

Via electronic mail

Mr. Paul Mitchell
ESA | Community Development
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**RE: ANALYSIS OF PROPOSED OFFSET PROGRAM FOR THE GOLDEN
STATE WARRIORS PROJECT,
SAN FRANCISCO, CALIFORNIA**

Date October 19, 2015

Dear Mr. Mitchell:

At the request of Environmental Science Associates (ESA), Ramboll Environ reviewed the Event Center and Mixed-use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR (SEIR)¹ Mitigation Measure M-AQ-2b describing the proposed emission offset program. The emission offset program described in Mitigation Measure M-AQ-2b "require[s] the project sponsor to pay an offset mitigation fee to the BAAQMD [Bay Area Air Quality Management District] to fund emissions reduction projects that would reduce emissions of ozone precursors to below the applicable thresholds." Ozone is a regional pollutant, and thus, reductions can occur anywhere in the air basin and have an effect on basin-wide ozone concentrations. Ozone precursors include reactive organic gases (ROG) and nitrogen oxides (NOx).

BAAQMD does not currently have an offset purchasing program for development projects. However, BAAQMD does facilitate an Emissions Banking Program² used for stationary sources subject to New Source Review. This program is comparable to Mitigation Measure M-AQ-2b in that the offsets (or credits) that can be purchased must be permanent and quantifiable. Companies receive credits by demonstrating the permanent reduction of emissions, and can sell the credits on the open market.

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¹ Draft SEIR available at: <http://www.sf-planning.org/index.aspx?page=1828>

² Emissions Banking Program information available at:
<http://www.baaqmd.gov/permits/emissions-banking>

The California Air Resources Board provides a record for emission reduction offset transaction costs.³ In the Bay Area in 2014, the median (average) cost per ton of hydrocarbon (analogous with ROG) and NOx were approximately \$7,000 (\$6,196) and \$14,500 (\$14,643), respectively. These values represent the market cost of permanent emissions reductions in 2014 in the Bay Area. Note that the cost per ton for both pollutants is significantly less than the Carl Moyer cost effectiveness standard of \$18,030 used in the SEIR to estimate offset cost.

Similarly, when permitting new stationary sources the BAAQMD has "adopted guidelines for the maximum cost per ton of air pollutants controlled that would be considered cost-effective," which is \$17,500 per ton for both ROG and NOx.⁴ Again, the cost per ton for both pollutants is less than the \$18,030 used in the SEIR.

Please feel free to contact Michael Keinath or Catherine Mukai if you have any questions. Thank you for the opportunity to assist you with this matter.

Yours sincerely,



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³ Available at: <http://www.arb.ca.gov/nsr/erco/erco.htm>

⁴ Available at: <http://hank.baaqmd.gov/pmt/bactworkbook/intro3.htm>