonstrate commitment to the implementation of these measures prior to Project approval to ensure that the Project's emissions are reduced to the maximum extent possible.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gary Ho', written over a faint dotted line.

Gary Ho
BLUM | COLLINS LLP

³⁴ <http://www.aqmd.gov/home/permits/spray-equipment-transfer-efficiency>