Appendix A-2

Criteria Pollutant Dispersion Modeling Analyses
Port of Long Beach MCC Cement Facility Modification Project

This page intentionally left blank.

APPENDIX A-2
CRITERIA POLLUTANT DISPERSION MODELING ANALYSES FOR THE MCC CEMENT FACILITY MODIFICATION PROJECT

1.0 INTRODUCTION

(NOTE: All tables are included at the end of this appendix.)

The following describes the methods for an air dispersion modeling analysis used to predict ambient air pollutant impacts from the operation of the MCC Cement Facility Modification Project and its alternatives. The analysis used the U.S. Environmental Project Agency (EPA) American Meteorological Society (AMS)/EPA Regulatory Model (AERMOD, version 14134) based on the Guideline on Air Quality Models (40 Code of Federal Regulations [CFR], Part 51, Appendix W, November 9, 2005). This appendix also describes the use of the South Coast Air Quality Management District (SCAQMD) Localized Significance Threshold (LST) methodology to evaluate ambient air pollutant impacts from proposed construction activities (SCAQMD 2008). Section 3.2 of this EIR presents the results of the project dispersion modeling analyses.

The analyses considered criteria pollutant emissions from proposed construction and operational activities, including nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter equal or less than 10 microns in diameter (PM_{10}), and particulate matter equal or less than 2.5 microns in diameter ($PM_{2.5}$). The analyses compared predicted ground-level concentrations to applicable SCAQMD ambient air quality thresholds to determine their significance.

2.0 CONSTRUCTION EMISSIONS IMPACT ANALYSIS

Emissions from proposed construction activities would occur from the following sources:

- Off-road construction equipment;
- On-road trucks;
- Worker commuting vehicles; and
- Fugitive dust.

The SCAQMD Localized Significance Threshold (LST) methodology was employed to evaluate ambient air quality impacts from proposed construction (SCAQMD 2008). The LST methodology allows a user to determine, in lieu of conducting a dispersion modeling analysis, if a project would cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard for each source receptor area (SRA). This methodology is based upon maximum daily allowable emissions, the total area of the emissions source (less than or equal to five acres), the ambient air quality in each SRA in which the emission source is located, and the distance to the nearest exposed individual. The LSTs are only for emissions of nitrogen oxides (NO_x), CO, PM_{10}, and $PM_{2.5}$. If proposed construction emissions are below the LST emission levels and no potentially significant impacts are found to be associated with other environmental issues, then the proposed activity is not significant for air quality.

The construction impact analysis included emissions from onsite 1) construction equipment, 2) haul trucks, and 3) fugitive dust, as the SCAQMD only requires analyses of onsite construction emission sources for criteria pollutant impacts (SCAQMD 2005). Therefore, the analysis did not consider offsite emission sources from truck hauling and worker commuting.

The construction impact analysis evaluated the highest peak daily emissions that would occur during any construction phase. Appendix A-1 of this EIR describes the methods used to estimate these emissions. Table A-2-1 presents the peak daily construction emissions evaluated by the LST analysis. These data exclude emissions generated offsite by haul trucks and commuter vehicles.

Air emissions from proposed construction activities mainly would occur over two acres within the MCC terminal and the adjacent vacant property (former Pacific Banana terminal). The following summarizes the inputs to the LST analysis.

- The SRA for the project site is the South Coastal Los Angeles County (#4).
- The distance to the nearest exposed individual would be 100 meters.

- The allowable daily emissions within a two-acre construction site and a receptor distance of 100 meters is 1) 1,611 pounds of CO, 2) 87 pounds of NOx, 3) 37 pounds of PM_{10}, and 4) 13 pounds of $PM_{2.5}$ (See Table A-2-1).

3.0 OPERATIONAL EMISSION SOURCES

In accordance with SCAQMD guidance, both onsite and offsite emission sources were included in the dispersion modeling analysis of operational emissions. The dispersion modeling analysis included emissions from the following Project emission sources:

Ships transiting to and from berth. Ocean-going vessels (OGVs) transit in SCAQMD waters through segments of the Fairway transit, Precautionary Area transit, harbor transit, turning, and docking. Ship emission sources include main propulsion engines, auxiliary engines, and boilers.

Ships hoteling at berth. Sources of hoteling emissions include ship auxiliary engines and boilers, since the main propulsion engine would not be in operation. While in cold-ironing mode, the only source of emissions from ships are boilers.

Tugboats used to assist OGVs between the POLB breakwater and berth (two tugboat assists during an inbound and outbound portion of each ship visit). Tugboat emission sources include main propulsion and auxiliary engines.

Wheeled loaders used to payload and clean up residual cement in OGV holds.

On-road trucks that deliver cement. Truck emissions occur from (a) on-terminal driving and idling and (b) off-terminal driving on roadways between the terminal and facility locations within the South Coast Air Basin (SCAB).

Emission from worker commuting activities were not included in the dispersion modeling analyses, as their minimal amount of emissions would produce inconsequential ambient impacts.

The analysis of emissions from proposed truck trips focused on roadway systems within roughly three miles of the Project terminal, rather than an entire trip distance between the terminal and facilities up to 30 miles away. This approach was taken, as these distant emissions would produce nominal impacts at these locations and they would not contribute substantially, if at all, to the maximum Project impacts that would occur in proximity to the terminal.

3.1 Operational Emissions

Operational emissions are based upon year 2015 conditions and the assumption that all project future scenarios would achieve full build-out and throughput at this time and that throughput levels would remain constant from this point forward. This scenario represents the annual period when each Project alternative would generate the highest amount of emissions within and adjacent to the MCC terminal and therefore would produce the highest ambient impacts in the Port and onshore regions for any Project year.

For each future project scenario, the analysis evaluated 1) long-term or annual impacts of NO_2 and PM_{10} and 2) short-term pollutant impacts of one-, eight-, and 24-hour averaging periods. The analysis also evaluated 24-hour PM_{10}/$PM_{2.5}$ and annual PM_{10} impacts for the CEQA Baseline scenario. The analysis developed hourly source emission rates for each of the project scenarios for use as inputs to AERMOD, based upon the following methods:

1. For the annual averaging period, total annual source emissions for year 2015 were divided by 8760 hours.

2. For 1- and 8-hour averaging periods, hourly source emissions were based upon OGV inbound harbor transit and docking, the use of two tugboats to assist these activities, and all non-OGV unloading sources on land. This scenario was determined to produce the highest acute impact of proposed emissions to onshore locations within the project region. Development of this scenario took into consideration relative emission source strengths, locations of sources, and the terminal operational routine. For example, an OGV would not hotel at berth and be in transit at the same time.

3. For the 24-hour averaging period, hourly source emissions were based upon the peak daily emissions scenario defined in Appendix A-1 Section 3.0: 1) the arrival of an OGV, 2) OGV hoteling and unloading for the remainder of the day (19 hours), and 3) terminal operations and associated truck loading and transporting for 24 hours per day.

To estimate ambient NO_2 impacts, the analysis used the Tier 3 Ozone Limiting Method (OLM) option in AERMOD. The OLM was chosen over the Plume Volume Molar Ratio Method (PVMRM), as the project AERMOD analyses simulate most project emission sources as ground-based volume sources that are subject to plume overlap (such as roadways). The EPA recommends use of the OLM for this type of simulation versus use of the PVMRM (EPA 2014). The analysis matched hourly NO_2 impacts estimated by AERMOD/OLM with sequential hourly background NO_2 concentrations to estimate maximum total project NO_2 impacts.

The annual operational emission sources were modeled assuming various diurnal emission patterns to reflect the daily cycle of activity at the terminal. The diurnal emission patterns, as shown in Table A-2-2, were based on those developed by the ARB in the Diesel Particulate Matter Exposure Assessment Study for the Ports of Long Beach and Los Angeles (ARB 2006) for vessel sources and MCC for the remaining project sources (MCC 2010). Table A-2-2 also includes temporal data to identify the project sources evaluated in the peak day and peak hour scenarios.

4.0 DISPERSION MODEL SELECTION AND OPTIONS

In November 2006, AERMOD officially became EPA's preferred model for conducting dispersion modeling, replacing the Industrial Source Complex Short-Term, Version 3 model (ISCST3) (EPA 2008). AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts that can handle both ground-level and elevated sources in simple and complex terrain.

AERMOD (version 14134) was used to perform dispersion modeling for the Project air quality impact analysis in this EIR. The AERMOD model was selected for the following reasons:

- It has become the regulatory default model for dispersion modeling;
- General acceptance by the modeling community and regulatory agencies of its ability to provide more reasonable results for large industrial complexes with multiple emission sources than ISCST3; and
- Ability of the model to handle the various physical characteristics of Project emission sources, including "point," "area," and "volume" source types.

Technical options selected for the AERMOD model are listed below. Use of these options follows EPA modeling guidance (40 CFR, Part 51, Appendix W, November 9, 2005) and SCAQMD guidance.

- Regulatory default option;
- Includes stack tip downwash;
- Incorporates effects of elevated terrain;
- Includes calms and missing data processing;
- Urban modeling option;
- Urban Area Population of 535,500; and
- Default roughness length of one meter. This was used to characterize the average surface roughness of the entire urban area represented in the model for the nighttime heat island effect, as impacts over water were not considered in this analysis.

Use of these options follows EPA and SCAQMD modeling guidance. The urban area option, which employs a routine to account for an urban heat island effect under nighttime conditions, was applied to all model sources except Precautionary Area and Fairway OGV transit. The urban area population of 535,500 represents the combined populations of Long Beach and Wilmington, the two adjacent cities to the Port. This urban area population estimate is conservative, as the larger Los Angeles metropolitan area may contribute to the urban heat island effect at the Port.

5.0 PHYSICAL SIMULATIONS OF OPERATIONAL EMISSION SOURCES

The AERMOD modeling analysis evaluated emission sources from project operations, including OGVs, assist tugboats, terminal equipment, and trucks. The analysis physically simulated these emission sources by taking into consideration their physical characteristics and operational locations.

The following provides additional details regarding the emission sources that were

included in the criteria pollutant modeling analysis:

- **Ships transiting** to and from the MCC berth. Ship transit in SCAQMD waters consists of the following transit segments, starting with the segment farthest from the berth.
  - Fairway transit – The portion of transit between the SCAQMD over water outer boundary (about 50 nautical miles [nm] from the Port breakwater) and the Precautionary Area (beginning about 10 nm from the Port breakwater). A sensitivity analysis performed for a Port of Los Angeles container terminal development project determined that the closest 14 nm portion of Fairway transit is sufficient to include in the modeling analysis, as the more distant portion of Fairway transit contributed to less than one percent of the total risks at the maximum residential and occupational receptors (Port of Los Angeles 2007). The Fairway segment excluded from the analysis is the portion that extends to the west of Point Vicente. Therefore, this analysis modeled Fairway vessel emissions between the Precautionary area and this point, or equal to 35 percent of the total Fairway emissions.
  - Precautionary Area transit – The portion of transit between the Fairway and the Port breakwater. This segment length is about 10 nm.
  - Harbor transit – The portion of transit between the Port breakwater and the MCC berth. This segment length is about 2.4 nm.
  - Turning and Docking – Final positioning of the ship near the berth.
  - The total one-way transit distance included in the modeling is about 27 nm. Vessel emission sources include main propulsion engines, auxiliary engines, and boilers.
- **Vessel turning and docking** representing final maneuvering activities that occur directly adjacent to the berth.
- **Ship hoteling** while at berth. Sources of hoteling emissions include ship auxiliary engines and boilers, as the main propulsion engine is not in operation. When a ship uses cold-ironing while hoteling, only boiler sources are in use.
- **Tugboats** used to assist OGVs between the Port breakwater and berth (two tugboat assists per inbound and outbound transit). Emission sources include tugboat main propulsion and auxiliary engines.
- **Wheeled loaders** used to payload and clean up residual cement in OGV holds.
- **Ship unloaders** used to transfer cement from OGVs to the storage warehouse and silos (sources of PM).
- **Bag houses and fabric filters** on cement storage warehouse and silos and truck loaders (sources of PM).
- **Trucks** that deliver cement on primary roadways to and from the MCC terminal, including vehicle exhaust, road dust, tire wear, and brake wear. The analysis focused on roadway systems within about three miles of the Project terminal, as emissions within more distant roadways would produce nominal impacts at these locations and they would not contribute substantially, if at all, to the maximum Project impacts that would occur in proximity to the terminal. The modeled roadways included:
  - On-terminal driving and idling.
  - I-710/Harbor Scenic Drive from Pacific Coast Highway to the Pico Ave. Connector.
  - Pico Ave. Connector from Harbor Scenic Drive to Pico Ave.
  - Pico Ave from Harbor Scenic Connector to Harbor Plaza.
  - Harbor Plaza from Pier F Ave to Pier G Ave.
  - Pier F Ave from the MCC Terminal Gate to Harbor Plaza.
  - Pico Ave from Pier E St to the Harbor Scenic Connector.
  - Pico Ave from Pier E St. to the Ocean Blvd. On-ramp.
  - Ocean Blvd. On-ramp from Pier D St. to Ocean Blvd. (WB).

- Ocean Blvd from Seaside Blvd On-ramp to the D St. On-ramp.
- Ocean Blvd from Pico Ave. On-ramp to the Pier E St. Off-ramp.
- Pier E St. Off Ramp from Pico Ave to Ocean Blvd.

The modeling analysis evenly distributed truck on-terminal driving emissions throughout the MCC terminal for all Project scenarios. All on-terminal idling emissions were included in the terminal truck-loading source.

Emissions from OGVs in transit and trucks on roadways and within the project terminal were simulated as line source emissions with the use of a series of separated volume sources. Volume source emissions were simulated by AERMOD as being released and mixed vertically and horizontally within a volume of air prior to being dispersed downwind. Finally, stationary emissions from hoteling ships and cement dust from bag houses and fabric filters were modeled as point (stack) sources with upward plume velocity and buoyancy.

The Project criteria pollutant modeling analyses and health risk assessment (HRA) includes the simulation of 291 emission sources by AERMOD. The sources represent different geographical locations, emission release heights, and diurnal emission profiles. The following figures display the locations of the project sources simulated in the AERMOD analyses:

- Figure A-2-1 present vessel Fairway and Precautionary Area transit routes.
- Figure A-2-2 presents the vessel harbor transit route and roadways used by trucks.
- Figure A-2-3 presents vessel unloading, vessel hoteling, the dockside catalytic control system (DoCCS), on-terminal truck driving, and cement dust point sources.

The operational characteristics of each source type in terms of the area of operation and vertical source height determined the release parameters of each volume or point source. Emission source locations were identified within AERMOD with the use of the Universal Transverse Mercator (UTM) coordinate system North American Datum 1983 (NAD83), referenced to topographic data obtained from the United States Geological Survey (USGS).

The following discusses the methodology that defined the physical characteristics of sources evaluated by AERMOD.

- Ship transit lanes (Fairway, Precautionary Area, and Harbor Transit). Emissions from OGVs that transit between the offshore shipping lanes and the berth were simulated as a series of elevated volume sources beginning approximately 14 nm beyond Point Fermin and extending to the MCC terminal. Total transit emissions were calculated and divided equally among the volume sources for each of the Fairway, Precautionary Area, and Harbor Transit segments. Tugboat assist emissions were modeled as separate Harbor Transit volume sources with a 50-foot plume height.
- Vessel transit sources were modeled as line sources with the use of multiple volume sources and consistent with methods in the *ISCST User's Guide, Section 1.2.2, Volume II* (EPA 1995). The volume source width for transit within the Fairway and Precautionary Area was set to 200 m. The volume source width for transit within the harbor was set to 100 m. The center-to-center spacing of the Fairway and Precautionary Area transit volume sources was 600 m. For Harbor Transit sources, the center-to-center spacing of the Harbor Transit volume sources was 200 m.
- The analysis used the following vertical dimensions for vessel transit volume sources, based upon a series of visual observations of container ship exhaust plumes at the Port (SAIC 2006). These observations showed that lower apparent wind speeds with slower ship speeds resulted in higher vessel plume rises.
- Fairway/Precautionary Area – Center of volume source equal to 25 percent above stack height (26 m), or 32 m, and a volume source depth of 50 percent of stack height, or 13 m; and
- Harbor Transit – Center of volume source equal to 50 percent above stack height, or

32 m, and a volume source depth of 100 percent of stack height, or 26 m.

- The transit sources were assumed to be positioned along the centerline of the vessel inbound/outbound traffic lanes through the Fairway and Precautionary Area, along a line from the edge of the Precautionary Area to Queens Gate, and then along the Long Beach Channel into the Southeast Basin and to Berth F207A. Figures A-2-1 and A-2-2 show the locations of the vessel sources evaluated in the modeling analysis.
- Vessel Turning and Docking. This activity would produce emissions that occur directly adjacent to the berth. The analysis used a volume source width of 100 m to simulate these activities. The analysis set the center of the volume source equal to 100 percent above stack height, or 52 m, and the volume source depth equal to 200 percent of stack height, or 52 m.
- Vessel hoteling location. The analysis modeled stationary auxiliary engines and boilers as a stack-type point source at a single location next to the berth for the CEQA Baseline and No Project scenarios. For hoteling sources associated with Alternatives 1 and 2, the analysis simulated the DoCCS as a point source within the terminal but directly adjacent to the berth. Stack parameters for the auxiliary engines and boilers were developed from data (1) collected during the vessel-boarding program for the Port of Los Angeles 2001 Baseline Air Emissions Inventory (Starcrest 2005) and (2) engine vendors (Caterpillar 2001).
- Wheeled loaders used to payload and the ship unloaders were combined into two volume sources that were 10 m wide. The analysis set the center of the volume source equal to 15 m above ground and the volume source depth equal to 12 m.
- Bag houses and fabric filters were simulated as point sources. MCC provided the stack parameters for these sources.
- Trucks Driving On-Terminal. Trucks driving within the terminal were modeled as a series of separated volume sources along the driving routes. These sources were assigned a release height of 15 feet, which is the approximate average height of the exhaust stack plus a nominal amount of plume rise, per visual observations.
- Truck Driving within Roadways. Truck movements on roadways were modeled as a series of separated volume sources, as recommended for the simulation of line sources in the ISCST User's Guide. Roadways were divided into links that have uniform average speeds and widths. Average roadway speeds were developed as part of the Middle Harbor Project traffic EIS/EIR (POLB 2009). Total link emissions were divided equally among the number of sources in a given link.

  Emissions from trucks within roadways were assigned a release height of 15 feet. The widths of volume sources for each roadway were set equal to the width of the roadway plus three m on each side.

Attachment 1 of Appendix 2 presents the hourly source emission rates for each scenario that was evaluated in the AERMOD analyses.

6.0 METEOROLOGICAL DATA

Due to the blocking effect of the Palos Verdes Hills, wide variations in wind conditions often occur within the Port. For example, during typical sea breeze conditions, the hills can create relatively light and variable wind conditions in the Inner Harbor while the Outer Harbor experiences more consistent southwest to west winds. The monthly and hourly streamlines developed for the South Coast Air Basin in California South Coast Air Basin Hourly Wind Flow Patterns show this difference in wind conditions between the inner and outer harbor regions (SCAQMD 1977).

Due to varying wind conditions within the Port region, the most accurate method for conducting criteria dispersion modeling was to split the project modeling domain into distinct Inner and Outer Harbor meteorological areas. Per real time observational analyses, the boundary chosen between these two areas is roughly a line drawn west to east through the intersection of Pico Ave. and Harbor Plaza. This layout places the project terminal in the outer harbor meteorological domain. The modeling results for each meteorological domain are summed at each common receptor point to produce total impacts from each Project scenario.

Over the past several years, a number of meteorological stations have come into operation in the POLB area and the data collected at these stations help to improve on the characterization of meteorological conditions within the POLB and surrounding areas. The POLB has operated two air quality monitoring stations, one in the Inner Harbor and one in the Outer Harbor, since September 2006 (POLB 2014). These stations are strategically located to monitor variations in meteorological conditions that exist across the Port area. Therefore, data from these stations were used in the project dispersion modeling analyses to simulate meteorological conditions within the Project region of influence and they include the following:

1. Outer Harbor Domain - The POLB Gull Park station is located directly across the Long Beach Channel from the project terminal at the end of the old Navy Mole on Nimitz Road. The Gull Park station records meteorological conditions that are representative of the Outer Harbor and adjacent offshore waters. Consequently, an annual set of data from the Gull Park station was processed with the AERMET routine (version 12345) to produce meteorological data for use in the AERMOD dispersion modeling analyses for project sources that would operate within these areas.

2. Inner Harbor Domain - The POLB Superblock station is located about 2.3 miles north of the Project terminal near the intersection of Canal Avenue and 12th Street. Due to its interior location, data collected at this station are representative of meteorological conditions within the inner harbor and inland areas of the Port. Consequently, an annual set of data from the Superblock station was processed with the AERMET routine (version 12345) to produce meteorological data for use in the AERMOD dispersion modeling analyses for project sources that would operate within these areas. The processing of these data occurred with the same methods used to develop the AERMOD-ready Gull Park data. These data also match the same one-year period as the Gull Park data.

The period of record of meteorological data used in the project air dispersion modeling analyses is September 2006 through August 2007. Figures A-2-4 and A-2-5 present wind roses of these data for the POLB Gull Park and Superblock monitoring stations.

7.0 SOURCE/RECEPTOR LOCATIONS

Receptor and source base elevations were determined from USGS Digital Elevation Model (DEM) data using the 7.5-minute format (i.e., 30-meter spacing between grid nodes). All coordinates were referenced to UTM North American Datum 1983 (NAD83), Zone 11. The dispersion modeling analysis utilized a regular coarse grid of 886 receptor points with grid spacing of 250 m extending out to three kilometers (km) from the terminal boundary. Beyond three km, receptors extended an additional 1.5 km to the north, 0.25 km to the west, two km to the east, and 4 km to the south, all spaced 500 m apart. To reduce AERMOD runtime, receptors over water were spaced 500 m apart, regardless of their distance from the terminal. Figure A-2-5a presents the locations of the coarse receptor points used in the AERMOD analyses.

The AERMOD analyses also used a 50-meter receptor grid system that extended up to 400 meters beyond the project terminal boundary to ensure identification of maximum project pollutant impacts. Figure A-2-5b presents the locations of the fine receptor points used in the AERMOD analyses.

For maximum pollutant impacts predicted from the coarse grid analyses that exceeded 50 percent of their ambient significance thresholds, fine receptor grid analyses were performed to more clearly define these maximum impact values. Fine grid analyses for maximum coarse grid impacts that were less than 50 percent of an ambient significance threshold were deemed unnecessary, as these impacts would remain below their significance criteria. Each fine grid was spaced at 50 m and extended 250 m from the coarse grid maximum in each direction, for a total grid extending 500 m by 500 m. Within the 500 m by 500 m fine grid, specific receptors were omitted if they were located in areas where impacts were unrealistic (such as receptors located over water or within roadways).

8.0 BACKGROUND AIR QUALITY DATA

For NO_2 and CO project impacts predicted by AERMOD, the analysis added background concentrations of each pollutant to produce total pollutant concentrations and then compared these total impacts to their applicable SCAQMD threshold. Background CO data needed for this analysis were obtained from the highest values recorded at either the POLB Superblock Inner Harbor or Gull Park Outer Harbor monitoring stations for the period of 2011 through 2013. Background NO_2 concentrations used in the OLM analyses were obtained from data collected at the Gull Park monitoring station during the same period of record as the meteorological data used in the AERMOD analysis: September 2006 through August 2007. The annual NO_2 background value obtained from this data set is somewhat higher than the calendar year average NO_2 values recorded at the Gull Park monitoring station for the period of 2009 through 2013.

9.0 SIGNIFICANCE CRITERIA FOR PROJECT AIR QUALITY IMPACTS

The SCAQMD has established thresholds to determine the significance of ambient air quality impacts from proposed land use development projects (SCAQMD 2011). Table A-2-3 presents the SCAQMD ambient significance criteria used to evaluate proposed construction and operational activities. However, as mentioned above, daily allowable emission levels from the SCAQMD LST methodology were used to evaluate ambient air quality impacts from proposed construction rather than dispersion modeling analyses. To evaluate Project operational impacts to ambient one-hour NO_2 levels, the analysis replaced the use of the current SCAQMD NO_2 threshold of 0.18 ppm with the more stringent one-hour NAAQS of 0.10 ppm, per SCAQMD guidance (SCAQMD 2012).

For operational emissions, NO_2 and CO ground-level concentrations predicted by AERMOD were added to background concentrations of each pollutant to produce total concentrations that were compared to the SCAQMD thresholds. To assess the significance of operational PM_{10} and $PM_{2.5}$ impacts, the analysis determined the net change in PM_{10} and $PM_{2.5}$ concentrations between each Project alternative and the CEQA Baseline scenario. These net changes in PM_{10} and $PM_{2.5}$ concentrations were compared to the SCAQMD incremental PM_{10} and $PM_{2.5}$ thresholds. Figure A-2-5c identifies the locations and values of maximum total 1-hour NO_2 impacts estimated for each project scenario.

9.1 Mitigated Scenarios

For the proposed Project or Reduced Throughput Alternative scenarios, ambient impacts predicted to exceed a SCAQMD ambient threshold were re-evaluated with AERMOD to determine the ability of **Mitigation Measure AQ-2: Modernization of Delivery Truck Fleet** to reduce unmitigated impacts to less than significance.

To assist in the determination of the spatial extent of the significant PM_{10} and $PM_{2.5}$ exceedances produced from each project alternative, the analysis developed isopleths of these pollutant concentrations in the following figures:

- Figure A-2-6. Maximum 24-Hr PM_{10} Mitigated Project minus CEQA Baseline Impacts.
- Figure A-2-7. Maximum 24-Hr $PM_{2.5}$ Mitigated Project minus CEQA Baseline Impacts.
- Figure A-2-8. Maximum Annual PM_{10} Mitigated Project minus CEQA Baseline Impacts.
- Figure A-2-9. Maximum 24-Hr PM_{10} Reduced Throughput Alternative minus CEQA Baseline Impacts.
- Figure A-2-10. Maximum 24-Hr $PM_{2.5}$ Reduced Throughput Alternative minus CEQA Baseline Impacts.
- Figure A-2-11. Maximum Annual PM_{10} Reduced Throughput Alternative minus CEQA Baseline Impacts.
- Figure A-2-12. Maximum 24—Hr PM_{10} No Project minus CEQA Baseline Impacts.
- Figure A-2-13. Maximum Annual PM_{10} No Project minus CEQA Baseline Impacts.

These data show that concentrations of the maximum project alternative PM_{10} and/or $PM_{2.5}$ minus CEQA baseline impacts decrease quickly beyond the project terminal boundary and that the areas greater than the applicable significance thresholds are relatively small.

10.0 REFERENCES

California Air Resources Board. 2006. Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach – Final Report.

Caterpillar Inc. 2001. *Marine Auxiliary Engine 3516B Specifications*. Website http://www.cat.com/en_US/products/new/power-systems/marine-power-systems/marine-generator-sets.html.

Mitsubishi Cement Corporation. 2010. Operational Emission Calculations for the Dockside Catalytic Control System and Facility Modifications Project. Provided in Excel format.

POLB. 2014. *Air Quality Monitoring Program at the Port of Long Beach - Annual Summary Report Calendar Year 2013*.

____. 2009. Middle Harbor Redevelopment Project FEIS/FEIR.

Port of Los Angeles. 2007. *Berths 136-147 Container Terminal Final EIS/EIR*, Appendix D3.

Science Applications International Corporation. 2006. Vessel plume photographic survey conducted at the POLA on March 15, 2006 and other spot observations from 2004 to 2006.

South Coast Air Quality Management District. 2012. Personal communications with James Koizumi on June 20, 2012.

_____. 2011. Air Quality Significance Thresholds. Web site: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. October.

_____. 2008. Localized Significance Threshold Methodology (Final). July. Available at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

_____. 2005. Personal communication with J. Koizumi. September 21.

_____. 1977. California South Coast Air Basin Hourly Wind Flow Patterns. Air Programs Division.

Starcrest Consulting Group, LLC. 2005. Port of Los Angeles Baseline Air Emissions Inventory - 2001.

U.S. Environmental Project Agency. 2014. Memorandum - Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO2 National Ambient Air Quality Standard to Regional Dispersion Modeling Contacts. From R. Chris Owen and Roger Brode to Regional Dispersion Modeling Contacts. U.S. EPA/OAQPS Air Quality Modeling Group, C439-01. September 30, 2014.

_____. 2008. AERMOD Modeling System. Web site http://www.epa.gov/scram001/dispersion_prefrec.htm#aermod.

_____. 2005. 40 Code of Federal Regulations Part 51, Appendix W. Available at http://www.epa.gov/ttn/scram/guidance_permit.htm.

_____. 1995. *User's Guide for the Industrial Source Complex Dispersion Models*. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. EPA-454/B-95-003a.

This page intentionally left blank.

Tables

This page intentionally left blank.

Tables

Table A-2-1. Peak Daily Emissions Evaluated for Ambient Impacts from Construction Activities –MCC Project Alternatives

Construction Stage/Phase	Emissions (Pounds per Day) (1)				
	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Stage 1/Phase 0	8.7	18.7	0.0	62.3	13.4
Stage 1/Phase 1	22.0	72.8	0.1	84.1	19.1
Stage 1/Phase 2	19.0	60.7	0.1	3.3	3.0
Peak Daily Emissions (2)	**22.0**	**72.8**	**0.1**	**84.1**	**19.1**
SCAQMD Localized Significance Thresholds (3)	**1,611**	**87**	**NA**	**37**	**13**
Exceed LST?	**No**	**No**	**No**	**Yes**	**Yes**
Mitigated Peak Daily Emissions (4)	**22.0**	**72.8**	**0.1**	**23.0**	**6.3**
Exceed LST?	**No**	**No**	**No**	**No**	**No**

Notes:

1. Excludes emissions generated offsite by haul trucks and commuter vehicles.
2. Peak daily construction emissions of all pollutants would occur during Stage 1/Phase 1. Alternative 2 would not construct State 1/Phase 2.
3. Based upon a construction area of two acres and a downwind distance of 100 meters.
4. Implementation of additional fugitive dust control measures that would achieve a 90 percent reduction in PM10/PM2.5 emissions from uncontrolled levels.

Table A-2-2. Temporal Distribution of MCC Emission Sources for Annual, Peak Day, and Peak Hour Modeling Scenarios

Source	Time Period	Activity Distribution	Hours per Day
Annual Scenario			
Ocean-Going Vessel (OGV)	4 A.M. – 8 P.M. 8 P.M. – 4 A.M.	80% 20%	16 8
OGV Hoteling	Midnight-midnight	100%	24
Harbor Craft	6 A.M. – 6 P.M. 6 P.M. – 6 A.M.	80% 20%	12 12
OGV unloading and all terminal sources	Midnight-midnight	100%	24
Trucks	Midnight-midnight	100%	24
Peak Day Scenario			
OGV Fairway	MIDNIGHT – 01 A.M.	100%	1
OGV Precau. Area	01 A.M.– 02 A.M.	100%	1
OGV Harbor Trans.	02 A.M.– 03 A.M.	100%	1
OGV Docking	02 A.M.– 03 A.M.	100%	1
Harbor Craft Trans.	02 A.M.– 03 A.M.	100%	1
Harbor Craft Docking	02 A.M.– 03 A.M.	100%	1
OGV Hoteling	03 A.M.– MIDNIGHT	100%	21
Unloaders	04 A.M.– MIDNIGHT	100%	20
Payloaders	---	---	0
Terminal Stn. Sources	Midnight-midnight	100%	24
Trucks On/Offsite	Midnight-midnight	100%	24
Peak 1-Hour/8-Hour Scenarios			
OGV Harbor Trans.	Midnight-midnight	100%	24
OGV Docking	Midnight-midnight	100%	24
Harbor Craft Trans.	Midnight-midnight	100%	24
Harbor Craft Docking	Midnight-midnight	100%	24
Terminal Stn. Sources	Midnight-midnight	100%	24
Trucks On/Offsite	Midnight-midnight	100%	24

Source: ARB 2006 for vessels, otherwise MCC 2010.

Table A.2-3. SCAQMD Ambient Air Quality Significance Thresholds for Proposed Construction and Operation Activities

Air Pollutant	*Ambient Concentration Threshold*	
	Construction	*Operational*
NO_2 [a]		
1-hour average	0.18 ppm (339 µg/m^3)	0.10 ppm (188 µg/m^3)
Annual average (state)	0.030 (57 µg/m^3)	0.030 (57 µg/m^3)
Annual average (national)	0.0534 (100 µg/m^3)	0.0534 (100 µg/m^3)
PM_{10} or $PM_{2.5}$ [b]		
24-hour average	10.4 µg/m^3	2.5 µg/m^3
Annual average (PM_{10} only)	1.0 µg/m^3	1.0 µg/m^3
CO [c]		
1-hour average	20 ppm (23,000 µg/m^3)	20 ppm (23,000 µg/m^3)
8-hour average	9.0 ppm (10,000 µg/m^3)	9.0 ppm (10,000 µg/m^3)
SO_2 [d]		
1-hour average (state)	0.25 ppm	0.25 ppm
1-hour average (national)	0.075 ppm	0.075 ppm
24-hour average (national)	0.04 ppm	0.04 ppm

Notes:

a) To evaluate Project impacts to ambient 1-hour NO2 levels, the analysis used the current SCAQMD 1-hour NO2 threshold (0.18 ppm) for construction impacts. To evaluate Project operational impacts, the analysis used the 1-hour NAAQS (0.10 ppm), per SCAQMD guidance (SCAQMD 2012). To attain the national standard, the 3-year average of the 98th percentile of the daily maximum 1-hour averages at a receptor must not exceed 0.10 ppm.

b) The PM_{10} and $PM_{2.5}$ thresholds are incremental thresholds; the maximum predicted impact from proposed activities (without adding background concentrations) is compared to these thresholds.

c) The CO thresholds are absolute thresholds; the maximum predicted impact from construction activities is added to the background concentration for the proposed Project vicinity and compared to the threshold.

d) To attain the SO_2 national 1-hour standard, the 3-year average of the 99th percentile of the daily maximum 1-hour averages at a receptor must not exceed 0.075 ppm.

Source: (SCAQMD 2011).

Figures

This page intentionally left blank.

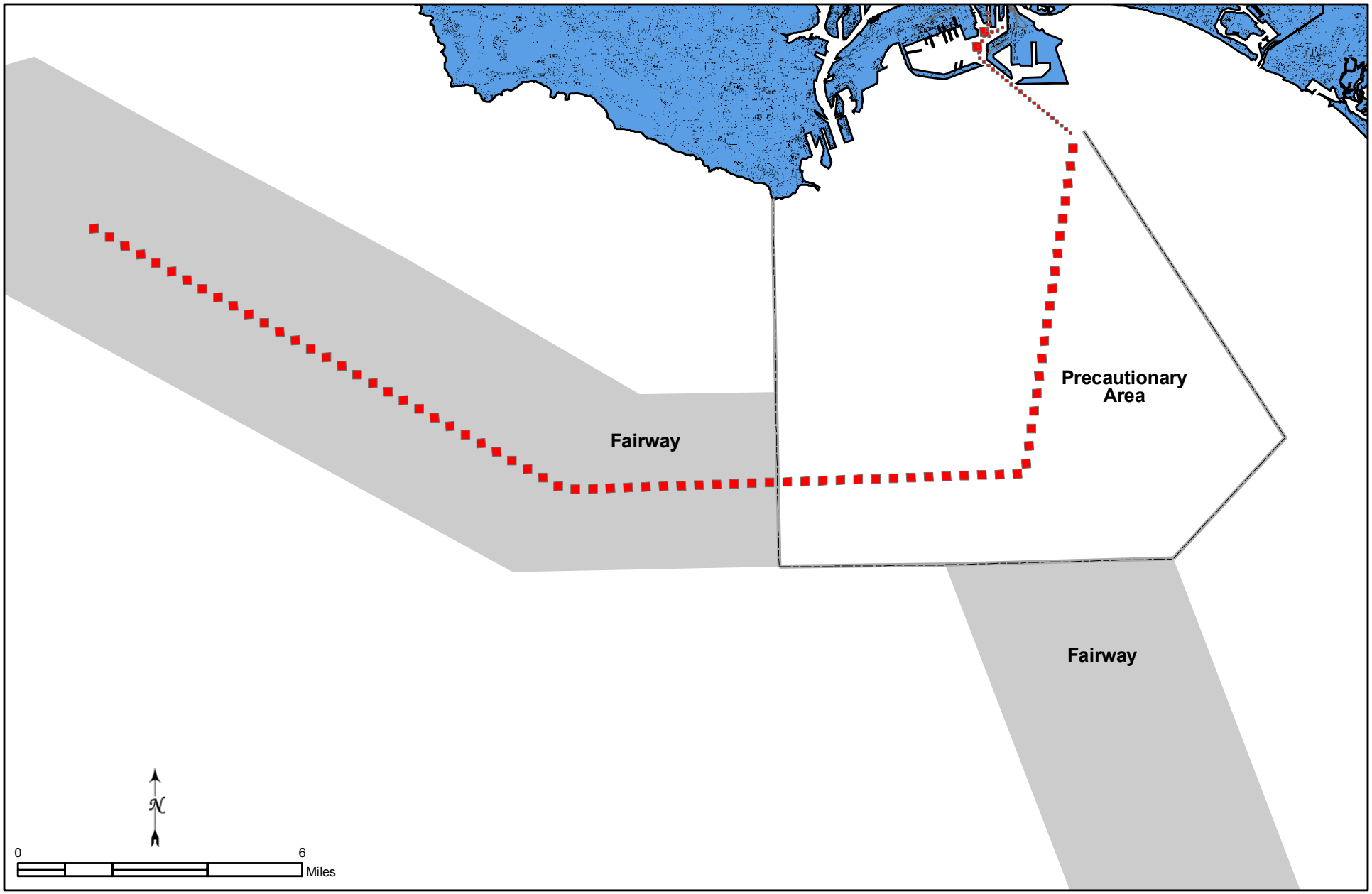


Figure A-2-1. AERMOD Representation of Ship Fairway and Precautionary Area Transit Routes

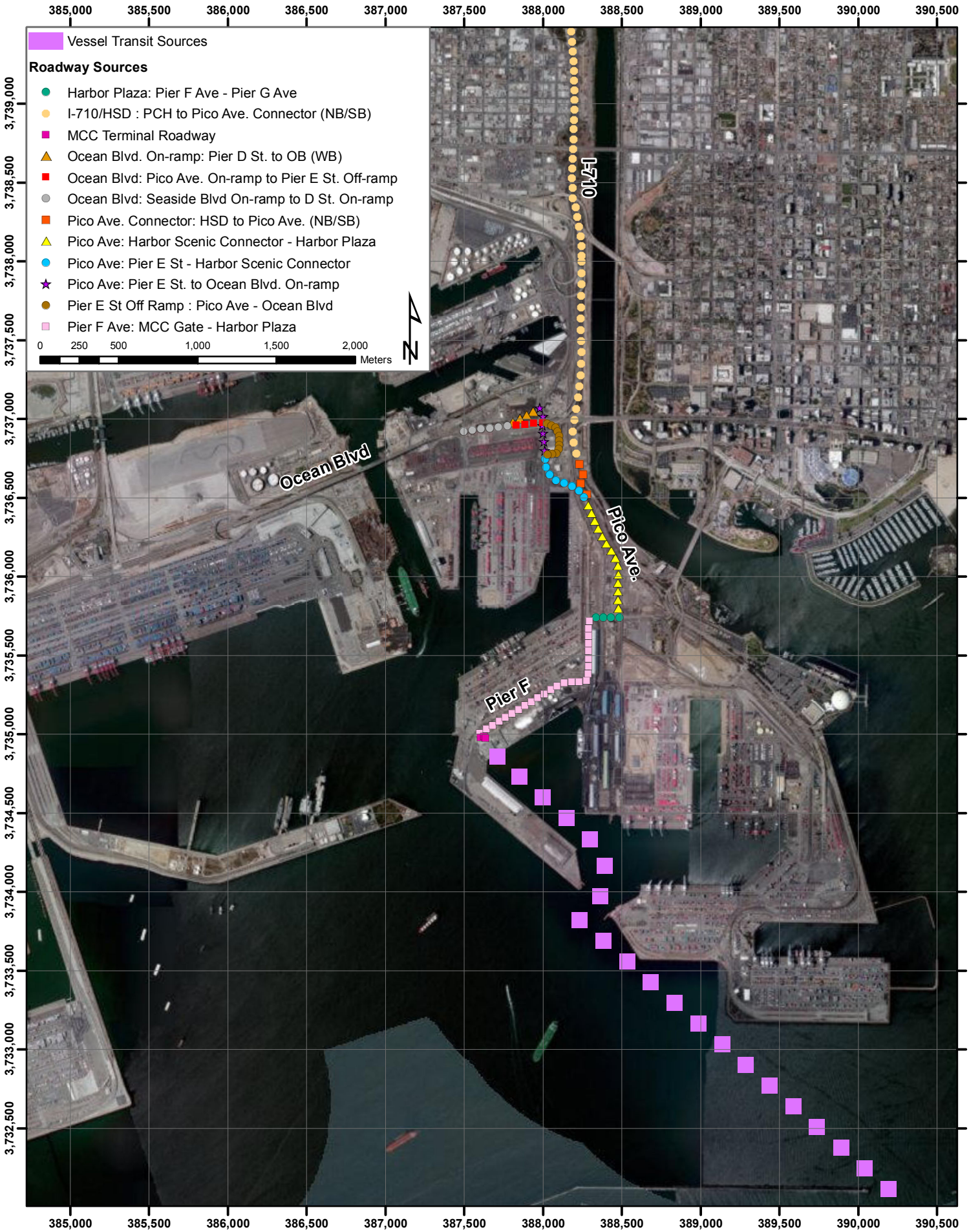


Figure A-2.2 AERMOD Vessel Habor Transit and Truck Roadway Sources

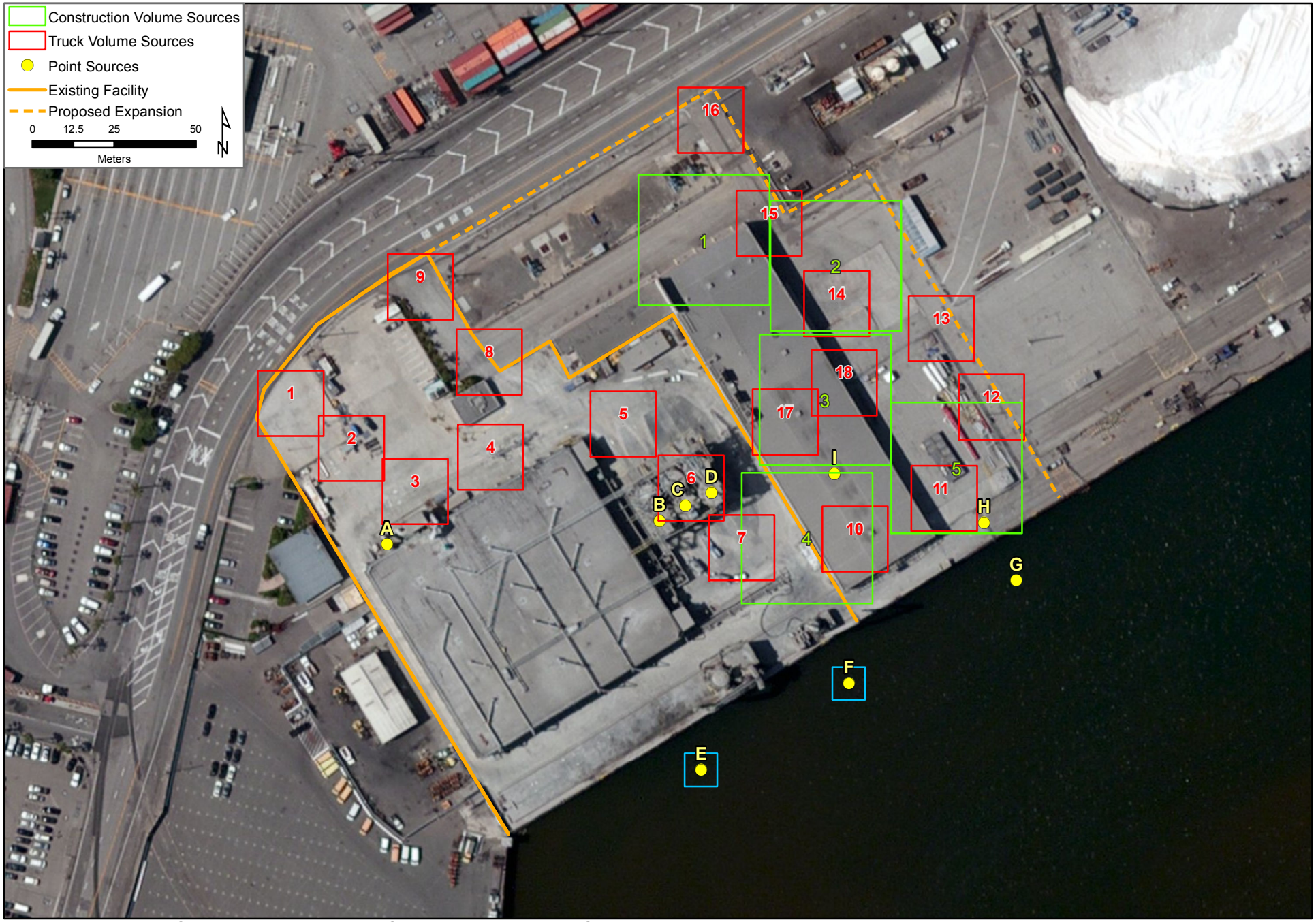


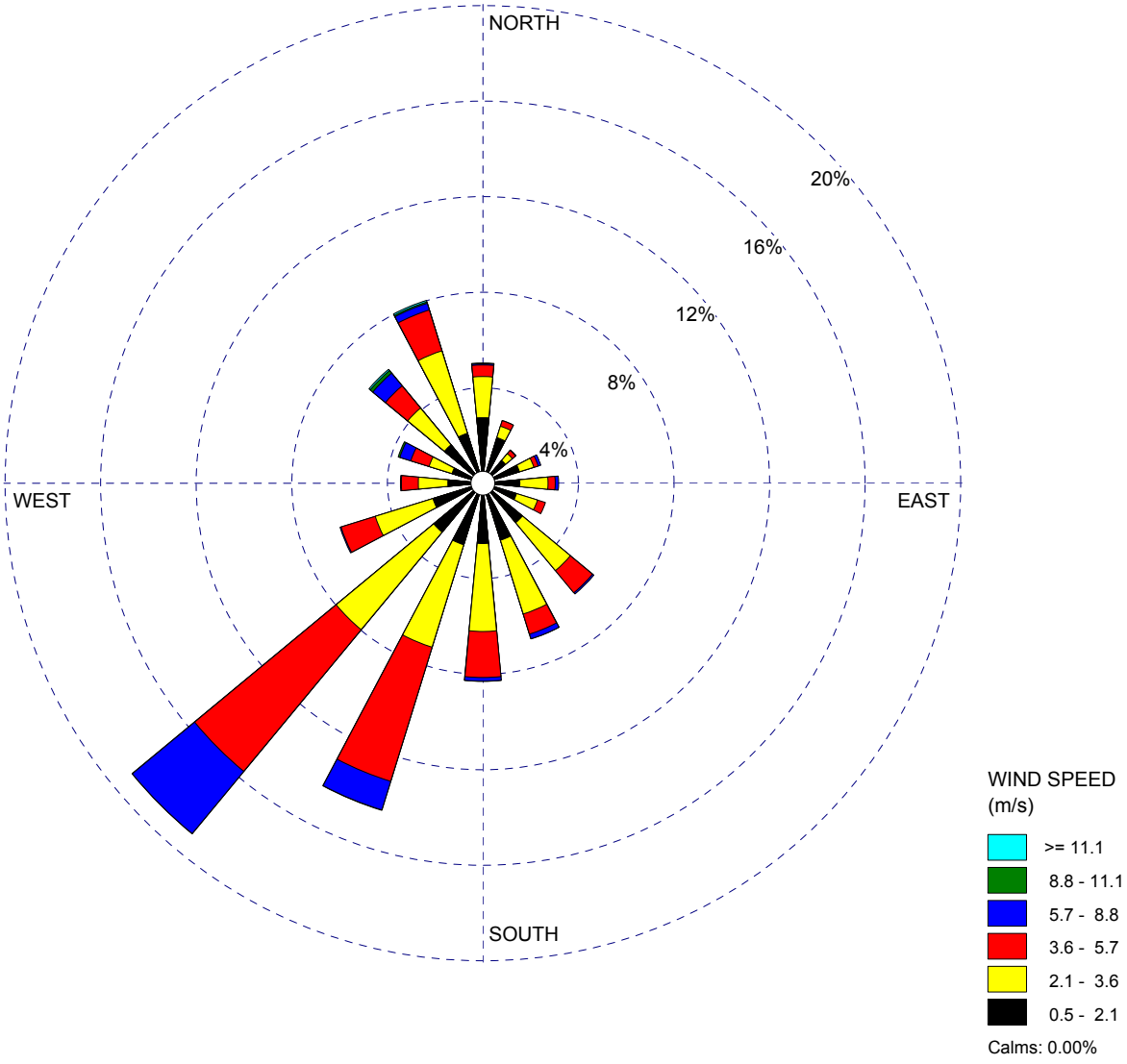
Figure A-2-3. AERMOD Vessel Berthing and On-Terminal Emission Sources.

WIND ROSE PLOT:

POLB - Gull Park
September 2006 through August 2007

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS: Met Data used for "Outer" model runs	DATA PERIOD: **Start Date: 9/1/2006 - 00:00** **End Date: 8/31/2007 - 23:00**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **0.00**	TOTAL COUNT: **8599 hrs.**	
	AVG. WIND SPEED: **3.02 m/s**	DATE: **9/9/2014**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

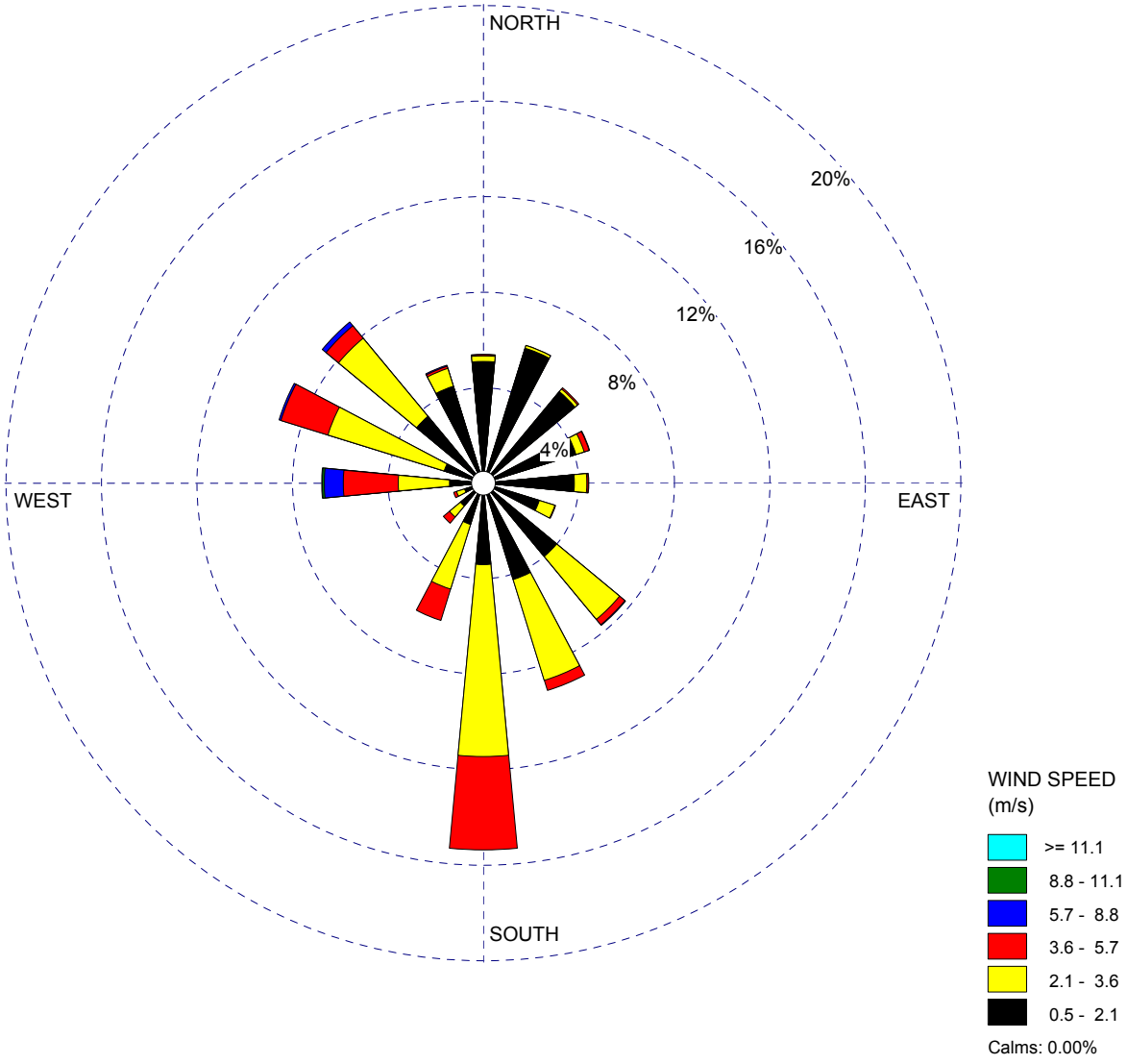
Figure A-2-4. Wind Rose of Data Used in AERMOD Modeling Analyses - POLB Gull Park Monitoring Station.

WIND ROSE PLOT:

POLB - Super Block
September 2006 through August 2007

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
Met Data used for "Inner" model runs	**Start Date: 9/1/2006 - 00:00** **End Date: 8/31/2007 - 23:00**	MODELER:	
	CALM WINDS: **0.00**	TOTAL COUNT: **8512 hrs.**	
	AVG. WIND SPEED: **2.18 m/s**	DATE: **9/9/2014**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

Figure A-2-5. Wind Rose of Data Used in AERMOD Modeling Analyses - POLB Superblock Monitoring Station.

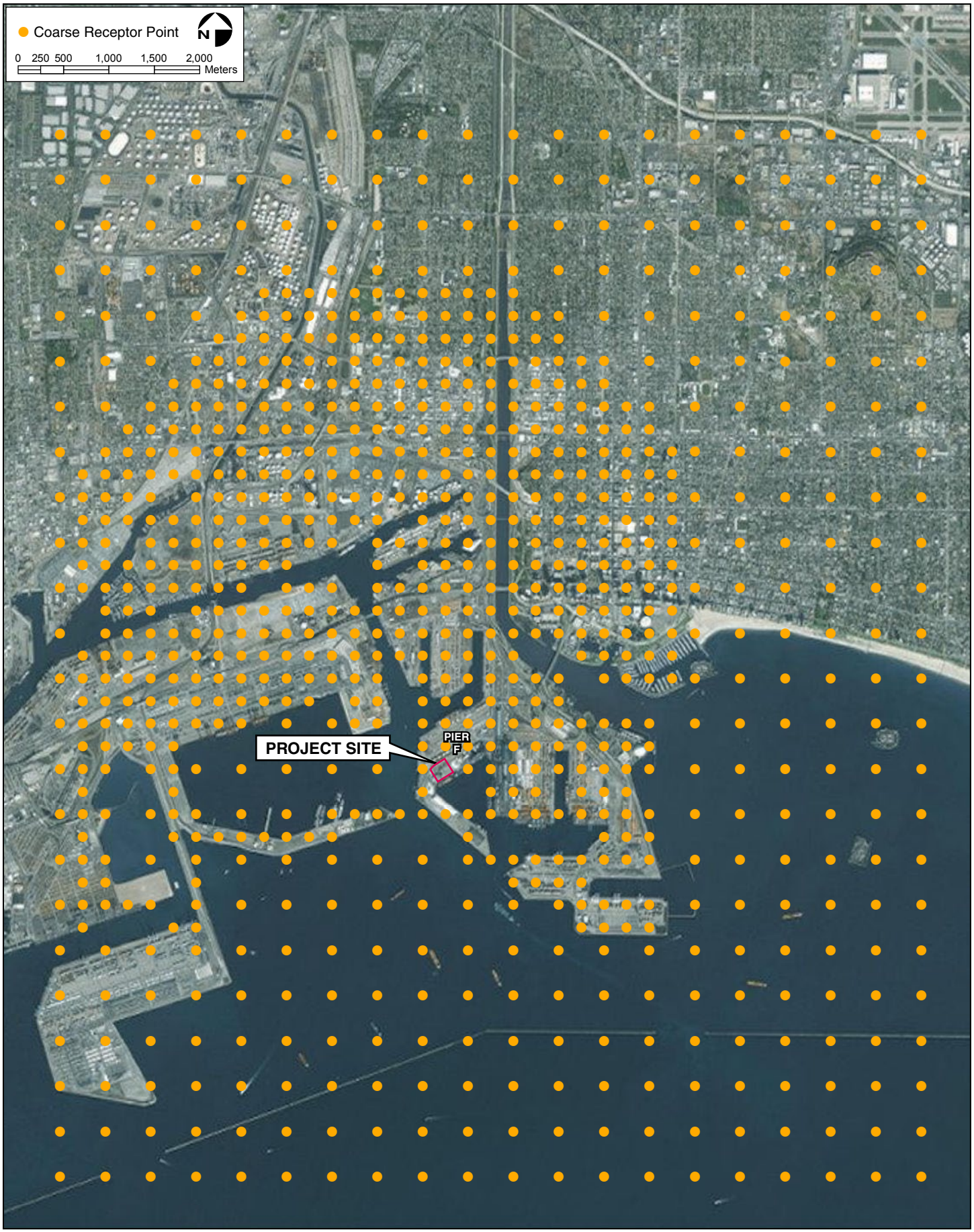


Figure A-2.5a AERMOD Coarse Receptor Points

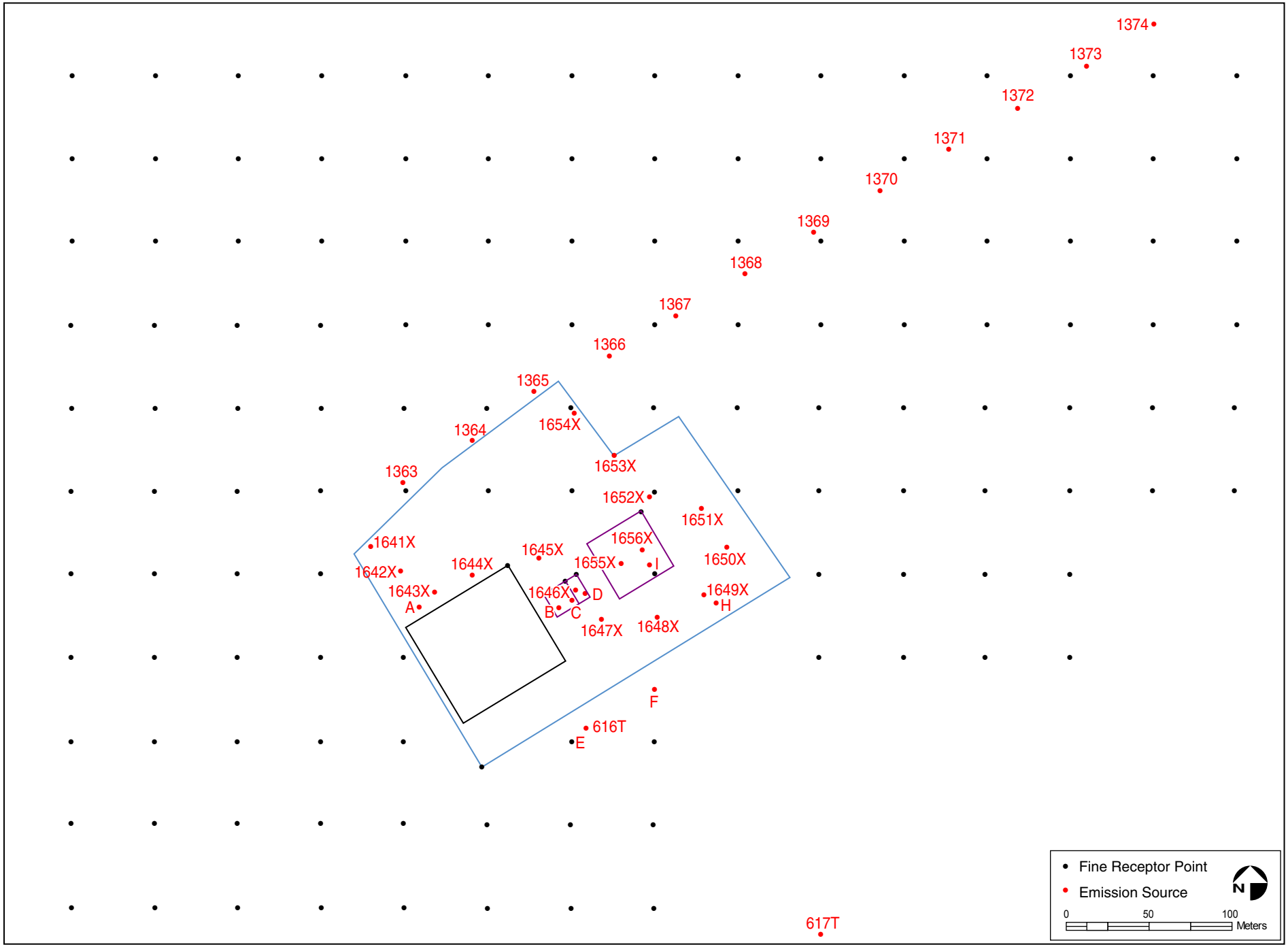


Figure A-2.5b AERMOD Fine Receptor Points

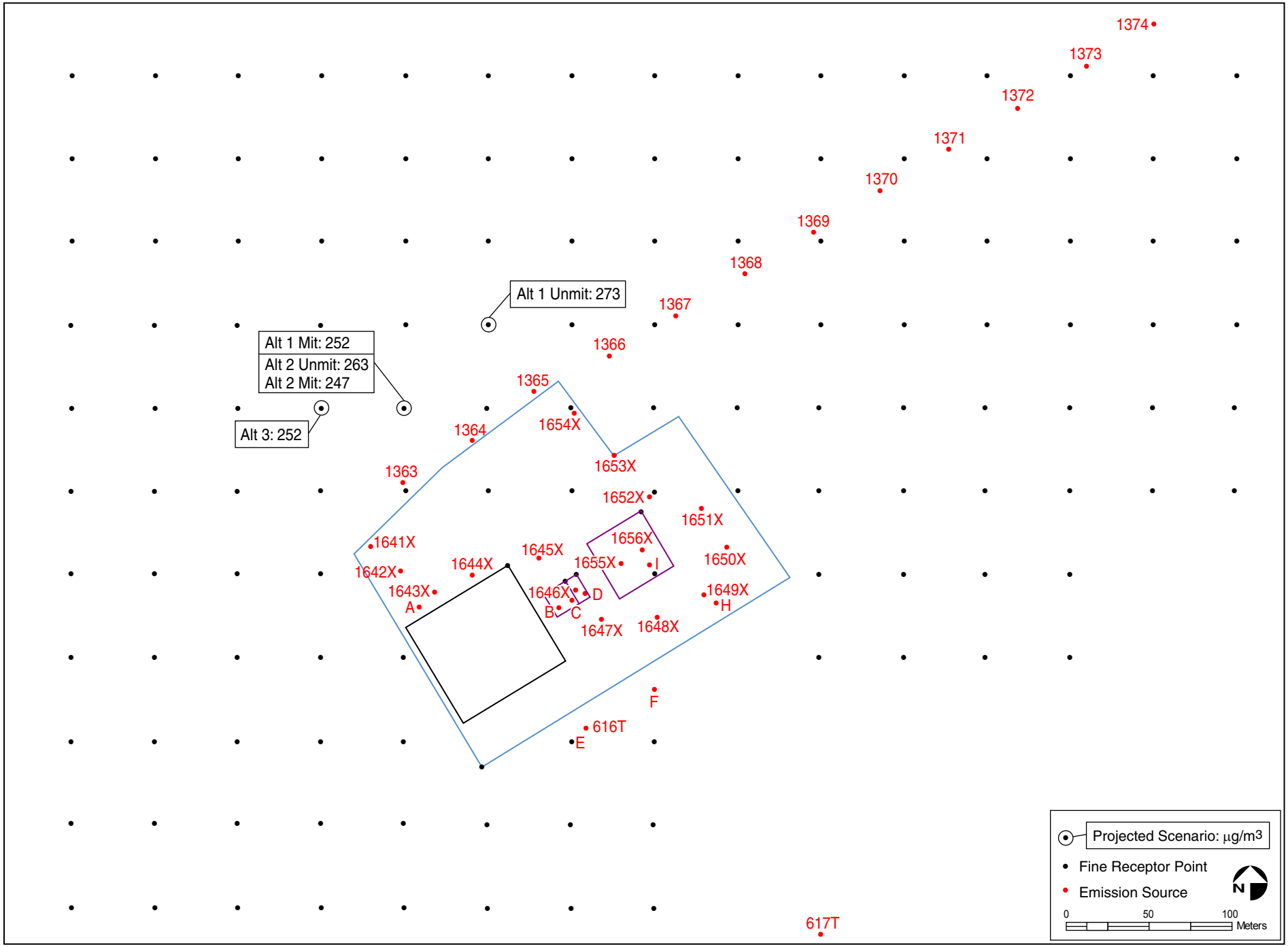


Figure A-2.5c Maximum 1-Hour NO_2 Impacts by Project Scenario

Figure A-2-6. Maximum 24-Hr PM10 Mitigated Project minus CEQA Baseline Impacts (ug/m3).

Figure A-2-7. Maximum 24-Hr PM2.5 Mitigated Project minus CEQA Baseline Impacts (ug/m3)

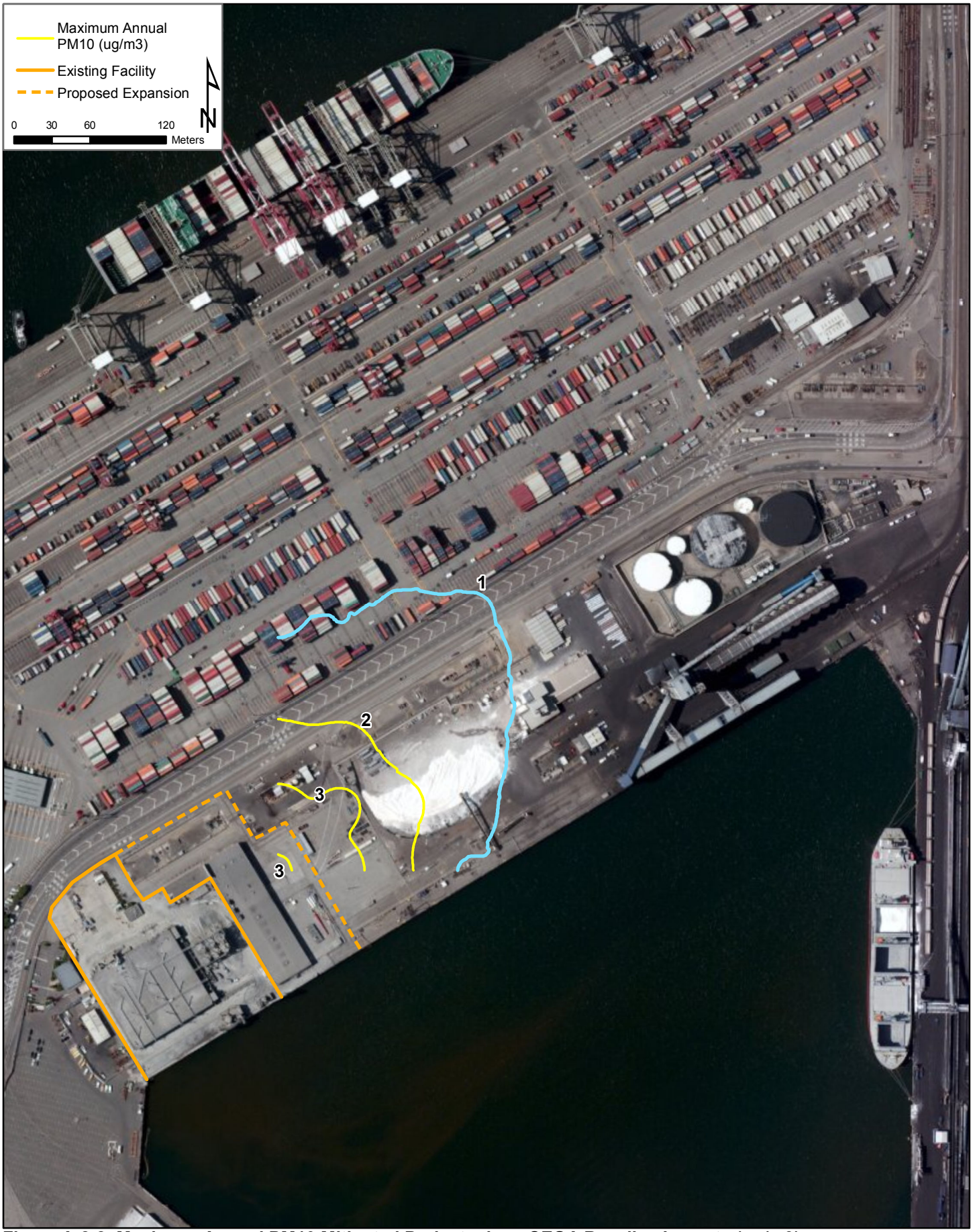


Figure A-2-8. Maximum Annual PM10 Mitigated Project minus CEQA Baseline Impacts (ug/m3)

Figure A-2-9. Maximum 24-Hr PM10 Reduced Throughput Alternative minus CEQA Baseline Impacts (ug/m3)

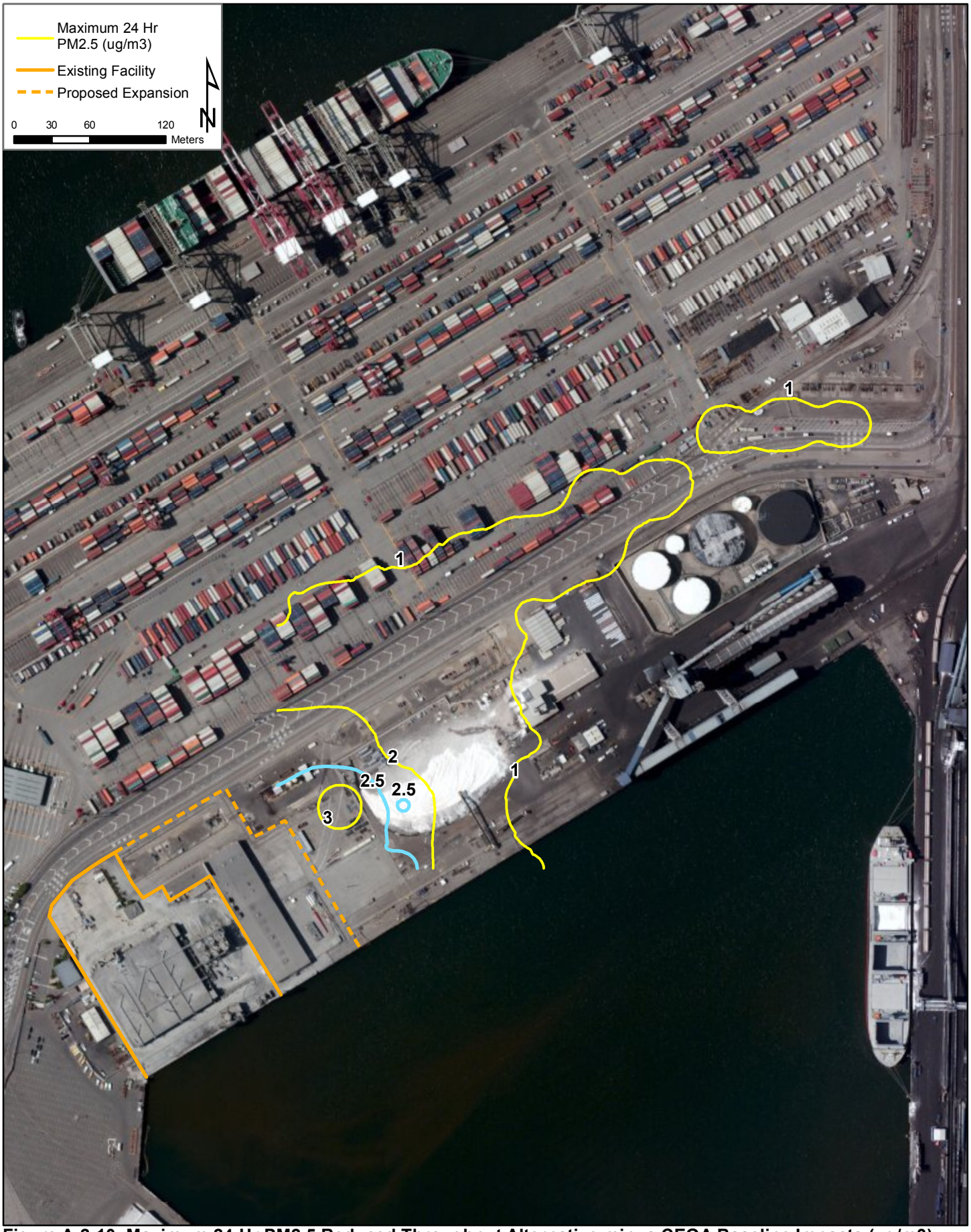


Figure A-2-10. Maximum 24-Hr PM2.5 Reduced Throughput Alternative minus CEQA Baseline Impacts (ug/m3)

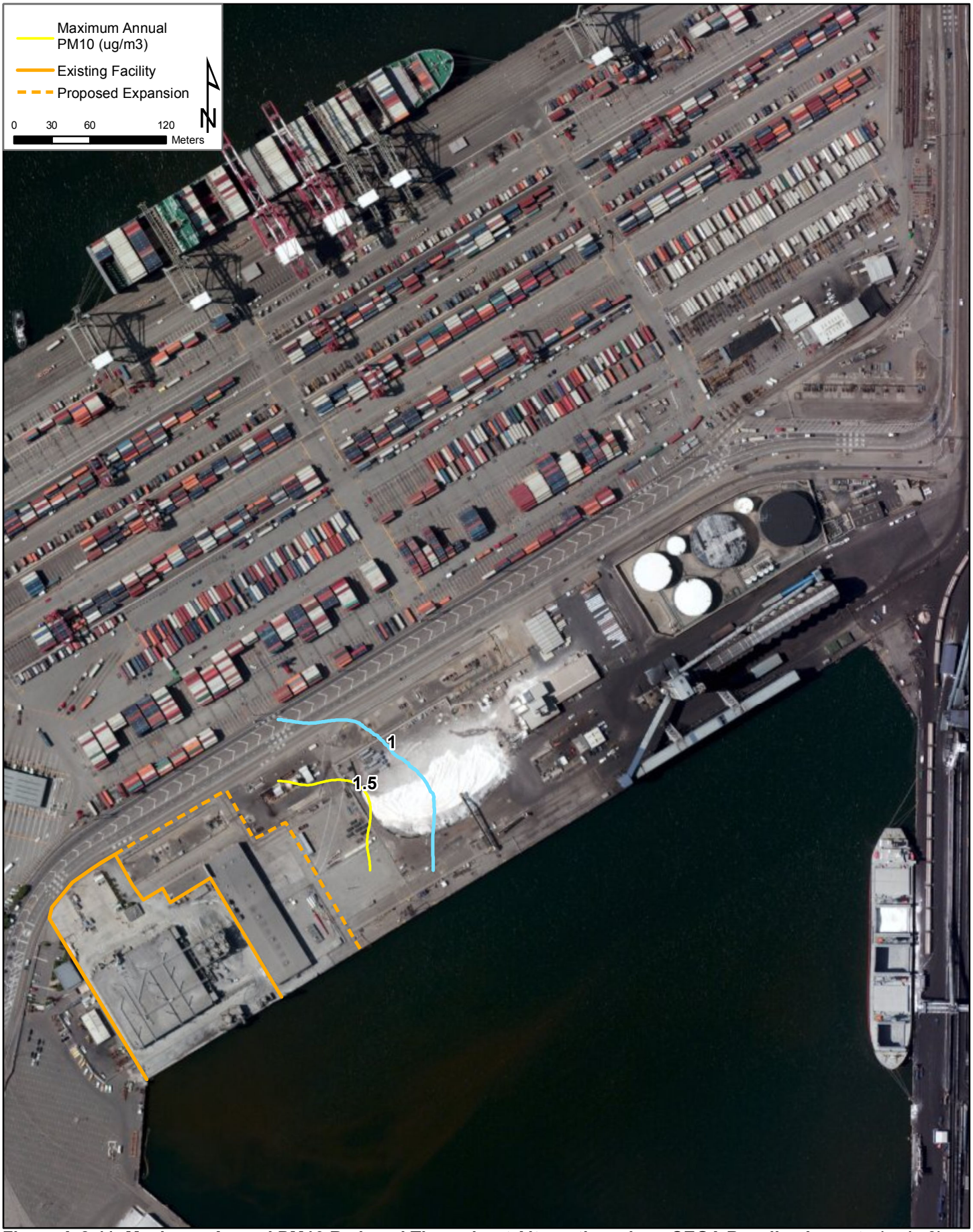


Figure A-2-11. Maximum Annual PM10 Reduced Throughput Alternative minus CEQA Baseline Impacts (ug/m3)

Figure A-2-12. Maximum 24-Hour PM10 No Project minus CEQA Baseline Impacts (ug/m3)

Figure A-2-13. Maximum Annual PM10 No Project minus CEQA Baseline Impacts (ug/m3)

Appendix A.2.1
Criteria Pollutant Modeling Emission Calculations

This page intentionally left blank.

Criteria Pollutant Dispersion Modeling Analyses Table of Contents

Table A.2.1-1 CEQA Baseline Operational Hourly Emissions - Peak Day Analysis - POLB MCC Project

Source Activity	*Pounds per Hour*	
	PM10	*PM2.5*
OGV - Fairway Transit	4.18	3.34
OGV - Precautionary Area Transit	1.35	1.08
OGV - Harbor Transit	0.52	0.41
OGV - Docking	0.30	0.24
OGV - Hoteling	0.16	0.13
Tugs - Harbor Transit	0.46	0.43
Tugs - Docking	0.15	0.14
Kovaco Cement Unloader	0.28	0.19
vanAalst Cement Unloader	0.01	0.01
Payloaders		
Storage Warehouse Dust Collector DC-01	0.38	0.25
Truck Loading Dust Collector DC-02	0.06	0.04
Truck Loading Dust Collector DC-03	0.06	0.04
Truck Loading Dust Collector DC-21	0.06	0.04
Truck Loading - Dust	0.06	0.04
Trucks - On-Terminal Idling (1)	0.011	0.010
Trucks - On-Terminal Driving	0.08	0.05
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.26	0.17
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.02	0.01
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.08	0.06
Harbor Plaza: Pier F Ave - Pier G Ave	0.02	0.01
Pier F Ave: MCC Gate - Harbor Plaza	0.14	0.09
Pico Ave: Pier E St to Harbor Scenic Connector	0.01	0.01
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.00	0.00
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.00	0.00
Ocean Blvd: West of D St. On-ramp	0.008	0.005
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.00	0.00
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.00	0.00
Total	**8.656**	**6.812**

Notes: (1) Assigned to the Truck Loading Source

Table A.2.1-2 CEQA Baseline Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	Volume Source Pounds per Hour PM10	Volume Source Pounds per Hour PM2.5
OGV - Fairway Transit								
	719-761	200	40,000	43	1,720,000	0.02	0.10	0.08
Subtotals			**-**	**43**	**1,720,000**	**-**	**4.18**	**3.34**
OGV - Precautionary Area Transit								
	686-718	200	40,000	33	1,320,000	0.03	0.04	0.03
Subtotals			**-**	**33**	**1,320,000**	**-**	**1.35**	**1.08**
OGV - Harbor Transit								
	(1,344)	100	10,000	20	200,000	0.05	0.03	0.02
Subtotals			**-**	**20**	**-**	**-**	**0.52**	**0.41**
OGV - Docking								
	616	100	10,000	1	10,000	1.00	0.30	0.24
Subtotals			**-**	**1**	**-**	**-**	**0.30**	**0.24**
OGV - Hoteling								
		NA	NA	1	NA	1.00	0.16	0.13
Subtotals			**-**	**1**	**-**	**-**	**0.16**	**0.13**
Tugs - Harbor Transit								
		100	10,000	20	200,000	0.05	0.02	0.02
Subtotals			**-**	**20**	**-**	**-**	**0.46**	**0.43**
Tugs - Docking								
		100	40,000	1	40,000	1.00	0.15	0.14
Subtotals			**-**	**1**	**40,000**	**-**	**0.15**	**0.14**
Kovaco Cement Unloader								
		10	100	1	100	1.00	0.28	0.19
Subtotals			**-**	**1**	**100**	**-**	**0.28**	**0.19**
vanAalst Cement Unloader								
		10	100	1	100	1.00	0.01	0.01
Subtotals			**-**	**1**	**100**	**-**	**0.01**	**0.01**
Payloaders								
		10	100	2	200	0.50	-	-
Subtotals			**-**	**2**	**200**	**-**	**-**	**-**
Kovaco Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.28	0.19
Subtotals			**-**	**1**	**100**	**-**	**0.28**	**0.19**
vanAalst Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.01	0.01
Subtotals			**-**	**1**	**100**	**-**	**0.01**	**0.01**
Storage Warehouse Dust Collector DC-01								
		NA	NA	1	NA	1.00	0.38	0.25
Subtotals			**-**	**1**	**-**	**-**	**0.38**	**0.25**
Truck Loading Dust Collector DC-02								
		NA	NA	1	NA	1.00	0.06	0.04
Subtotals			**-**	**1**	**-**	**-**	**0.06**	**0.04**
Truck Loading Dust Collector DC-03								
		NA	NA	1	NA	1.00	0.06	0.04
Subtotals			**-**	**1**	**-**	**-**	**0.06**	**0.04**
Truck Loading Dust Collector DC-21								
		NA	NA	1	NA	1.00	0.06	0.04
Subtotals			**-**	**1**	**-**	**-**	**0.06**	**0.04**
Truck Loading - Dust								
		20	400	1	400	1.00	0.06	0.04
Subtotals			**-**	**1**	**400**	**-**	**0.06**	**0.04**
Trucks - On-Terminal Idling (1)								
		20	400	1	400	1.00	0.01	0.01
Subtotals			**-**	**1**	**400**	**-**	**0.01**	**0.01**
Truck Loading Dust + On-Terminal Idling								
		20	400	1	400	1.00	0.07	0.05
Subtotals			**-**	**1**	**400**	**-**	**0.07**	**0.05**
Trucks - On-Terminal Driving								
		20	400	8	3,200	0.13	0.01	0.01
Subtotals			**-**	**8**	**3,200**	**-**	**0.08**	**0.05**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)								
		31	961	43	41,323	0.02	0.01	0.00
Subtotals			**-**	**43**	**41,323**	**-**	**0.26**	**0.17**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)								
		36	1,296	4	5,184	0.25	0.00	0.00
Subtotals			**-**	**4**	**5,184**	**-**	**0.02**	**0.01**
Pico Ave: Harbor Scenic Connector - Harbor Plaza								
		27	400	14	5,600	0.07	0.01	0.00
Subtotals			**-**	**14**	**5,600**	**-**	**0.08**	**0.06**
Harbor Plaza: Pier F Ave - Pier G Ave								
		24	400	4	5,600	0.25	0.00	0.00
Subtotals			**-**	**4**	**5,600**	**-**	**0.02**	**0.01**
Pier F Ave: MCC Gate - Harbor Plaza								

Table A.2.1-2 CEQA Baseline Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Pounds per Hour*	
							PM10	*PM2.5*
		24	400	25	5,600	0.04	0.01	0.00
Subtotals			**-**	**25**	**5,600**	**-**	**0.14**	**0.09**
Pico Ave: Pier E St to Harbor Scenic Connector								
		27	729	8	10,206	0.13	0.00	0.00
Subtotals			**-**	**8**	**10,206**	**-**	**0.01**	**0.01**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp								
		27	729	6	2,916	0.17	0.00	0.00
Subtotals			**-**	**6**	**2,916**	**-**	**0.00**	**0.00**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)								
		25	625	4	15,625	0.25	0.00	0.00
Subtotals			**-**	**4**	**15,625**	**-**	**0.00**	**0.00**
Ocean Blvd: West of D St. On-ramp								
		28	784	6	6,272	0.17	0.0013	0.0009
Subtotals			**-**	**6**	**6,272**	**-**	**0.01**	**0.01**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp								
		28	784	4	4,704	0.25	0.00	0.00
Subtotals			**-**	**4**	**4,704**	**-**	**0.00**	**0.00**
Pier E St Off Ramp : Pico Ave - Ocean Blvd								
		14	196	11	784	0.09	0.00	0.00
Subtotals			**-**	**11**	**784**	**-**	**0.00**	**0.00**
Totals - minus double counting of combined sources							**8.656**	**6.812**

Table A.2.1-3 CEQA Baseline Operational Hourly Emissions - Annual Analysis - POLB MCC Project

Source Activity	*Pounds per Hour PM10*
OGV - Fairway Transit	0.0917
OGV - Precautionary Area Transit	0.0121
OGV - Harbor Transit	0.0039
OGV - Docking	0.0032
OGV - Hoteling	0.0726
Tugs - Harbor Transit	0.004
Tugs - Docking	0.001
Kovaco Cement Unloader	0.109
vanAalst Cement Unloader	0.003
Payloaders	0.0001
Storage Warehouse Dust Collector DC-01	0.380
Truck Loading Dust Collector DC-02	0.060
Truck Loading Dust Collector DC-03	0.060
Truck Loading Dust Collector DC-21	0.060
Truck Loading - Dust	0.032
Trucks - On-Terminal Idling (1)	0.006
Trucks - On-Terminal Driving	0.041
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.056
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.004
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.018
Harbor Plaza: Pier F Ave - Pier G Ave	0.004
Pier F Ave: MCC Gate - Harbor Plaza	0.030
Pico Ave: Pier E St to Harbor Scenic Connector	0.002
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.001
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.0004
Ocean Blvd: West of D St. On-ramp	0.002
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.0004
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.001
Total	**1.0577**

Notes: (1) Assigned to the Truck Loading Source

Table A.2.1-4 CEQA Baseline Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source PM10 Pounds/Hour*
OGV - Fairway Transit							
		200	40,000	43	1,720,000	0.02	0.0021
Subtotals			**-**	**43**	**1,720,000**	**-**	**0.0917**
OGV - Precautionary Area Transit							
		200	40,000	33	1,320,000	0.03	0.0004
Subtotals			**-**	**33**	**1,320,000**	**-**	**0.0121**
OGV - Harbor Transit							
		100	10,000	20	200,000	0.05	0.0002
Subtotals			**-**	**20**	**-**	**-**	**0.0039**
OGV - Docking							
		100	10,000	1	10,000	1.00	0.0032
Subtotals			**-**	**1**	**-**	**-**	**0.0032**
OGV - Hoteling							
		NA	NA	1	NA	1.00	0.0726
Subtotals			**-**	**1**	**-**	**-**	**0.0726**
Tugs - Harbor Transit							
		100	10,000	20	200,000	0.05	0.0002
Subtotals			**-**	**20**	**-**	**-**	**0.0036**
Tugs - Docking							
		100	40,000	1	40,000	1.00	0.0012
Subtotals			**-**	**1**	**40,000**	**-**	**0.0012**
Kovaco Cement Unloader							
		10	100	1	100	1.00	0.1089
Subtotals			**-**	**1**	**100**	**-**	**0.1089**
vanAalst Cement Unloader							
		10	100	1	100	1.00	0.0033
Subtotals			**-**	**1**	**100**	**-**	**0.0033**
Payloaders							
		10	100	2	200	0.50	0.0001
Subtotals			**-**	**2**	**200**	**-**	**0.0001**
Kovaco Cement Unloader+50%Payloaders							
		10	100	1	100	1.00	0.1090
Subtotals			**-**	**1**	**100**	**-**	**0.1090**
vanAalst Cement Unloader+50%Payloaders							
		10	100	1	100	1.00	0.0034
Subtotals			**-**	**1**	**100**	**-**	**0.0034**
Storage Warehouse Dust Collector DC-01							
		NA	NA	1	NA	1.00	0.3800
Subtotals			**-**	**1**	**-**	**-**	**0.3800**
Truck Loading Dust Collector DC-02							
		NA	NA	1	NA	1.00	0.0600
Subtotals			**-**	**1**	**-**	**-**	**0.0600**
Truck Loading Dust Collector DC-03							
		NA	NA	1	NA	1.00	0.0600
Subtotals			**-**	**1**	**-**	**-**	**0.0600**
Truck Loading Dust Collector DC-21							
		NA	NA	1	NA	1.00	0.0600
Subtotals			**-**	**1**	**-**	**-**	**0.0600**
Truck Loading - Dust							
		20	400	1	400	1.00	0.0316
Subtotals			**-**	**1**	**400**	**-**	**0.0316**
Trucks - On-Terminal Idling (1)							
		20	400	1	400	1.00	0.0060
Subtotals			**-**	**1**	**400**	**-**	**0.0060**
Truck Loading Dust + On-Terminal Idling							
		20	400	1	400	1.00	0.0376
Subtotals			**-**	**1**	**400**	**-**	**0.0376**
Trucks - On-Terminal Driving							
		20	400	8	3,200	0.13	0.0052
Subtotals			**-**	**8**	**3,200**	**-**	**0.0414**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)							
		31	961	43	41,323	0.02	0.0013
Subtotals			**-**	**43**	**41,323**	**-**	**0.0563**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)							
		36	1,296	4	5,184	0.25	0.0011
Subtotals			**-**	**4**	**5,184**	**-**	**0.0043**
Pico Ave: Harbor Scenic Connector - Harbor Plaza							
		27	400	14	5,600	0.07	0.0013
Subtotals			**-**	**14**	**5,600**	**-**	**0.0181**

Table A.2.1-4 CEQA Baseline Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source PM10 Pounds/Hour*
Harbor Plaza: Pier F Ave - Pier G Ave							
		24	400	4	5,600	0.25	0.0010
Subtotals			**-**	**4**	**5,600**	**-**	**0.0039**
Pier F Ave: MCC Gate - Harbor Plaza							
		24	400	25	5,600	0.04	0.0012
Subtotals			**-**	**25**	**5,600**	**-**	**0.0296**
Pico Ave: Pier E St to Harbor Scenic Connector							
		27	729	8	10,206	0.13	0.0002
Subtotals			**-**	**8**	**10,206**	**-**	**0.0019**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp							
		27	729	6	2,916	0.17	0.0001
Subtotals			**-**	**6**	**2,916**	**-**	**0.0007**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)							
		25	625	4	15,625	0.25	0.0001
Subtotals			**-**	**4**	**15,625**	**-**	**0.0004**
Ocean Blvd: West of D St. On-ramp							
		28	784	6	6,272	0.17	0.0003
Subtotals			**-**	**6**	**6,272**	**-**	**0.0017**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp							
		28	784	4	4,704	0.25	0.0001
Subtotals			**-**	**4**	**4,704**	**-**	**0.0004**
Pier E St Off Ramp : Pico Ave - Ocean Blvd							
		14	196	11	784	0.09	0.0001
Subtotals			**-**	**11**	**784**	**-**	**0.0007**
Totals - minus double counting of combined sources							**1.058**

Table A.2.1-5 Full Expansion Alternative Operational Hourly Emissions - Peak Day Analysis - POLB MCC Project

Source Activity	Pounds per Hour				
	TOG	CO	*NO2*	PM10	PM2.5
OGV - Fairway Transit	9.92	16.07	85.57	2.97	2.37
OGV - Precautionary Area Transit	4.41	7.22	38.37	1.35	1.08
OGV - Harbor Transit	3.02	3.46	5.97	0.52	0.41
OGV - Docking	2.02	1.80	3.27	0.30	0.24
OGV - Hoteling	0.31	0.56	0.377	0.16	0.13
Tugs - Harbor Transit	1.04	8.23	5.36	0.48	0.44
Tugs - Docking	0.35	2.74	1.79	0.16	0.15
Kovaco 1 Cement Unloader				0.04	0.03
Kovaco 2 Cement Unloader				0.04	0.03
Payloaders					
SCR Duct Burner - DOCCS (1)	0.02	0.18	0.02	0.02	0.02
Storage Warehouse Dust Collector DC-01				0.18	0.12
New Storage Silos Dust Collector				0.19	0.13
Truck Loading Dust Collector DC-02				0.04	0.03
Truck Loading Dust Collector DC-03				0.04	0.03
Truck Loading Dust Collector DC-21				0.04	0.03
Truck Loading - Dust				0.14	0.09
Trucks - On-Terminal Idling (2)	0.04	0.15	0.06	0.001	0.0005
Trucks - On-Terminal Driving	0.07	0.13	0.08	0.25	0.17
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.16	0.67	0.59	0.60	0.40
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.01	0.05	0.04	0.05	0.03
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.07	0.22	0.23	0.19	0.13
Harbor Plaza: Pier F Ave - Pier G Ave	0.02	0.05	0.05	0.04	0.03
Pier F Ave: MCC Gate - Harbor Plaza	0.11	0.36	0.37	0.31	0.21
Pico Ave: Pier E St to Harbor Scenic Connector	0.01	0.02	0.02	0.02	0.01
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.00	0.01	0.01	0.01	0.00
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.00	0.00	0.01	0.00	0.00
Ocean Blvd: West of D St. On-ramp	0.01	0.02	0.02	0.02	0.01
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.00	0.01	0.01	0.00	0.00
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.00	0.01	0.01	0.01	0.01
Total	**21.59**	**41.96**	**142.22**	**8.18**	**6.32**

Notes: (1) Assigned to the Hoteling source

(2) Assigned to the Truck Loading source

Table A.2.1-6 Full Expansion Alternative Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	Volume Source Pounds per Hour				
							TOG	CO	NO2	PM10	PM2.5
OGV - Fairway Transit											
	719-761	200	40,000	43	1,720,000	0.02	0.23	0.37	1.99	0.07	0.06
Subtotals			**-**	**43**	**1,720,000**	**-**	**9.92**	**16.07**	**85.57**	**2.97**	**2.37**
OGV - Precautionary Area Transit											
	686-718	200	40,000	33	1,320,000	0.03	0.13	0.22	1.16	0.04	0.03
Subtotals			**-**	**33**	**1,320,000**	**-**	**4.41**	**7.22**	**38.37**	**1.35**	**1.08**
OGV - Harbor Transit											
	(1,344)	100	10,000	20	200,000	0.05	0.15	0.17	0.30	0.03	0.02
Subtotals			**-**	**20**	**-**	**-**	**3.02**	**3.46**	**5.97**	**0.52**	**0.41**
OGV - Docking											
	616	100	10,000	1	10,000	1.00	2.02	1.80	3.27	0.30	0.24
Subtotals			**-**	**1**	**-**	**-**	**2.02**	**1.80**	**3.27**	**0.30**	**0.24**
OGV - Hoteling + SCR Duct Burner - DOCCS											
		NA	NA	1	NA	1.00	0.33	0.74	0.39	0.17	0.14
Subtotals			**-**	**1**	**-**	**-**	**0.33**	**0.74**	**0.39**	**0.17**	**0.14**
Tugs - Harbor Transit											
		100	10,000	20	200,000	0.05	0.05	0.41	0.27	0.02	0.02
Subtotals			**-**	**20**	**-**	**-**	**1.04**	**8.23**	**5.36**	**0.48**	**0.44**
Tugs - Docking											
		100	40,000	1	40,000	1.00	0.35	2.74	1.79	0.16	0.15
Subtotals			**-**	**1**	**40,000**	**-**	**0.35**	**2.74**	**1.79**	**0.16**	**0.15**
Kovaco 1 Cement Unloader											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Kovaco 2 Cement Unloader											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Payloaders											
		10	100	2	200	0.50	-	-	-	-	-
Subtotals			**-**	**2**	**200**	**-**	**-**	**-**	**-**	**-**	**-**
Kovaco 1 Cement Unloader+50%Payloaders											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Kovaco 2 Cement Unloader+50%Payloaders											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
SCR Duct Burner - DOCCS (1)											
		NA	NA	1	NA	1.00					
			-	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Storage Warehouse Dust Collector DC-01											
		NA	NA	1	NA	1.00	-	-	-	0.18	0.12
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.18**	**0.12**
New Storage Silos Dust Collector											
		NA	NA	1	NA	1.00	-	-	-	0.19	0.13
			-	**1**	**-**	**-**	**-**	**-**	**-**	**0.19**	**0.13**
Truck Loading Dust Collector DC-02											
		NA	NA	1	NA	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Truck Loading Dust Collector DC-03											
		NA	NA	1	NA	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Truck Loading Dust Collector DC-21											
		NA	NA	1	NA	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Truck Loading - Dust											
		20	400	1	400	1.00	-	-	-	0.14	0.09
Subtotals			**-**	**1**	**400**	**-**	**-**	**-**	**-**	**0.14**	**0.09**
Trucks - On-Terminal Idling (2)											
		20	400	1	400	1.00	0.04	0.15	0.06	0.00	0.00
Subtotals			**-**	**1**	**400**	**-**	**0.04**	**0.15**	**0.06**	**0.00**	**0.00**
Truck Loading Dust + On-Terminal Idling											
	1646X	20	400	1	400	1.00	0.026	0.088	0.038	0.084	0.057
Subtotals			**-**	**1**	**400**	**-**	**0.03**	**0.09**	**0.04**	**0.08**	**0.06**
Truck Loading Dust + On-Terminal Idling											
	1655X	20	400	1	400	1.00	0.009	0.029	0.013	0.028	0.019
Subtotals			**-**	**1**	**400**	**-**	**0.01**	**0.03**	**0.01**	**0.03**	**0.02**
Truck Loading Dust + On-Terminal Idling											
	1656X	20	400	1	400	1.00	0.009	0.029	0.013	0.028	0.019
Subtotals			**-**	**1**	**400**	**-**	**0.01**	**0.03**	**0.01**	**0.03**	**0.02**
Trucks - On-Terminal Driving											
		20	400	13	5,200	0.08	0.01	0.01	0.01	0.02	0.01
Subtotals			**-**	**13**	**5,200**	**-**	**0.07**	**0.13**	**0.08**	**0.25**	**0.17**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)											
		31	961	43	41,323	0.02	0.00	0.02	0.01	0.01	0.01
Subtotals			**-**	**43**	**41,323**	**-**	**0.16**	**0.67**	**0.59**	**0.60**	**0.40**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)											
		36	1,296	4	5,184	0.25	0.00	0.01	0.01	0.01	0.01

Table A.2.1-6 Full Expansion Alternative Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Pounds per Hour*				
							TOG	*CO*	*NO2*	PM10	PM2.5
Subtotals			**-**	**4**	**5,184**	**-**	**0.01**	**0.05**	**0.04**	**0.05**	**0.03**
Pico Ave: Harbor Scenic Connector - Harbor Plaza											
		27	400	14	5,600	0.07	0.00	0.02	0.02	0.01	0.01
Subtotals			**-**	**14**	**5,600**	**-**	**0.07**	**0.22**	**0.23**	**0.19**	**0.13**
Harbor Plaza: Pier F Ave - Pier G Ave											
		24	400	4	5,600	0.25	0.00	0.01	0.01	0.01	0.01
Subtotals			**-**	**4**	**5,600**	**-**	**0.02**	**0.05**	**0.05**	**0.04**	**0.03**
Pier F Ave: MCC Gate - Harbor Plaza											
		24	400	25	5,600	0.04	0.00	0.01	0.01	0.01	0.01
Subtotals			**-**	**25**	**5,600**	**-**	**0.11**	**0.36**	**0.37**	**0.31**	**0.21**
Pico Ave: Pier E St to Harbor Scenic Connector											
		27	729	8	10,206	0.13	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**8**	**10,206**	**-**	**0.01**	**0.02**	**0.02**	**0.02**	**0.01**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp											
		27	729	6	2,916	0.17	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**6**	**2,916**	**-**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)											
		25	625	4	15,625	0.25	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**4**	**15,625**	**-**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**
Ocean Blvd: West of D St. On-ramp											
		28	784	6	6,272	0.17	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**6**	**6,272**	**-**	**0.01**	**0.02**	**0.02**	**0.02**	**0.01**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp											
		28	784	4	4,704	0.25	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**4**	**4,704**	**-**	**0.00**	**0.01**	**0.01**	**0.00**	**0.00**
Pier E St Off Ramp : Pico Ave - Ocean Blvd											
		14	196	11	784	0.09	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**11**	**784**	**-**	**0.00**	**0.01**	**0.01**	**0.01**	**0.01**

Table A.2.1-7 Full Expansion Alternative Operational Hourly Emissions - Annual Analysis - POLB MCC Project

Source Activity	*Pounds per Hour*	
	NO2	*PM10*
OGV - Fairway Transit	14.697	0.238
OGV - Precautionary Area Transit	2.016	0.033
OGV - Harbor Transit	0.242	0.011
OGV - Docking	0.134	0.007
OGV - Hoteling	0.157	0.057
Tugs - Harbor Transit	0.179	0.010
Tugs - Docking	0.060	0.0032
Kovaco 1 Cement Unloader		0.0412
Kovaco 2 Cement Unloader		0.0412
Payloaders	0.002	0.000
SCR Duct Burner - DOCCS (1)	0.017	0.016
Storage Warehouse Dust Collector DC-01		0.176
New Storage Silos Dust Collector		0.193
Truck Loading Dust Collector DC-02		0.040
Truck Loading Dust Collector DC-03		0.040
Truck Loading Dust Collector DC-21		0.040
Truck Loading - Dust		0.098
Trucks - On-Terminal Idling (2)	0.045	0.0004
Trucks - On-Terminal Driving	0.057	0.178
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.171	0.174
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.012	0.013
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.065	0.055
Harbor Plaza: Pier F Ave - Pier G Ave	0.015	0.012
Pier F Ave: MCC Gate - Harbor Plaza	0.106	0.090
Pico Ave: Pier E St to Harbor Scenic Connector	0.007	0.006
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.003	0.002
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.001	0.001
Ocean Blvd: West of D St. On-ramp	0.006	0.005
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.002	0.001
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.003	0.002
Total	**17.997**	**1.584**

Notes: (1) Assigned to the Hoteling source

(2) Assigned to the Truck Loading source

Table A.2.1-8 Full Expansion Alternative Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	Volume Source Lbs/Hour NO2	PM10
OGV - Fairway Transit								
	719-761	200	40,000	43	1,720,000	0.02	0.342	0.006
Subtotals			**-**	**43**	**1,720,000**	**-**	**14.697**	**0.238**
OGV - Precautionary Area Transit								
	686-718	200	40,000	33	1,320,000	0.03	0.061	0.001
Subtotals			**-**	**33**	**1,320,000**	**-**	**2.016**	**0.033**
OGV - Harbor Transit								
	(1,344)	100	10,000	20	200,000	0.05	0.012	0.001
Subtotals			**-**	**20**	**-**	**-**	**0.242**	**0.011**
OGV - Docking								
	616	100	10,000	1	10,000	1.00	0.134	0.007
Subtotals			**-**	**1**	**-**	**-**	**0.134**	**0.007**
OGV Hoteling + SCR Duct Burner = DOCCS Stack								
	H	NA	NA	1	NA	1.00	0.175	0.073
Subtotals			**-**	**1**	**-**	**-**	**0.175**	**0.073**
Tugs - Harbor Transit								
		100	10,000	20	200,000	0.05	0.009	0.000
Subtotals			**-**	**20**	**-**	**-**	**0.179**	**0.010**
Tugs - Docking								
		100	40,000	1	40,000	1.00	0.060	0.003
Subtotals			**-**	**1**	**40,000**	**-**	**0.060**	**0.003**
Kovaco 1 Cement Unloader								
		10	100	1	100	1.00	-	0.041
Subtotals			**-**	**1**	**100**	**-**	**-**	**0.041**
Kovaco 2 Cement Unloader								
		10	100	1	100	1.00	-	0.041
Subtotals			**-**	**1**	**100**	**-**	**-**	**0.041**
Payloaders								
		10	100	2	200	0.50	0.001	0.000
Subtotals			**-**	**2**	**200**	**-**	**0.002**	**0.000**
Kovaco 1 Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.001	0.041
Subtotals			**-**	**1**	**100**	**-**	**0.001**	**0.041**
Kovaco 2 Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.001	0.041
Subtotals			**-**	**1**	**100**	**-**	**0.001**	**0.041**
SCR Duct Burner - DOCCS (1)								
		NA	NA	1	NA	1.00	0.017	0.016
			-	**1**	**-**	**-**	**0.017**	**0.016**
Storage Warehouse Dust Collector DC-01								
		NA	NA	1	NA	1.00	-	0.176
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.176**
New Storage Silos Dust Collector								
		NA	NA	1	NA	1.00	-	0.193
			-	**1**	**-**	**-**	**-**	**0.193**
Truck Loading Dust Collector DC-02								
		NA	NA	1	NA	1.00	-	0.040
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.040**
Truck Loading Dust Collector DC-03								
		NA	NA	1	NA	1.00	-	0.040
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.040**
Truck Loading Dust Collector DC-21								
		NA	NA	1	NA	1.00	-	0.040
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.040**
Truck Loading - Dust								
		20	400	1	400	1.00	-	0.098
Subtotals			**-**	**1**	**400**	**-**	**-**	**0.098**
Trucks - On-Terminal Idling (2)								
		20	400	1	400	1.00	0.045	0.0004
Subtotals			**-**	**1**	**400**	**-**	**0.045**	**0.000**
Truck Loading Dust + On-Terminal Idling								
	1646X	20	400	1	400	1.00	0.027	0.059
Subtotals			**-**	**1**	**400**	**-**	**0.027**	**0.059**
Truck Loading Dust + On-Terminal Idling								
	1655X	20	400	1	400	1.00	0.009	0.020
Subtotals			**-**	**1**	**400**	**-**	**0.009**	**0.020**
Truck Loading Dust + On-Terminal Idling								
	1656X	20	400	1	400	1.00	0.009	0.020
Subtotals			**-**	**1**	**400**	**-**	**0.009**	**0.020**
Trucks - On-Terminal Driving								
		20	400	13	5,200	0.08	0.004	0.014

Table A.2.1-8 Full Expansion Alternative Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Lbs/Hour*	
							NO2	PM10
Subtotals			**-**	**13**	**5,200**	**-**	**0.057**	**0.178**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)								
		31	961	43	41,323	0.02	0.004	0.004
Subtotals			**-**	**43**	**41,323**	**-**	**0.171**	**0.174**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)								
		36	1,296	4	5,184	0.25	0.003	0.003
Subtotals			**-**	**4**	**5,184**	**-**	**0.012**	**0.013**
Pico Ave: Harbor Scenic Connector - Harbor Plaza								
		27	400	14	5,600	0.07	0.005	0.004
Subtotals			**-**	**14**	**5,600**	**-**	**0.065**	**0.055**
Harbor Plaza: Pier F Ave - Pier G Ave								
		24	400	4	5,600	0.25	0.004	0.003
Subtotals			**-**	**4**	**5,600**	**-**	**0.015**	**0.012**
Pier F Ave: MCC Gate - Harbor Plaza								
		24	400	25	5,600	0.04	0.004	0.004
Subtotals			**-**	**25**	**5,600**	**-**	**0.106**	**0.090**
Pico Ave: Pier E St to Harbor Scenic Connector								
		27	729	8	10,206	0.13	0.001	0.001
Subtotals			**-**	**8**	**10,206**	**-**	**0.007**	**0.006**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp								
		27	729	6	2,916	0.17	0.000	0.000
Subtotals			**-**	**6**	**2,916**	**-**	**0.003**	**0.002**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)								
		25	625	4	15,625	0.25	0.000	0.000
Subtotals			**-**	**4**	**15,625**	**-**	**0.001**	**0.001**
Ocean Blvd: West of D St. On-ramp								
		28	784	6	6,272	0.17	0.001	0.001
Subtotals			**-**	**6**	**6,272**	**-**	**0.006**	**0.005**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp								
		28	784	4	4,704	0.25	0.000	0.000
Subtotals			**-**	**4**	**4,704**	**-**	**0.002**	**0.001**
Pier E St Off Ramp : Pico Ave - Ocean Blvd								
		14	196	11	784	0.09	0.000	0.000
Subtotals			**-**	**11**	**784**	**-**	**0.003**	**0.002**

Table A.2.1-9 Reduced Expansion Alternative Operational Hourly Emissions - Peak Day Analysis - POLB MCC Project

Source Activity	*Pounds per Hour*				
	TOG	*CO*	*NO2*	*PM10*	*PM2.5*
OGV - Fairway Transit	9.92	16.07	85.57	2.97	2.37
OGV - Precautionary Area Transit	4.41	7.22	38.37	1.35	1.08
OGV - Harbor Transit	3.02	3.46	5.97	0.52	0.41
OGV - Docking	2.02	1.80	3.27	0.30	0.24
OGV - Hoteling	0.31	0.56	0.38	0.16	0.13
Tugs - Harbor Transit	1.04	8.23	5.36	0.48	0.44
Tugs - Docking	0.35	2.74	1.79	0.16	0.15
Kovaco 1 Cement Unloader				0.04	0.03
Kovaco 2 Cement Unloader				0.04	0.03
Payloaders					
SCR Duct Burner - DOCCS (1)	0.02	0.18	0.02	0.02	0.02
Storage Warehouse Dust Collector DC-01				0.18	0.12
New Storage Silos Dust Collector				0.19	0.13
Truck Loading Dust Collector DC-02				0.04	0.03
Truck Loading Dust Collector DC-03				0.04	0.03
Truck Loading Dust Collector DC-21				0.04	0.03
Truck Loading - Dust				0.11	0.08
Trucks - On-Terminal Idling (2)	0.03	0.12	0.05	0.0004	0.0004
Trucks - On-Terminal Driving	0.05	0.10	0.06	0.20	0.14
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.13	0.55	0.49	0.49	0.33
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.01	0.04	0.03	0.04	0.03
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.06	0.18	0.18	0.16	0.10
Harbor Plaza: Pier F Ave - Pier G Ave	0.01	0.04	0.04	0.03	0.02
Pier F Ave: MCC Gate - Harbor Plaza	0.09	0.29	0.30	0.26	0.17
Pico Ave: Pier E St to Harbor Scenic Connector	0.01	0.02	0.02	0.02	0.01
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.00	0.01	0.01	0.01	0.00
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.00	0.00	0.00	0.00	0.00
Ocean Blvd: West of D St. On-ramp	0.01	0.02	0.02	0.01	0.01
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.00	0.00	0.00	0.00	0.00
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.00	0.01	0.01	0.01	0.00
Total	**21.49**	**41.65**	**141.94**	**7.87**	**6.12**

Notes: (1) Assigned to the Hoteling source

(2) Assigned to the Truck Loading source

Table A.2.1-10 Reduced Expansion Alternative Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Pounds per Hour*				
							TOG	*CO*	*NO2*	PM10	PM2.5
OGV - Fairway Transit											
		200	40,000	43	1,720,000	0.02	0.23	0.37	1.99	0.07	0.06
Subtotals			**-**	**43**	**1,720,000**	**-**	**9.92**	**16.07**	**85.57**	**2.97**	**2.37**
OGV - Precautionary Area Transit											
		200	40,000	33	1,320,000	0.03	0.13	0.22	1.16	0.04	0.03
Subtotals			**-**	**33**	**1,320,000**	**-**	**4.41**	**7.22**	**38.37**	**1.35**	**1.08**
OGV - Harbor Transit											
		100	10,000	20	200,000	0.05	0.15	0.17	0.30	0.03	0.02
Subtotals			**-**	**20**	**-**	**-**	**3.02**	**3.46**	**5.97**	**0.52**	**0.41**
OGV - Docking											
		100	10,000	1	10,000	1.00	2.02	1.80	3.27	0.30	0.24
Subtotals			**-**	**1**	**-**	**-**	**2.02**	**1.80**	**3.27**	**0.30**	**0.24**
OGV Hoteling + SCR Duct Burner = DoCCS Stack											
	H	NA	NA	1	NA	1.00	0.33	0.74	0.39	0.17	0.14
Subtotals			**-**	**1**	**-**	**-**	**0.33**	**0.74**	**0.39**	**0.17**	**0.14**
Tugs - Harbor Transit											
		100	10,000	20	200,000	0.05	0.05	0.41	0.27	0.02	0.02
Subtotals			**-**	**20**	**-**	**-**	**1.04**	**8.23**	**5.36**	**0.48**	**0.44**
Tugs - Docking											
		100	40,000	1	40,000	1.00	0.35	2.74	1.79	0.16	0.15
Subtotals			**-**	**1**	**40,000**	**-**	**0.35**	**2.74**	**1.79**	**0.16**	**0.15**
Kovaco 1 Cement Unloader											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Kovaco 2 Cement Unloader											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Payloaders											
		10	100	2	200	0.50	-	-	-	-	-
Subtotals			**-**	**2**	**200**	**-**	**-**	**-**	**-**	**-**	**-**
Kovaco 1 Cement Unloader+50%Payloaders											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Kovaco 2 Cement Unloader+50%Payloaders											
		10	100	1	100	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
SCR Duct Burner - DOCCS (1)											
	H	NA	NA	1	NA	1.00					
			-	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Storage Warehouse Dust Collector DC-01											
		NA	NA	1	NA	1.00	-	-	-	0.18	0.12
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.18**	**0.12**
New Storage Silos Dust Collector											
		NA	NA	1	NA	1.00	-	-	-	0.19	0.13
			-	**1**	**-**	**-**	**-**	**-**	**-**	**0.19**	**0.13**
Truck Loading Dust Collector DC-02											
		NA	NA	1	NA	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Truck Loading Dust Collector DC-03											
		NA	NA	1	NA	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Truck Loading Dust Collector DC-21											
		NA	NA	1	NA	1.00	-	-	-	0.04	0.03
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.04**	**0.03**
Truck Loading - Dust											
		20	400	1	400	1.00	-	-	-	0.11	0.08
Subtotals			**-**	**1**	**400**	**-**	**-**	**-**	**-**	**0.11**	**0.08**
Trucks - On-Terminal Idling (2)											
		20	400	1	400	1.00	0.03	0.12	0.05	0.00	0.00
Subtotals			**-**	**1**	**400**	**-**	**0.03**	**0.12**	**0.05**	**0.00**	**0.00**
Truck Loading Dust + On-Terminal Idling											
	1646X	20	400	1	400	1.00	0.026	0.088	0.038	0.085	0.057
Subtotals			**-**	**1**	**400**	**-**	**0.03**	**0.09**	**0.04**	**0.08**	**0.06**
Truck Loading Dust + On-Terminal Idling											
	1655X	20	400	1	400	1.00	0.009	0.029	0.013	0.028	0.019
Subtotals			**-**	**1**	**400**	**-**	**0.01**	**0.03**	**0.01**	**0.03**	**0.02**
Trucks - On-Terminal Driving											
		20	400	13	5,200	0.08	0.00	0.01	0.00	0.02	0.01
Subtotals			**-**	**13**	**5,200**	**-**	**0.05**	**0.10**	**0.06**	**0.20**	**0.14**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)											
		31	961	43	41,323	0.02	0.00	0.01	0.01	0.01	0.01
Subtotals			**-**	**43**	**41,323**	**-**	**0.13**	**0.55**	**0.49**	**0.49**	**0.33**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)											
		36	1,296	4	5,184	0.25	0.00	0.01	0.01	0.01	0.01
Subtotals			**-**	**4**	**5,184**	**-**	**0.01**	**0.04**	**0.03**	**0.04**	**0.03**
Pico Ave: Harbor Scenic Connector - Harbor Plaza											
		27	400	14	5,600	0.07	0.00	0.01	0.01	0.01	0.01

Table A.2.1-10 Reduced Expansion Alternative Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Pounds per Hour*				
							TOG	*CO*	*NO2*	PM10	PM2.5
Subtotals			**-**	**14**	**5,600**	**-**	**0.06**	**0.18**	**0.18**	**0.16**	**0.10**
Harbor Plaza: Pier F Ave - Pier G Ave											
		24	400	4	5,600	0.25	0.00	0.01	0.01	0.01	0.01
Subtotals			**-**	**4**	**5,600**	**-**	**0.01**	**0.04**	**0.04**	**0.03**	**0.02**
Pier F Ave: MCC Gate - Harbor Plaza											
		24	400	25	5,600	0.04	0.00	0.01	0.01	0.01	0.01
Subtotals			**-**	**25**	**5,600**	**-**	**0.09**	**0.29**	**0.30**	**0.26**	**0.17**
Pico Ave: Pier E St to Harbor Scenic Connector											
		27	729	8	10,206	0.13	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**8**	**10,206**	**-**	**0.01**	**0.02**	**0.02**	**0.02**	**0.01**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp											
		27	729	6	2,916	0.17	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**6**	**2,916**	**-**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)											
		25	625	4	15,625	0.25	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**4**	**15,625**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Ocean Blvd: West of D St. On-ramp											
		28	784	6	6,272	0.17	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**6**	**6,272**	**-**	**0.01**	**0.02**	**0.02**	**0.01**	**0.01**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp											
		28	784	4	4,704	0.25	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**4**	**4,704**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Pier E St Off Ramp : Pico Ave - Ocean Blvd											
		14	196	11	784	0.09	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**11**	**784**	**-**	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**

Table A.2.1-11 Reduced Expansion Alternative Operational Hourly Emissions - Annual Analysis - POLB MCC

Source Activity	*Pounds per Hour*	
	NO2	*PM10*
OGV - Fairway Transit	11.76	0.190
OGV - Precautionary Area Transit	1.613	0.027
OGV - Harbor Transit	0.193	0.009
OGV - Docking	0.107	0.005
OGV - Hoteling	0.126	0.046
Tugs - Harbor Transit	0.143	0.008
Tugs - Docking	0.048	0.0026
Kovaco 1 Cement Unloader		0.0412
Kovaco 2 Cement Unloader		0.0412
Payloaders	0.002	0.0002
SCR Duct Burner - DOCCS (1)	0.017	0.016
Storage Warehouse Dust Collector DC-01		0.176
New Storage Silos Dust Collector		0.193
Truck Loading Dust Collector DC-02		0.040
Truck Loading Dust Collector DC-03		0.040
Truck Loading Dust Collector DC-21		0.040
Truck Loading - Dust		0.078
Trucks - On-Terminal Idling (2)	0.036	0.0003
Trucks - On-Terminal Driving	0.045	0.143
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.137	0.139
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.010	0.011
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.052	0.044
Harbor Plaza: Pier F Ave - Pier G Ave	0.012	0.009
Pier F Ave: MCC Gate - Harbor Plaza	0.085	0.072
Pico Ave: Pier E St to Harbor Scenic Connector	0.006	0.005
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.002	0.002
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.001	0.001
Ocean Blvd: West of D St. On-ramp	0.005	0.004
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.001	0.001
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.002	0.002
Total	**14.401**	**1.385**

Notes: (1) Assigned to the Hoteling source

(2) Assigned to the Truck Loading source

Table A.2.1-12 Reduced Expansion Alternative Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Lbs/Hour*	
							NO2	PM10
OGV - Fairway Transit								
	719-761	200	40,000	43	1,720,000	0.02	0.273	0.004
Subtotals			**-**	**43**	**1,720,000**	**-**	**11.758**	**0.190**
OGV - Precautionary Area Transit								
	686-718	200	40,000	33	1,320,000	0.03	0.049	0.001
Subtotals			**-**	**33**	**1,320,000**	**-**	**1.613**	**0.027**
OGV - Harbor Transit								
	659-685	100	10,000	20	200,000	0.05	0.010	0.000
Subtotals			**-**	**20**	**-**	**-**	**0.193**	**0.009**
OGV - Docking								
	616	100	10,000	1	10,000	1.00	0.107	0.005
Subtotals			**-**	**1**	**-**	**-**	**0.107**	**0.005**
OGV Hoteling + SCR Duct Burner = DoCCS Stack								
	H	NA	NA	1	NA	1.00	0.143	0.062
Subtotals			**-**	**1**	**-**	**-**	**0.143**	**0.062**
Tugs - Harbor Transit								
		100	10,000	20	200,000	0.05	0.007	0.000
Subtotals			**-**	**20**	**-**	**-**	**0.143**	**0.008**
Tugs - Docking								
		100	40,000	1	40,000	1.00	0.048	0.003
Subtotals			**-**	**1**	**40,000**	**-**	**0.048**	**0.003**
Kovaco 1 Cement Unloader								
		10	100	1	100	1.00	-	0.041
Subtotals			**-**	**1**	**100**	**-**	**-**	**0.041**
Kovaco 2 Cement Unloader								
		10	100	1	100	1.00	-	0.041
Subtotals			**-**	**1**	**100**	**-**	**-**	**0.041**
Payloaders								
		10	100	2	200	0.50	0.001	0.000
Subtotals			**-**	**2**	**200**	**-**	**0.002**	**0.000**
Kovaco 1 Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.001	0.041
Subtotals			**-**	**1**	**100**	**-**	**0.001**	**0.041**
Kovaco 2 Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.001	0.041
Subtotals			**-**	**1**	**100**	**-**	**0.001**	**0.041**
SCR Duct Burner - DOCCS (1)								
	H	NA	NA	1	NA	1.00	0.017	0.016
			-	**1**	**-**	**-**	**0.017**	**0.016**
Storage Warehouse Dust Collector DC-01								
		NA	NA	1	NA	1.00	-	0.176
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.176**
New Storage Silos Dust Collector								
		NA	NA	1	NA	1.00	-	0.193
			-	**1**	**-**	**-**	**-**	**0.193**
Truck Loading Dust Collector DC-02								
		NA	NA	1	NA	1.00	-	0.040
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.040**
Truck Loading Dust Collector DC-03								
		NA	NA	1	NA	1.00	-	0.040
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.040**
Truck Loading Dust Collector DC-21								
		NA	NA	1	NA	1.00	-	0.040
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.040**
Truck Loading - Dust								
		20	400	1	400	1.00	-	0.078
Subtotals			**-**	**1**	**400**	**-**	**-**	**0.078**
Trucks - On-Terminal Idling (2)								
		20	400	1	400	1.00	0.036	0.000
Subtotals			**-**	**1**	**400**	**-**	**0.036**	**0.000**
Truck Loading Dust + On-Terminal Idling								
	1646X	20	400	1	400	1.00	0.027	0.059
Subtotals			**-**	**1**	**400**	**-**	**0.027**	**0.059**
Truck Loading Dust + On-Terminal Idling								
	1655X	20	400	1	400	1.00	0.009	0.020
Subtotals			**-**	**1**	**400**	**-**	**0.009**	**0.020**
Trucks - On-Terminal Driving								
		20	400	13	5,200	0.08	0.003	0.011
Subtotals			**-**	**13**	**5,200**	**-**	**0.045**	**0.143**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)								
		31	961	43	41,323	0.02	0.003	0.003

Table A.2.1-12 Reduced Expansion Alternative Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Lbs/Hour*	
							NO2	PM10
Subtotals			**-**	**43**	**41,323**	**-**	**0.137**	**0.139**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)								
		36	1,296	4	5,184	0.25	0.002	0.003
Subtotals			**-**	**4**	**5,184**	**-**	**0.010**	**0.011**
Pico Ave: Harbor Scenic Connector - Harbor Plaza								
		27	400	14	5,600	0.07	0.004	0.003
Subtotals			**-**	**14**	**5,600**	**-**	**0.052**	**0.044**
Harbor Plaza: Pier F Ave - Pier G Ave								
		24	400	4	5,600	0.25	0.003	0.002
Subtotals			**-**	**4**	**5,600**	**-**	**0.012**	**0.009**
Pier F Ave: MCC Gate - Harbor Plaza								
		24	400	25	5,600	0.04	0.003	0.003
Subtotals			**-**	**25**	**5,600**	**-**	**0.085**	**0.072**
Pico Ave: Pier E St to Harbor Scenic Connector								
		27	729	8	10,206	0.13	0.001	0.001
Subtotals			**-**	**8**	**10,206**	**-**	**0.006**	**0.005**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp								
		27	729	6	2,916	0.17	0.000	0.000
Subtotals			**-**	**6**	**2,916**	**-**	**0.002**	**0.002**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)								
		25	625	4	15,625	0.25	0.000	0.000
Subtotals			**-**	**4**	**15,625**	**-**	**0.001**	**0.001**
Ocean Blvd: West of D St. On-ramp								
		28	784	6	6,272	0.17	0.001	0.001
Subtotals			**-**	**6**	**6,272**	**-**	**0.005**	**0.004**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp								
		28	784	4	4,704	0.25	0.000	0.000
Subtotals			**-**	**4**	**4,704**	**-**	**0.001**	**0.001**
Pier E St Off Ramp : Pico Ave - Ocean Blvd								
		14	196	11	784	0.09	0.000	0.000
Subtotals			**-**	**11**	**784**	**-**	**0.002**	**0.002**

Table A.2.1-13 No Project Alternative Operational Hourly Emissions - Peak Day Analysis - POLB MCC Project

Source Activity	*Pounds per Hour*				
	TOG	*CO*	*NO2*	*PM10*	*PM2.5*
OGV - Fairway Transit	9.92	16.07	85.57	2.97	2.37
OGV - Precautionary Area Transit	4.41	7.22	38.37	1.35	1.08
OGV - Harbor Transit	3.02	3.46	5.97	0.52	0.41
OGV - Docking	2.02	1.80	3.27	0.30	0.24
OGV - Hoteling	0.31	0.56	1.59	0.16	0.13
Tugs - Harbor Transit	1.04	8.23	5.36	0.48	0.44
Tugs - Docking	0.35	2.74	1.79	0.16	0.15
Kovaco Cement Unloader				0.28	0.19
vanAalst Cement Unloader				0.01	0.01
Payloaders					
Storage Warehouse Dust Collector DC-01				0.38	0.25
Truck Loading Dust Collector DC-02				0.06	0.04
Truck Loading Dust Collector DC-03				0.06	0.04
Truck Loading Dust Collector DC-21				0.06	0.04
Truck Loading - Dust				0.09	0.06
Trucks - On-Terminal Idling (2)	0.03	0.10	0.04	0.0004	0.0003
Trucks - On-Terminal Driving	0.03	0.06	0.04	0.12	0.08
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.09	0.37	0.32	0.33	0.22
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.01	0.03	0.02	0.03	0.02
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.04	0.12	0.12	0.10	0.07
Harbor Plaza: Pier F Ave - Pier G Ave	0.01	0.03	0.03	0.02	0.01
Pier F Ave: MCC Gate - Harbor Plaza	0.06	0.20	0.20	0.17	0.11
Pico Ave: Pier E St to Harbor Scenic Connector	0.00	0.01	0.01	0.01	0.01
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.00	0.00	0.00	0.00	0.00
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.00	0.00	0.00	0.00	0.00
Ocean Blvd: West of D St. On-ramp	0.00	0.01	0.01	0.01	0.01
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.00	0.00	0.00	0.00	0.00
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.00	0.00	0.01	0.00	0.00
Total	**21.34**	**41.02**	**142.74**	**7.69**	**5.99**

Notes: (1) Assigned to the Hoteling source

(2) Assigned to the Truck Loading source

Table A.2.1-14 No Project Alternative Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Pounds per Hour* TOG	CO	NO2	PM10	PM2.5
OGV - Fairway Transit											
		200	40,000	43	1,720,000	0.02	0.23	0.37	1.99	0.07	0.06
Subtotals			**-**	**43**	**1,720,000**	**-**	**9.92**	**16.07**	**85.57**	**2.97**	**2.37**
OGV - Precautionary Area Transit											
		200	40,000	33	1,320,000	0.03	0.13	0.22	1.16	0.04	0.03
Subtotals			**-**	**33**	**1,320,000**	**-**	**4.41**	**7.22**	**38.37**	**1.35**	**1.08**
OGV - Harbor Transit											
		100	10,000	20	200,000	0.05	0.15	0.17	0.30	0.03	0.02
Subtotals			**-**	**20**	**-**	**-**	**3.02**	**3.46**	**5.97**	**0.52**	**0.41**
OGV - Docking											
		100	10,000	1	10,000	1.00	2.02	1.80	3.27	0.30	0.24
Subtotals			**-**	**1**	**-**	**-**	**2.02**	**1.80**	**3.27**	**0.30**	**0.24**
OGV - Hoteling											
		NA	NA	1	NA	1.00	0.31	0.56	1.59	0.16	0.13
Subtotals			**-**	**1**	**-**	**-**	**0.31**	**0.56**	**1.59**	**0.16**	**0.13**
Tugs - Harbor Transit											
		100	10,000	20	200,000	0.05	0.05	0.41	0.27	0.02	0.02
Subtotals			**-**	**20**	**-**	**-**	**1.04**	**8.23**	**5.36**	**0.48**	**0.44**
Tugs - Docking											
		100	40,000	1	40,000	1.00	0.35	2.74	1.79	0.16	0.15
Subtotals			**-**	**1**	**40,000**	**-**	**0.35**	**2.74**	**1.79**	**0.16**	**0.15**
Kovaco Cement Unloader											
		10	100	1	100	1.00	-	-	-	0.28	0.19
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.28**	**0.19**
vanAalst Cement Unloader											
		10	100	1	100	1.00	-	-	-	0.01	0.01
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.01**	**0.01**
Payloaders											
		10	100	2	200	0.50	-	-	-	-	-
Subtotals			**-**	**2**	**200**	**-**	**-**	**-**	**-**	**-**	**-**
Kovaco Cement Unloader+50%Payloaders											
		10	100	1	100	1.00	-	-	-	0.28	0.19
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.28**	**0.19**
vanAalst Cement Unloader+50%Payloaders											
		10	100	1	100	1.00	-	-	-	0.01	0.01
Subtotals			**-**	**1**	**100**	**-**	**-**	**-**	**-**	**0.01**	**0.01**
		NA	NA	1	NA	1.00					
			-	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Storage Warehouse Dust Collector DC-01											
		NA	NA	1	NA	1.00	-	-	-	0.38	0.25
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.38**	**0.25**
		NA	NA	1	NA	1.00	-	-	-	-	-
			-	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Truck Loading Dust Collector DC-02											
		NA	NA	1	NA	1.00	-	-	-	0.06	0.04
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.06**	**0.04**
Truck Loading Dust Collector DC-03											
		NA	NA	1	NA	1.00	-	-	-	0.06	0.04
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.06**	**0.04**
Truck Loading Dust Collector DC-21											
		NA	NA	1	NA	1.00	-	-	-	0.06	0.04
Subtotals			**-**	**1**	**-**	**-**	**-**	**-**	**-**	**0.06**	**0.04**
Truck Loading - Dust											
		20	400	1	400	1.00	-	-	-	0.09	0.06
Subtotals			**-**	**1**	**400**	**-**	**-**	**-**	**-**	**0.09**	**0.06**
Trucks - On-Terminal Idling (2)											
		20	400	1	400	1.00	0.03	0.10	0.04	0.00	0.00
Subtotals			**-**	**1**	**400**	**-**	**0.03**	**0.10**	**0.04**	**0.00**	**0.00**
Truck Loading Dust + On-Terminal Idling											
		20	400	1	400	1.00	0.03	0.10	0.04	0.09	0.06
Subtotals			**-**	**1**	**400**	**-**	**0.03**	**0.10**	**0.04**	**0.09**	**0.06**
Trucks - On-Terminal Driving											
		20	400	8	3,200	0.13	0.00	0.01	0.00	0.02	0.01
Subtotals			**-**	**8**	**3,200**	**-**	**0.03**	**0.06**	**0.04**	**0.12**	**0.08**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)											
		31	961	43	41,323	0.02	0.00	0.01	0.01	0.01	0.01
Subtotals			**-**	**43**	**41,323**	**-**	**0.09**	**0.37**	**0.32**	**0.33**	**0.22**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)											
		36	1,296	4	5,184	0.25	0.00	0.01	0.01	0.01	0.00
Subtotals			**-**	**4**	**5,184**	**-**	**0.01**	**0.03**	**0.02**	**0.03**	**0.02**
Pico Ave: Harbor Scenic Connector - Harbor Plaza											
		27	400	14	5,600	0.07	0.00	0.01	0.01	0.01	0.00
Subtotals			**-**	**14**	**5,600**	**-**	**0.04**	**0.12**	**0.12**	**0.10**	**0.07**
Harbor Plaza: Pier F Ave - Pier G Ave											
		24	400	4	5,600	0.25	0.00	0.01	0.01	0.01	0.00
Subtotals			**-**	**4**	**5,600**	**-**	**0.01**	**0.03**	**0.03**	**0.02**	**0.01**
Pier F Ave: MCC Gate - Harbor Plaza											
		24	400	25	5,600	0.04	0.00	0.01	0.01	0.01	0.00
Subtotals			**-**	**25**	**5,600**	**-**	**0.06**	**0.20**	**0.20**	**0.17**	**0.11**
Pico Ave: Pier E St to Harbor Scenic Connector											
		27	729	8	10,206	0.13	0.00	0.00	0.00	0.00	0.00

Table A.2.1-14 No Project Alternative Operational Hourly Emission Source Simulations - Peak Day Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Pounds per Hour*				
							TOG	*CO*	*NO2*	PM10	PM2.5
Subtotals			**-**	**8**	**10,206**	**-**	**0.00**	**0.01**	**0.01**	**0.01**	**0.01**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp											
		27	729	6	2,916	0.17	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**6**	**2,916**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)											
		25	625	4	15,625	0.25	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**4**	**15,625**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Ocean Blvd: West of D St. On-ramp											
		28	784	6	6,272	0.17	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**6**	**6,272**	**-**	**0.00**	**0.01**	**0.01**	**0.01**	**0.01**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp											
		28	784	4	4,704	0.25	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**4**	**4,704**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Pier E St Off Ramp : Pico Ave - Ocean Blvd											
		14	196	11	784	0.09	0.00	0.00	0.00	0.00	0.00
Subtotals			**-**	**11**	**784**	**-**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**

Table A.2.1-15 No Project Alternative Operational Hourly Emissions - Annual A

Source Activity	*Pounds per Hour*	
	NO2	*PM10*
OGV - Fairway Transit	9.94	0.161
OGV - Precautionary Area Transit	1.36	0.022
OGV - Harbor Transit	0.16	0.007
OGV - Docking	0.09	0.005
OGV - Hoteling	0.366	0.045
Tugs - Harbor Transit	0.121	0.006
Tugs - Docking	0.040	0.002
Kovaco Cement Unloader		0.150
vanAalst Cement Unloader		0.005
Payloaders	0.002	0.0002
Storage Warehouse Dust Collector DC-01		0.380
Truck Loading Dust Collector DC-02		0.060
Truck Loading Dust Collector DC-03		0.060
Truck Loading Dust Collector DC-21		0.060
Truck Loading - Dust		0.053
Trucks - On-Terminal Idling (2)	0.02	0.0002
Trucks - On-Terminal Driving	0.02	0.069
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	0.092	0.094
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.007	0.007
Pico Ave: Harbor Scenic Connector - Harbor Plaza	0.035	0.030
Harbor Plaza: Pier F Ave - Pier G Ave	0.008	0.006
Pier F Ave: MCC Gate - Harbor Plaza	0.057	0.049
Pico Ave: Pier E St to Harbor Scenic Connector	0.004	0.003
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.001	0.001
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.001	0.001
Ocean Blvd: West of D St. On-ramp	0.003	0.003
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.001	0.001
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.001	0.001
Total	**12.346**	**1.281**

Notes: (1) Assigned to the Hoteling source

(2) Assigned to the Truck Loading source

Table A.2.1-16 No Project Alternative Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	Volume Source Lbs/Hour NO2	Volume Source Lbs/Hour PM10
OGV - Fairway Transit								
	719-761	200	40,000	43	1,720,000	0.02	0.231	0.004
Subtotals			**-**	**43**	**1,720,000**	**-**	**9.942**	**0.161**
OGV - Precautionary Area Transit								
	686-718	200	40,000	33	1,320,000	0.03	0.041	0.001
Subtotals			**-**	**33**	**1,320,000**	**-**	**1.364**	**0.022**
OGV - Harbor Transit								
	659-685	100	10,000	20	200,000	0.05	0.008	0.000
Subtotals			**-**	**20**	**-**	**-**	**0.164**	**0.007**
OGV - Docking								
	616	100	10,000	1	10,000	1.00	0.091	0.005
Subtotals			**-**	**1**	**-**	**-**	**0.091**	**0.005**
OGV - Hoteling								
		NA	NA	1	NA	1.00	0.366	0.045
Subtotals			**-**	**1**	**-**	**-**	**0.366**	**0.045**
Tugs - Harbor Transit								
		100	10,000	20	200,000	0.05	0.006	0.000
Subtotals			**-**	**20**	**-**	**-**	**0.121**	**0.006**
Tugs - Docking								
		100	40,000	1	40,000	1.00	0.040	0.002
Subtotals			**-**	**1**	**40,000**	**-**	**0.040**	**0.002**
Kovaco Cement Unloader								
		10	100	1	100	1.00	-	0.150
Subtotals			**-**	**1**	**100**	**-**	**-**	**0.150**
vanAalst Cement Unloader								
		10	100	1	100	1.00	-	0.005
Subtotals			**-**	**1**	**100**	**-**	**-**	**0.005**
Payloaders								
		10	100	2	200	0.50	0.001	0.000
Subtotals			**-**	**2**	**200**	**-**	**0.002**	**0.000**
Kovaco Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.001	0.150
Subtotals			**-**	**1**	**100**	**-**	**0.001**	**0.150**
vanAalst Cement Unloader+50%Payloaders								
		10	100	1	100	1.00	0.001	0.005
Subtotals			**-**	**1**	**100**	**-**	**0.001**	**0.005**
Storage Warehouse Dust Collector DC-01								
		NA	NA	1	NA	1.00	-	0.380
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.380**
Truck Loading Dust Collector DC-02								
		NA	NA	1	NA	1.00	-	0.060
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.060**
Truck Loading Dust Collector DC-03								
		NA	NA	1	NA	1.00	-	0.060
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.060**
Truck Loading Dust Collector DC-21								
		NA	NA	1	NA	1.00	-	0.060
Subtotals			**-**	**1**	**-**	**-**	**-**	**0.060**
Truck Loading - Dust								
		20	400	1	400	1.00	-	0.053
Subtotals			**-**	**1**	**400**	**-**	**-**	**0.053**
Trucks - On-Terminal Idling (2)								
		20	400	1	400	1.00	0.024	0.000
Subtotals			**-**	**1**	**400**	**-**	**0.024**	**0.000**
Truck Loading Dust + On-Terminal Idling								
		20	400	1	400	1.00	0.024	0.053
Subtotals			**-**	**1**	**400**	**-**	**0.024**	**0.053**
Trucks - On-Terminal Driving								
		20	400	8	3,200	0.13	0.003	0.009
Subtotals			**-**	**8**	**3,200**	**-**	**0.022**	**0.069**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)								
		31	961	43	41,323	0.02	0.002	0.002
Subtotals			**-**	**43**	**41,323**	**-**	**0.092**	**0.094**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)								
		36	1,296	4	5,184	0.25	0.002	0.002
Subtotals			**-**	**4**	**5,184**	**-**	**0.007**	**0.007**
Pico Ave: Harbor Scenic Connector - Harbor Plaza								
		27	400	14	5,600	0.07	0.003	0.002
Subtotals			**-**	**14**	**5,600**	**-**	**0.035**	**0.030**
Harbor Plaza: Pier F Ave - Pier G Ave								
		24	400	4	5,600	0.25	0.002	0.002

Table A.2.1-16 No Project Alternative Operational Hourly Emission Source Simulations - Annual Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*Volume Source Lbs/Hour*	
							NO2	PM10
Subtotals			**-**	**4**	**5,600**	**-**	**0.008**	**0.006**
Pier F Ave: MCC Gate - Harbor Plaza								
		24	400	25	5,600	0.04	0.002	0.002
Subtotals			**-**	**25**	**5,600**	**-**	**0.057**	**0.049**
Pico Ave: Pier E St to Harbor Scenic Connector								
		27	729	8	10,206	0.13	0.000	0.000
Subtotals			**-**	**8**	**10,206**	**-**	**0.004**	**0.003**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp								
		27	729	6	2,916	0.17	0.000	0.000
Subtotals			**-**	**6**	**2,916**	**-**	**0.001**	**0.001**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)								
		25	625	4	15,625	0.25	0.000	0.000
Subtotals			**-**	**4**	**15,625**	**-**	**0.001**	**0.001**
Ocean Blvd: West of D St. On-ramp								
		28	784	6	6,272	0.17	0.0005	0.0005
Subtotals			**-**	**6**	**6,272**	**-**	**0.003**	**0.003**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp								
		28	784	4	4,704	0.25	0.000	0.000
Subtotals			**-**	**4**	**4,704**	**-**	**0.001**	**0.001**
Pier E St Off Ramp : Pico Ave - Ocean Blvd								
		14	196	11	784	0.09	0.000	0.000
Subtotals			**-**	**11**	**784**	**-**	**0.001**	**0.001**

Table A.2.1-17 Short-term Roadway Analysis - POLB MCC Proje

Project Scenario/Vehicle Type	*Peak Day Trips (1)*	*Peak Hour Trips (2)*
CEQA Baseline		
Heavy Duty Truck	264	56
Full Expansion Project - Year 2015		
Heavy Duty Truck	643	132
Reduced Expansion Alt - Year 2015		
Heavy Duty Truck	515	108
No Project - Year 2015		
Heavy Duty Truck	432	72

(1) Round trips

(2) One-way trips

Table A.2.1-18 On-Road Truck Unmitigated Emission Factors - POLB MCC Project Scenarios

	Emission Factors (Grams/Mile)									
Project Year/Mode	*TOG*	*ROG*	*CO*	*NOx*	*NO2*	*SOx*	*DPM $_{10}$*	*DPM $_{2.5}$*	*Dust $_{10}$*	*Dust $_{2.5}$*
CEQA Baseline										
5 mph	4.28	3.77	6.85	28.44	7.34	0.02	0.47	0.43	1.43	0.93
10 mph	2.51	2.21	4.59	20.23	5.22	0.02	0.34	0.31	1.43	0.93
15 mph	1.28	1.12	2.95	14.47	3.73	0.02	0.23	0.22	1.43	0.93
20 mph	0.53	0.47	1.81	10.88	2.81	0.02	0.16	0.14	1.43	0.93
25 mph	0.45	0.39	1.61	10.13	2.61	0.02	0.13	0.12	1.43	0.93
30 mph	0.38	0.33	1.44	9.50	2.45	0.02	0.12	0.11	1.43	0.93
35 mph	0.32	0.28	1.31	8.99	2.32	0.02	0.11	0.10	1.43	0.93
40 mph	0.27	0.24	1.21	8.60	2.22	0.02	0.11	0.10	1.43	0.93
45 mph	0.24	0.21	1.16	8.34	2.15	0.02	0.11	0.10	1.43	0.93
50 mph	0.22	0.20	1.14	8.20	2.12	0.02	0.12	0.11	1.43	0.93
55 mph	0.22	0.19	1.15	8.19	2.11	0.02	0.14	0.13	1.43	0.93
60 mph										
65 mph										
Year 2015+ Max										
5 mph										
10 mph	3.25	2.86	6.10	15.02	3.88	0.02	0.10	0.09	1.43	0.93
15 mph	1.65	1.45	3.54	11.30	2.92	0.02	0.09	0.09	1.43	0.93
20 mph	0.71	0.63	1.92	8.54	2.20	0.02	0.08	0.08	1.43	0.93
25 mph	0.62	0.55	1.81	7.66	1.98	0.02	0.08	0.07	1.43	0.93
30 mph	0.54	0.48	1.74	6.91	1.78	0.02	0.08	0.07	1.43	0.93
35 mph	0.47	0.42	1.69	6.28	1.62	0.02	0.08	0.08	1.43	0.93
40 mph	0.41	0.36	1.68	5.79	1.49	0.02	0.09	0.08	1.43	0.93
45 mph	0.36	0.32	1.70	5.43	1.40	0.02	0.10	0.09	1.43	0.93
50 mph	0.33	0.29	1.76	5.18	1.34	0.02	0.11	0.10	1.43	0.93
55 mph	0.30	0.26	1.84	5.10	1.32	0.02	0.13	0.12	1.43	0.93
60 mph										
65 mph										

From POLB HDV EMFAC2011 based HDV ER (06 Feb 2012)SCG.xlsx - Trapezoid corrected.

SCAQMD NO2 conversion factor based upon a distance of 500m = 0.258.

Table A.2.1-19 CEQA Baseline Peak Hourly Roadway Link Emissions - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of PHT	PHT	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	45	0.05	0.04	0.20	1.45	0.37	0.00	0.02	0.02	0.24	0.16	0.26	0.17	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	45	0.00	0.00	0.01	0.11	0.03	0.00	0.00	0.00	0.02	0.01	0.02	0.01	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	56	0.02	0.02	0.08	0.51	0.13	0.00	0.01	0.01	0.08	0.05	0.08	0.06	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	56	0.01	0.00	0.02	0.12	0.03	0.00	0.00	0.00	0.02	0.01	0.02	0.01	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	56	0.03	0.03	0.13	0.84	0.22	0.00	0.01	0.01	0.13	0.08	0.14	0.09	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	11	0.00	0.00	0.01	0.05	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	6	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	11	0.00	0.00	0.01	0.05	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.01	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-rar	1094	0.10	32	0.10	6	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	6	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11
Totals					302	**0.11**	**0.10**	**0.47**	**3.19**	**0.82**	**0.01**	**0.04**	**0.04**	**0.50**	**0.33**	**0.54**	**0.36**	129

Table A.2.1-20 Year 2015 Full Expansion Project Peak Hourly Roadway Link Emissions - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of PHT	PHT	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	106	0.16	0.14	0.67	2.30	0.59	0.01	0.04	0.03	0.57	0.37	0.60	0.40	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	106	0.01	0.01	0.05	0.16	0.04	0.00	0.00	0.00	0.04	0.03	0.05	0.03	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	132	0.07	0.06	0.22	0.88	0.23	0.00	0.01	0.01	0.18	0.12	0.19	0.13	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	132	0.02	0.01	0.05	0.21	0.05	0.00	0.00	0.00	0.04	0.03	0.04	0.03	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	132	0.11	0.10	0.36	1.43	0.37	0.00	0.02	0.02	0.30	0.19	0.31	0.21	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	26	0.01	0.01	0.02	0.09	0.02	0.00	0.00	0.00	0.02	0.01	0.02	0.01	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	13	0.00	0.00	0.01	0.03	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	13	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	26	0.01	0.01	0.02	0.08	0.02	0.00	0.00	0.00	0.02	0.01	0.02	0.01	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-rar	1094	0.10	32	0.10	13	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	13	0.00	0.00	0.01	0.04	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.01	11
Totals					713	**0.40**	**0.35**	**1.42**	**5.27**	**1.36**	**0.02**	**0.07**	**0.06**	**1.19**	**0.77**	**1.26**	**0.84**	129

Table A.2.1-21 Year 2015 Reduced Expansion Alternative Peak Hourly Roadway Link Emissions - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of PHT	PHT	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	86	0.13	0.12	0.55	1.89	0.49	0.01	0.03	0.03	0.47	0.30	0.49	0.33	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	86	0.01	0.01	0.04	0.13	0.03	0.00	0.00	0.00	0.04	0.02	0.04	0.03	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	108	0.06	0.05	0.18	0.72	0.18	0.00	0.01	0.01	0.15	0.10	0.16	0.10	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	108	0.01	0.01	0.04	0.17	0.04	0.00	0.00	0.00	0.03	0.02	0.03	0.02	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	108	0.09	0.08	0.29	1.17	0.30	0.00	0.01	0.01	0.24	0.16	0.26	0.17	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	22	0.01	0.01	0.02	0.08	0.02	0.00	0.00	0.00	0.02	0.01	0.02	0.01	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	11	0.00	0.00	0.01	0.03	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	11	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	22	0.01	0.00	0.02	0.07	0.02	0.00	0.00	0.00	0.01	0.01	0.01	0.01	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-rar	1094	0.10	32	0.10	11	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	11	0.00	0.00	0.01	0.03	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00	11
Totals					583	**0.32**	**0.29**	**1.16**	**4.31**	**1.11**	**0.01**	**0.06**	**0.05**	**0.97**	**0.63**	**1.03**	**0.68**	129

Table A.2.1-22 Year 2015 No Project Alternative Peak Hourly Roadway Link Emissions - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of PHT	PHT	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	58	0.09	0.08	0.37	1.26	0.32	0.00	0.02	0.02	0.31	0.20	0.33	0.22	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	58	0.01	0.01	0.03	0.09	0.02	0.00	0.00	0.00	0.02	0.02	0.03	0.02	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	72	0.04	0.03	0.12	0.48	0.12	0.00	0.01	0.01	0.10	0.06	0.10	0.07	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	72	0.01	0.01	0.03	0.11	0.03	0.00	0.00	0.00	0.02	0.01	0.02	0.01	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	72	0.06	0.05	0.20	0.78	0.20	0.00	0.01	0.01	0.16	0.11	0.17	0.11	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	14	0.00	0.00	0.01	0.05	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	7	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	7	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	14	0.00	0.00	0.01	0.04	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-rar	1094	0.10	32	0.10	7	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	7	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11
Totals					389	**0.22**	**0.19**	**0.78**	**2.87**	**0.74**	**0.01**	**0.04**	**0.04**	**0.65**	**0.42**	**0.69**	**0.46**	129

Table A.2.1-23 Annual Roadway Analysis - POLB MCC Project Scenarios

Project Scenario/Vehicle Type	*Annual Trips*	
	Round	*1-Way Trips*
CEQA Baseline		
Heavy Duty Truck	53,067	106,134
Full Expansion Project - Year 2015		
Heavy Duty Truck	166,400	332,800
Reduced Expansion Alt - Year 2015		
Heavy Duty Truck	133,120	266,240
No Project - Year 2015		
Heavy Duty Truck	89,856	179,712

Table A.2.1-24 CEQA Baseline Hourly Roadway Link Emissions for Annual Modeling Analysis - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of Annual Trips	Annual Trips	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	84,907	0.010	0.009	0.044	0.314	0.081	0.001	0.004	0.004	0.052	0.034	0.056	0.038	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	84,907	0.001	0.001	0.003	0.023	0.006	0.000	0.000	0.000	0.004	0.003	0.004	0.003	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	106,134	0.004	0.004	0.017	0.111	0.029	0.000	0.001	0.001	0.017	0.011	0.018	0.012	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	106,134	0.001	0.001	0.004	0.025	0.007	0.000	0.000	0.000	0.004	0.002	0.004	0.003	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	106,134	0.007	0.006	0.027	0.181	0.047	0.000	0.002	0.002	0.027	0.018	0.030	0.020	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	21,227	0.000	0.000	0.002	0.012	0.003	0.000	0.000	0.000	0.002	0.001	0.002	0.001	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	10,613	0.000	0.000	0.001	0.004	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	10,613	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	21,227	0.000	0.000	0.002	0.010	0.003	0.000	0.000	0.000	0.002	0.001	0.002	0.001	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ran	1094	0.10	32	0.10	10,613	0.000	0.000	0.000	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	10,613	0.000	0.000	0.001	0.005	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	11
Totals					573,124	**0.025**	**0.022**	**0.101**	**0.690**	**0.178**	**0.002**	**0.009**	**0.008**	**0.109**	**0.071**	**0.118**	**0.079**	129

Table A.2.1-25 Year 2015 Full Expansion Project Hourly Roadway Link Emissions for Annual Modeling Analysis - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of Annual Trips	Annual Trips	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	266,240	0.047	0.042	0.193	0.663	0.171	0.002	0.010	0.009	0.164	0.107	0.174	0.116	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	266,240	0.003	0.003	0.015	0.047	0.012	0.000	0.001	0.001	0.012	0.008	0.013	0.009	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	332,800	0.020	0.017	0.063	0.252	0.065	0.001	0.003	0.003	0.052	0.034	0.055	0.037	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	332,800	0.005	0.004	0.014	0.060	0.015	0.000	0.001	0.001	0.011	0.007	0.012	0.008	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	332,800	0.032	0.028	0.104	0.412	0.106	0.001	0.005	0.004	0.085	0.056	0.090	0.060	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	66,560	0.002	0.002	0.007	0.027	0.007	0.000	0.000	0.000	0.006	0.004	0.006	0.004	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	33,280	0.001	0.001	0.002	0.010	0.003	0.000	0.000	0.000	0.002	0.001	0.002	0.001	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	33,280	0.000	0.000	0.001	0.006	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.001	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	66,560	0.002	0.002	0.006	0.023	0.006	0.000	0.000	0.000	0.005	0.003	0.005	0.003	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ran	1094	0.10	32	0.10	33,280	0.000	0.000	0.002	0.006	0.002	0.000	0.000	0.000	0.001	0.001	0.001	0.001	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	33,280	0.001	0.001	0.003	0.010	0.003	0.000	0.000	0.000	0.002	0.001	0.002	0.002	11
Totals					1,797,120	**0.114**	**0.100**	**0.409**	**1.517**	**0.391**	**0.005**	**0.020**	**0.019**	**0.342**	**0.222**	**0.362**	**0.241**	129

Table A.2.1-26 Year 2015 Reduced Expansion Alternative Hourly Roadway Link Emissions for Annual Modeling Analysis - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of Annual Trips	Annual Trips	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	212,992	0.038	0.033	0.154	0.531	0.137	0.002	0.008	0.007	0.131	0.085	0.139	0.093	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	212,992	0.003	0.002	0.012	0.038	0.010	0.000	0.001	0.001	0.010	0.006	0.011	0.007	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	266,240	0.016	0.014	0.051	0.202	0.052	0.001	0.002	0.002	0.042	0.027	0.044	0.029	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	266,240	0.004	0.003	0.011	0.048	0.012	0.000	0.001	0.000	0.009	0.006	0.009	0.006	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	266,240	0.026	0.023	0.083	0.330	0.085	0.001	0.004	0.004	0.068	0.044	0.072	0.048	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	53,248	0.002	0.001	0.005	0.022	0.006	0.000	0.000	0.000	0.004	0.003	0.005	0.003	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	26,624	0.001	0.001	0.002	0.008	0.002	0.000	0.000	0.000	0.002	0.001	0.002	0.001	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	26,624	0.000	0.000	0.001	0.005	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.001	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	53,248	0.001	0.001	0.005	0.019	0.005	0.000	0.000	0.000	0.004	0.003	0.004	0.003	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ran	1094	0.10	32	0.10	26,624	0.000	0.000	0.001	0.005	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.001	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	26,624	0.001	0.001	0.002	0.008	0.002	0.000	0.000	0.000	0.002	0.001	0.002	0.001	11
Totals					1,437,696	**0.091**	**0.080**	**0.327**	**1.214**	**0.313**	**0.004**	**0.016**	**0.015**	**0.273**	**0.178**	**0.290**	**0.193**	129

Table A.2.1-27 Year 2015 No Project Alternative Hourly Roadway Link Emissions for Annual Modeling Analysis - POLB MCC Project.

Roadway Link	BEEST ID Start #	Length (Mi)	MPH	Fraction of Annual Trips	Annual Trips	Pounds per Hour												# of Vol. Sources
						TOG	ROG	CO	NOx	NO2	SOx	DPM_{10}	$DPM_{2.5}$	$Dust_{10}$	$Dust_{2.5}$	$All\ PM_{10}$	$All\ PM_{2.5}$	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	1126	1.71	41	0.80	143,770	0.026	0.023	0.104	0.358	0.092	0.001	0.005	0.005	0.088	0.058	0.094	0.063	43
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1167	0.13	47	0.80	143,770	0.002	0.002	0.008	0.025	0.007	0.000	0.000	0.000	0.007	0.004	0.007	0.005	4
Pico Ave: Harbor Scenic Connector - Harbor Plaza	1002	0.44	31	1.00	179,712	0.011	0.009	0.034	0.136	0.035	0.000	0.002	0.001	0.028	0.018	0.030	0.020	14
Harbor Plaza: Pier F Ave - Pier G Ave	1388	0.09	29	1.00	179,712	0.003	0.002	0.008	0.032	0.008	0.000	0.000	0.000	0.006	0.004	0.006	0.004	4
Pier F Ave: MCC Gate - Harbor Plaza	1363	0.71	30	1.00	179,712	0.017	0.015	0.056	0.223	0.057	0.001	0.003	0.002	0.046	0.030	0.049	0.032	25
Pico Ave: Pier E St to Harbor Scenic Connector	1016	0.23	31	0.20	35,942	0.001	0.001	0.004	0.015	0.004	0.000	0.000	0.000	0.003	0.002	0.003	0.002	8
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1024	0.17	31	0.10	17,971	0.000	0.000	0.001	0.005	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.001	6
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	NEW	0.09	25	0.10	17,971	0.000	0.000	0.001	0.003	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	4
Ocean Blvd: West of D St. On-ramp	1061	0.20	32	0.20	35,942	0.001	0.001	0.003	0.013	0.003	0.000	0.000	0.000	0.003	0.002	0.003	0.002	6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ran	1094	0.10	32	0.10	17,971	0.000	0.000	0.001	0.003	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	4
Pier E St Off Ramp : Pico Ave - Ocean Blvd	1621	0.18	30	0.10	17,971	0.000	0.000	0.001	0.006	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.001	11
Totals					970,445	**0.062**	**0.054**	**0.221**	**0.819**	**0.211**	**0.003**	**0.011**	**0.010**	**0.185**	**0.120**	**0.196**	**0.130**	129

Appendix A-3

Health Risk Assessment
Port of Long Beach MCC Cement Facility Modification Project

This page intentionally left blank.

APPENDIX A-3
HEALTH RISK ASSESSMENT FOR THE MCC CEMENT FACILITY MODIFICATION PROJECT

1.0 INTRODUCTION

(NOTE: All tables and figures are included at the end of this appendix.)

This document describes the methods and results of a health risk assessment (HRA) that evaluates potential public health effects from toxic air contaminant (TAC) emissions that would occur from construction and operation of the MCC Cement Facility Modification Project (Project). TACs are compounds that are known or suspected to cause adverse carcinogenic and/or non-carcinogenic human health effects after short-term (acute) or long-term (chronic) exposure.

The HRA evaluated individual lifetime cancer risks and chronic and acute non-cancer hazard indices associated with the proposed Project. Individual lifetime cancer risk represents the chance that an individual would contract cancer after a lifetime of exposure to TACs of concern. To assess non-cancer health effects, the HRA evaluated long-term chronic and short-term acute health impacts.

This HRA was prepared according to guidelines recommended by the South Coast Air Quality Management District (SCAQMD), California Air Resources Board (ARB), and Office of Environmental Health Hazard Assessment (OEHHA). In general, the Protocol follows the methods for preparing Tier 1 risk assessments described in *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2003); *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588)* (SCAQMD 2011a); and *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions* (SCAQMD 2003). The OEHHA methods are incorporated into the ARB Hotspots Analysis and Reporting Program (HARP) model (ARB 2014). This HRA used the HARP model to perform all health risk calculations.

The HRA process requires four general steps to estimate health impacts: 1) quantify Project-generated emissions; 2) identify ground-level receptor locations that may be affected by proposed emissions (including both a regular grid of receptors and any special sensitive receptor locations such as schools, hospitals, convalescent homes, and daycare centers); 3) perform dispersion modeling analyses to estimate ambient TAC concentrations at each receptor location; and 4) use a risk characterization model (i.e., HARP) to estimate potential health risks at each receptor location. The following describes the methods used to develop each step of the Project HRA.

2.0 DEVELOPMENT OF EMISSION SCENARIOS USED IN THE HRA

2.1 EMISSION SOURCES

The HRA evaluated operational air emissions sources associated with each project scenario. Additionally, for the cancer analyses, the HRA evaluated emissions of diesel particulate matter (DPM) that would occur from onsite construction activities for each project alternative/scenario. Appendix A-1 of this EIR describes the methods used to estimate proposed construction and operational emissions.

2.2 TAC EMISSION CALCULATION APPROACH

The determination of health risks in the HRA required the evaluation of different exposure periods and therefore emission scenarios. These included the following:

- Cancer risks - The HRA used 70-year annual average emission rates to determine individual lifetime cancer risks. The 70-year averaging period coincided with 2015 through 2084, or Project years one through 70. This 70-year projection of emissions matches the exposure period evaluated for cancer risks. The 70-year emission calculations for the CEQA Baseline and project alternatives took into consideration changes in source emission factors due to future regulations and proposed environmental controls, as discussed in Section 2.3 below.
- Chronic non-cancer effects - The HRA conservatively used maximum annual emission rates to determine the chronic hazard index, as the chronic exposure period for non-cancer effects is assumed

to be at least eight years (OEHHA 2003). The HRA focused on Project operations in year 2020, as cement delivery truck emission factors and resulting daily and annual emissions would be the highest during this year.

- Acute non-cancer effects - In accordance with OEHHA HRA guidelines, maximum one-hour emission rates were used to determine the acute hazard index because the acute exposure period is one hour for most TACs. The HRA evaluated the same peak-hour scenario developed for the Project criteria pollutant modeling analyses, as described in section 3.1, Appendix A-2 of this EIR.
- The HRA evaluated non-cancer effects from the CEQA Baseline scenario as if it were in operation in year 2015.

The overwhelming majority of Project emissions would occur from diesel-powered internal combustion engines. The analysis of long-term (cancer and chronic) health effects from these sources focused on their DPM emissions, as this is the only pollutant OEHHA considers in the estimation of cancer (lifetime) and chronic (annual) non-cancer effects from these sources. However, to estimate acute health effects (less than 24 hours) from diesel-powered internal combustion engines, the HRA evaluated a more detailed list of pollutants, including criteria pollutants and TACs in the form of volatile organic compounds (VOCs) and particulate matter (PM).

The cancer, chronic, and acute non-cancer toxicity factors established by OEHHA for the assessment of DPM emissions include consideration of all toxic compounds associated with combustive emissions from diesel-powered internal combustion engines.

Since boilers in ocean-going vessels (OGVs) are external combustion sources, it was necessary to separate their PM and VOCs emissions into individual TAC components for use in the HRA. In accordance with ARB recommendations (ARB 2005a), speciation profiles developed for the ARB emission inventory process were used for this purpose (ARB 2011). The HRA derived total organic gas (TOG) emissions from VOC emissions using conversion factors provided with the TOG speciation profiles. Table A-3-1 presents the speciation profiles used to convert VOC and PM combustion emissions into individual TAC emissions.

Particulate emissions from cement dust and truck tire and brake wear also were speciated into their individual TAC components for use in the cancer, chronic, and/or acute HRA analysis. The ARB speciation profiles used for these sources also are presented in Table A-3-1.

Lastly, the dockside catalytic control system (DoCCS) would emit small amounts of ammonia when the selective catalytic reduction system is in operation (0.063 pounds per hours) (MCC 2012). Ammonia has both chronic and acute non-cancer RELs. Hoteling emissions under Alternatives 1 and 2 are not associated with a peak hour emissions scenario and therefore are not evaluated for acute effects (as discussed in Section 3.1 of Appendix A2). However, the HRA did evaluate this TAC for the chronic non-cancer assessment.

2.3 SOURCE EMISSION RATE TRENDS

The extensive Project life analyzed in the HRA (up to 70 years for cancer risk) required wide-ranging predictions of the future operational characteristics of proposed emission sources. Two of the more important factors that would affect future emissions from Project sources are:

1. Reductions in emission factors due to 1) vehicle or equipment fleet turnover to cleaner standards and 2) the future phase-in of cleaner fuels as required by existing regulations or agreements. Cement delivery trucks and OGV assist tugboats would be the only Project sources affected by future regulations.
2. Changes in vehicle or equipment activity levels due to changes in cargo throughput.

The air quality analyses assume that all project future scenarios would achieve full build-out and throughput in year 2015 and that throughput levels would remain constant from this point forward. Therefore, the HRA evaluated source activity levels as being constant for the 70-year cancer risk period of analysis from 2015 through 2084. This is a conservative approach, as it is expected that it would take several years for the Project terminal achieve full throughput. For the CEQA Baseline scenario, the HRA evaluated source activities equal to year 2006 throughput levels and held constant for 70 years.

Based on these future trends, the HRA developed annualized 70-year 1) DPM and 2) PM and VOC (for ship boilers only) emission

rates for each emission source category four use in the cancer analysis. ARB speciation profiles were then applied to the PM and VOC emissions for non-diesel internal combustion sources to identify TACs for use in the HRA.

Project construction activities were evaluated as occurring between 2015 and 2017, although it is reasonable to assume that a delay in market demand would postpone the final phase 2 construction for a few years. For use in the cancer analysis, the HRA divided total DPM emissions from construction by 70 years to create 70-year annual average DPM emission rates. The analysis then added these emissions to the 70-year annual average operational DPM emissions to estimate total Project cancer effects.

Like the Project criteria pollutant modeling analyses, annual operational emission sources were modeled assuming various diurnal emission patterns to reflect the daily cycle of activity at the terminal, as shown in Table A-2-2 of Appendix A-2 of this EIR.

Proposed Environmental Controls

The HRA assumes that each Project scenario would operate consistent with approved/applicable regulations, as identified in EIR Section 3.2.1.3 (Regulatory Section). In addition, the unmitigated project scenarios include Port-wide CAAP measures that would occur independent of terminal lease agreements, as presented in EIR Section 3.2.2.2.

Attachment 1 of Appendix A-3 presents the TAC emission rates for sources evaluated in the HRA.

3.0 RECEPTOR LOCATIONS USED IN THE HRA

The HRA analyzed health impacts at a variety of locations (receptors) throughout the Project area, including locations of residents, offsite workers, and sensitive members of the public. According to OEHHA, sensitive receptors include schools, day care centers, convalescent homes, and hospitals.

For residents and offsite workers, the analysis utilized a regular coarse grid of 886 receptor points spaced 250 meters (m) apart and extending from the Project terminal property line, as described in Section 7.0 of Appendix A-2 of this EIR. Using internet searches, state database information, and Long Beach Unified School District maps, 111 discrete sensitive receptor locations were identified in proximity to the Project terminal and were included in the regular receptor grid. Table A-3-2 summarizes the locations of these sensitive receptors.

The HRA selected the maximally exposed individual (MEI) locations from the modeling receptor grids for three different receptor types: (1) residential; (2) occupational; and (3) sensitive. The locations of these receptor types assumed the following:

- Residential receptors occur within all residential or zoned residential areas, including public marinas (for possible live-aboards) located in the East Basin, Cerritos Channel, and Long Beach Marina; and
- Occupational receptors occur outside of the Project terminal property line, excluding over water or on public roadways.

Sensitive receptors occur at all schools, day care centers, convalescent homes, and hospitals in the surrounding Project area including all schools identified by the Long Beach Unified School District.

Once the MEI locations were determined for the CEQA increments, a fine receptor grid was developed around these points of high impact, as described in Section 7.0, Appendix A-2 of this EIR. The MEIs were then determined from a combination of coarse and fine grid modeling runs based on the assessed highest values by the HARP Model.

4.0 DISPERSION MODEL SELECTION AND INPUTS

Like the Project criteria pollutant ambient impact analysis, the HRA used the AERMOD (version 14134) dispersion model to estimate ambient concentrations of TACs from proposed sources. The HRA used AERMOD with the same methods as those presented in Appendix A-2 of this EIR.

In addition to the simulation of operational sources, the AERMOD modeling analysis also evaluated proposed construction emission sources for the cancer risk assessment. These sources were simulated as five volume sources with a width of 40 m over the construction footprint within the proposed expanded terminal boundary.

5.0 CALCULATION OF HEALTH RISKS

This HRA used the HARP model version 1.4f to assess health risks from proposed emission sources. The results of the AERMOD TACs dispersion modeling analyses were converted into a format that could be used by the HARP risk analysis module with the use of the HARP On-Ramp program. The HARP model subsequently determined cancer risk and chronic and acute non-cancer hazard indices from Project emission sources by factoring pollutant concentrations by pollutant-specific cancer potency factors and non-cancer reference exposure levels (RELs) defined by OEHHA (ARB 2012). An REL is an estimate of the maximum acceptable continuous inhalation exposure concentration for the human population (including sensitive subgroups) that would not produce appreciable harmful non-cancer effects.

5.1 TOXICITY FACTORS

The inhalation cancer potency factor is the probability that a person will contract cancer from the continuous inhalation of one milligram (mg) of a chemical per kilogram (kg) of body weight per day over a period of 70 years. The inhalation potency factor is used to calculate a potential inhalation cancer risk using the risk assessment algorithms defined by OEHHA. To assess the potential for non-cancer health effects resulting from chronic and acute inhalation exposure, OEHHA has established RELs to evaluate ambient TAC concentrations.

In addition to the inhalation exposure pathway, several non-inhalation exposure pathways also were incorporated in the HRA, including dermal adsorption, soil ingestion, home-grown produce ingestion (residential and sensitive receptors only), and mother's milk ingestion (residential and sensitive receptors only). The various exposure parameters and settings used in HARP for these exposure pathways are consistent with SCAQMD guidelines (SCAQMD 2005). The results of this study show that the contributions of the non-inhalation exposure pathways to the HRA results are negligible compared to the inhalation pathway.

Table A-3-3 presents the cancer risk, chronic and acute non-cancer toxicity factors, and target organs (end points) used to assess health risks in this study, as based on OEHHA guidance at the time of this analysis.

5.2 EXPOSURE SCENARIOS FOR INDIVIDUAL LIFETIME CANCER RISK

For the cancer risk assessment, the frequency and duration of exposure to TACs are assumed to be directly proportional to the risk. Therefore, this HRA used specific exposure assumptions for each receptor type, as described below.

Residential and Sensitive Receptors. The HRA estimated cancer risks for residential and sensitive receptors based on the use of breathing rates described in the *ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk (October 2003)* (ARB 2004a). For risk assessments only based on the inhalation pathway (as appropriate for DPM) where a single cancer risk value is required for a risk management decision, the ARB policy recommends that the potential cancer risk be based on the breathing rate representing the 80th percentile for a 70-year exposure period. The 80th percentile lifetime breathing rate is equal to 302 liters per kilogram of body weight per day (L/kg BW-day). Therefore, the HRA determined maximum residential and sensitive receptor cancer risk impacts by using the HARP 80th percentile point estimate analysis method (inhalation only) and an exposure duration of 24 hours per day, 350 days per year, and 70 years (i.e., the "Derived [Adjusted]" risk calculation method).

- **Occupational impacts**. Workers generally do not spend as much time within a project region compared to residents. The SCAQMD therefore allows an exposure adjustment for workers (SCAQMD 2005). Lifetime occupational exposure is based on a worker presence of eight hours per day, 245 days per year, for 40 years (as recommended by OEHHA [2003]). The breathing rate for workers is equal to 447 L/kg BW-day, which equates to 149 L/kg BW-day over an eight-hour workday (OEHHA 2003). Occupational cancer risk estimates were calculated directly in HARP assuming an 18-hour-per-day Project operating schedule. The use of an 18-hour-per-day Project operating schedule could yield conservative (over-predictive) results for workers because some sources (such as hoteling ships) would operate 24 hours per day, resulting in proportionately less

exposure during the time the worker is at the job site.

- Table A-3-4 summarizes the primary exposure assumptions used to calculate individual lifetime cancer risks by receptor type.

5.3 EXPOSURE ASSUMPTIONS FOR CANCER BURDEN

Cancer burden is an estimate of the number of persons that would contract cancer from exposure to proposed TAC emissions within a Project's zone of impact (ZOI). The ZOI equates to the area greater than a one in one million (1×10^{-6}) residential cancer risk increment, in accordance with SCAQMD risk assessment procedures (SCAQMD 2005).

Cancer burden calculations are based upon the approach used in the HARP program (ARB 2014). To estimate cancer burden, incremental Project cancer risks are determined, using residential exposure assumptions, for each census block located partially or completely within a Project's ZOI. The cancer risk increment for each census block is then multiplied by the census block's residential population, and the products are summed for all census blocks.

6.0 SIGNIFICANCE CRITERIA FOR PROJECT HEALTH RISKS

The CEQA significance of public health impacts produced by a project alternative is based upon incremental health effects, as calculated from the net change in health impacts between the alternative and the CEQA Baseline conditions (alternative minus CEQA Baseline). These incremental health effects values were compared to the thresholds described below to determine their significance.

The SCAQMD has established thresholds for determining the significance of health impacts from proposed land use development projects (SCAQMD 2011b). Based on these thresholds, a project would produce less than significant cancer risk impacts if its maximum CEQA incremental cancer risk is less than 10 chances in one million (10×10^{-6}). The Port has adopted this threshold as an acceptable risk level for new projects.

The SCAQMD would consider the cancer burden associated with a proposed project to be significant if it equaled or exceeded 0.5 cancer cases.

For chronic non-cancer exposures, the HRA compared maximum predicted annual TAC concentrations to applicable RELs developed by OEHHA. For acute non-cancer exposures, the HRA compared maximum predicted hourly TAC concentrations to applicable RELs developed by OEHHA. A health hazard index [HHI] (defined as the summation of predicted TAC concentrations divided by their respective RELs) less than one indicates that the exposure would present an acceptable or insignificant health risk (i.e., no adverse non-cancer effects). Hazard indexes above one represent the potential for an unacceptable or significant non-cancer effect.

7.0 PREDICTED HEALTH IMPACTS

Section 3.2 of this EIR summarizes the results of the project HRA. In addition, this appendix displays the residential cancer risks estimated for each project scenario within the analysis domain in graphic form (cancer risk isopleths). The exposure conditions associated with these figures are 24 hours per day, 350 days per year, 70 years, and an 80th percentile breathing rate.

Figures A-3-2 through A-3-4 show the distribution of predicted residential cancer risks within the modeling domain for the 1) CEQA Baseline, 2) Unmitigated Alternative 1, and 3) Unmitigated Alternative 1 CEQA increment (unmitigated Alternative 1 minus CEQA Baseline) scenarios, respectively. The unmitigated Alternative 1 CEQA increment cancer risk shown in Figure A-3-4 is derived by subtracting the data in Figure A-3-2 (CEQA Baseline cancer risk) from those in Figure A-3-3 (unmitigated Alternative 1 cancer risk).

Figures A-3-5 through A-3-8 also show the distribution of predicted residential cancer risks within the modeling domain for the 1) Unmitigated Alternative 2, 2) Unmitigated Alternative 2 CEQA increment, 3) Alternative 3 (No Project Alternative); and 4) Alternative 3 CEQA increment scenarios, respectively.

Figures A-3-4, A-3-6, and A-3 8 show that within the modeling domain, the CEQA incremental cancer risks for each project alternative would not exceed the 10 in one million significance threshold.

8.0 PM MORBIDITY & MORTALITY CONSIDERATIONS

8.1 HEALTH EFFECTS OF DPM EMISSIONS

Particles small enough to be inhaled into the deepest parts of the lung are of great concern to public health. Respirable particles (PM_{10}) can accumulate in the respiratory system and aggravate health problems such as asthma, bronchitis and other lung diseases. Children, the elderly, exercising adults, and those suffering from asthma are especially vulnerable to adverse health effects of PM_{10} and $PM_{2.5}$.

The proposed construction and operational activities would emit DPM, which is mainly $PM_{2.5}$. This section discusses potential health effects caused by DPM emissions and the regulatory impetus to address their health impacts.

Epidemiological studies substantiate the correlation between inhalation of ambient PM and increased mortality and morbidity (ARB 2002a, 2006c). The ARB conducted a study to assess the potential health effects associated with exposure to air pollutants arising from ports and goods movement in California (ARB 2006b and 2006c). This assessment evaluated numerous studies and research efforts and focused on PM and ozone (O_3), as they represent a large portion of known risk associated with exposure to outdoor air pollution. This analysis performed large-scale quantification of the health effects associated with emission sources, including premature deaths and increased cases of disease linked to exposure to PM and O_3 from ports and goods movement. Table A-3-5 presents the statewide PM and O_3 health effects identified by the ARB (ARB 2006h).

Although epidemiologic studies are numerous, few toxicology studies have investigated the responses of human subjects specifically exposed to DPM, and the available epidemiologic studies have not measured the DPM content of the outdoor pollution mix. ARB has made quantitative estimates of the public health impacts of DPM based on the assumption that DPM is as toxic as the general ambient PM mixture (ARB 2010).

The ARB study concluded that significant uncertainties are involved in quantitatively estimating the health effects of exposure to outdoor air pollution. Uncertain elements include emission and population exposure estimates, concentration-response functions, baseline rates of mortality and morbidity that are entered into concentration response functions, and occurrence of additional not-quantified adverse health effects (ARB 2006c). Many of these elements have a factor-of-two uncertainty. Numerous new studies, ongoing and proposed, will likely increase scientific knowledge and provide better estimates of DPM health effects.

It should be noted that PM in ambient air is a complex mixture that varies in size and chemical composition, as well as varying spatially and temporally. Different types of particles may cause different effects with different time courses, and perhaps only in susceptible individuals. The interaction between PM and gaseous pollutants adds additional complexity because in the ambient air, a number of pollutants tend to co-occur and have strong inter-relationships with each other (e.g., PM, SO_2, NO_2, CO, and O_3) (SCAQMD 2007; ARB 2006b, 2006c).

Various studies have been published that substantiate the correlation between the inhalation of ambient PM and increased cases of premature death from heart and/or lung diseases (Jerrett et al. 2005; Krewski et al. 2001; Pope et al. 1995, 2002). Studies such as these and others serve as the fundamental basis for ambient PM standards promulgated by the SCAQMD, ARB, EPA, and the World Health Organization.

8.2 EXISTING CEQA THRESHOLDS

8.2.1 Concentration Thresholds

Regulatory agencies set protective health-based short and long-term ambient concentration standards designed “in consideration of public health, safety, and welfare, including, but not limited to, health, illness, irritation to the senses, aesthetic value, interference with visibility, and effects on the economy" (Health and Safety Code Section 39606(a)(2)). Ambient Air Quality Standards (AAQS) specify concentrations and durations of exposure to air pollutants that reflect the relationships between the intensity and composition of air pollution and undesirable effects. The fundamental objective of an AAQS is to provide a basis for preventing or abating adverse health or welfare effects of air pollution.

In developing the AAQS, regulatory agencies in California consider existing health science

literature and recommendations from OEHHA. Standards are set to ensure that sensitive population sub-groups are protected from exposure to pollutants that may cause adverse health effects. In the case of PM, CAAQS are peer reviewed by the Air Quality Advisory Committee (AQAC), an external scientific committee comprised of world-class scientists in the PM field.

Within the SCAB, the SCAQMD further identifies localized ambient significance thresholds. These ambient concentration thresholds target pollutants the SCAQMD has determined are most likely to cause or contribute to an exceedance of the NAAQS or CAAQS. The SCAQMD ambient standards for PM are more stringent than either the NAAQS or the CAAQS: 1) for 24-hour PM10 and $PM_{2.5}$, 10.4 $\mu g/m^3$ and 2.5 $\mu g/m^3$ for construction and operation, respectively and 2) for annual PM10, 1.0 $\mu g/m^3$ for operations. These values were developed based on ARB guidance and epidemiological studies showing significant toxicity (resulting in mortality and morbidity) related to exposure to fine particles.

The Project dispersion analyses determined ambient PM_{10} and $PM_{2.5}$ concentrations and their localized significance under Impact AQ-4 in Section 3.2.2.3.

8.2.2 Quantifying Morbidity and Mortality

A recent study by the ARB used a health effects model based on multiple epidemiological studies, which quantified expected non-cancer impacts of mortality and morbidity from ambient PM exposure (e.g., premature deaths, cardiac and respiratory hospitalizations, asthma and other lower respiratory symptoms, and lost work/school days). The study focused on large-scale applications such as the benefits of attaining the state air quality standard for PM2.5, the impacts of goods movement emissions on a statewide and broad regional level, and the impacts from combined operations at the POLB and POLA (ARB 2006b and 2006c). Focusing on PM is also consistent with recent ARB studies of mortality and morbidity impacts from California ports (ARB 2006b, 2006c, and 2008a). As noted in the ARB analysis, “The air pollutants of concern related to goods movement are largely those associated with diesel-fueled engines, which cover nearly all of the trucks, locomotives, off-road equipment, and ships.” (ARB 2006b).

ARB staff have indicated that it would be neither appropriate nor meaningful to apply the health effects model used in the ARB study to quantify the mortality and morbidity impacts of PM on a relatively small, localized Port project for CEQA purposes because values calculated for a specific location would fall within the margin of error of the ARB methodology (ARB 2002b). Since this methodology was designed for larger-scale projects affecting a much larger population, it may not be sensitive enough to provide accurate results for projects affecting much smaller populations.

For example, potential health effects from a large Port project would be restricted to an area generally within 3 miles of the terminal that encompasses about 87,000 people, as impacts would be highest nearest the Port. In contrast, ARB’s study considered a 40-mile by 50-mile area encompassing much of the population of the SCAB (several million people). This methodology generally follows the approach used by ARB to estimate statewide health impacts from ports and goods movement in California (ARB 2006b), incorporating the recent draft methodology for mortality published by ARB (2008b). The methodology also is consistent with the methodology developed by POLA for quantifying mortality and morbidity (POLA 2011b).

Measured PM, usually as PM2.5 or PM10, has been correlated to health effects that are of particular interest with regulators and communities surrounding the Port. These health effects, such as exacerbation of asthma, increased hospitalizations, and premature deaths, are correlated with ambient PM concentrations. Various studies have been published over the past 10 years that substantiate the correlation between the inhalation of ambient PM and increased cases of premature death from heart and/or lung diseases (Jerrett et al. 2005; Krewski et al. 2001; Pope et al. 1995, 2002). Studies such as these serve as the fundamental basis for PM air quality standards promulgated by ARB, EPA, and the World Health Organization. Therefore, this methodology uses the concentration/response (C/R) functions developed for exposure to ambient PM to quantify mortality and morbidity.

The SCAQMD localized significance threshold for a 24-hour PM2.5 concentration is 2.5 $\mu g/m^3$ for operational impacts. This value is only 7 percent of the 24-hour NAAQS and 21 percent

of the annual CAAQS (there is no 24-hour CAAQS for $PM_{2.5}$). This value is based on ARB guidance and epidemiological studies showing significant toxicity (resulting in mortality and morbidity) related to exposure to fine particles. Since mortality and morbidity studies represent major inputs used by the ARB and EPA to set CAAQS and NAAQS, project-level mortality and morbidity impacts were indirectly evaluated as part of the $PM_{10}/PM_{2.5}$ dispersion modeling analyses conducted in this EIR. Therefore, it is appropriate to quantify project PM mortality and morbidity effects only if the Project dispersion modeling analysis identifies a significant $PM_{2.5}$ concentration and impact. This general approach follows the guidance in CEQA Section 15126.2(a), which provides that an EIR should focus on "significant" impacts, and further provides that an EIR's discussion of significant impacts should include "health and safety problems caused by the physical changes."

As shown in Section 3.2.2.3 of this EIR, the maximum mitigated Project alternative minus CEQA Baseline 24-hour $PM_{2.5}$ impact outside of the MCC terminal is 6.00 $\mu g/m^3$ (Alternative 1), which is greater than the significance threshold of 2.5 $\mu g/m^3$. The footprint of this $PM_{2.5}$ ambient threshold exceedance only would extend a few hundred meters beyond the proposed Project terminal boundary (as shown in Figure A-2-7 in Appendix A2). There are no residents within this impact zone. Therefore, no further analysis is required and emissions of PM from each Project alternative would produce less than significant impacts to mortality and morbidity levels.

9.0 RISK UNCERTAINTY

Risk estimates, by their nature, cannot be completely accurate because they are *predictions* of risk. Scientists, medical experts, regulators, and practitioners do not completely understand how toxic air pollutants harm human cells and how different pollutants may interact with each other in the human body. The exposure assessment often relies on computer models that are based on numerous assumptions, both in terms of present and future conditions.

When information is missing or uncertain, risk analysts generally make assumptions that tend to prevent them from underestimating the potential risk. These assumptions generally are very conservative so they provide a margin of safety to protect human health. For example, regarding exposure durations for cancer risks, essentially no one resides in one location 24 hours a day and 350 days a year for 70 years. Additionally, there is no one standard way of conducting health risk assessments, leading to possible problems in comparing different risks. Assumptions also change over time and even HRAs completed using the same models can produce different results.

OEHHA provided the following discussion of risk assessment uncertainties (OEHHA 2003).

> *There is a great deal of uncertainty associated with the process of risk assessment. The uncertainty arises from lack of data in many areas necessitating the use of assumptions. The assumptions used in these guidelines are designed to err on the side of health protection in order to avoid underestimation of risk to the public. Sources of uncertainty, which may either over estimate or under estimate risk, include: 1) extrapolation of toxicity data in animals to humans; 2) uncertainty in the estimation of emissions; 3) uncertainty in the air dispersion models; and 4) uncertainty in the exposure estimates. Uncertainty may be defined as what is not known and may be reduced with further scientific studies. In addition to uncertainty, there is a natural range or variability in the human population in such properties as height, weight, and susceptibility to chemical toxicants. Scientific studies with representative individuals and large enough sample size can characterize this variability.*
>
> *Interactive effects of exposure to more than one carcinogen or toxicant are also not necessarily quantified in the HRA. Cancer risks from all emitted carcinogens are typically added, and hazard quotients for substances impacting the same target organ system are added to determine the hazard index (HI). Many examples of additivity and synergism (interactive effects greater than additive) are known. For substances that act synergistically, the HRA could underestimate the risks. Some substances may have antagonistic effects (lessen the toxic effects produced by another substance). For substances that act antagonistically, the HRA could overestimate the risks.*
>
> *Other sources of uncertainty, which may underestimate or overestimate risk, can be found in exposure estimates where little or no data are available (e.g., soil half-life and*

dermal penetration of some substances from a soil matrix).

The differences among species and within human populations usually cannot be easily quantified and incorporated into risk assessments. Factors including metabolism, target site sensitivity, diet, immunological responses, and genetics may influence the response to toxicants. The human population is much more diverse both genetically and culturally (e.g., lifestyle, diet) than inbred experimental animals. The intraspecies variability among humans is expected to be much greater than in laboratory animals. Adjustment for tumors at multiple sites induced by some carcinogens could result in a higher potency. Other uncertainties arise 1) in the assumptions underlying the dose-response model used, and 2) in extrapolating from large experimental doses, where, for example, other toxic effects may compromise the assessment of carcinogenic potential, to usually much smaller environmental doses. Also, only single tumor sites induced by a substance are usually considered. When epidemiological data are used to generate a carcinogenic potency, less uncertainty is involved in the extrapolation from workplace exposures to environmental exposures. However, children, a subpopulation whose hematological, nervous, endocrine, and immune systems, for example, are still developing and who may be more sensitive to the effects of carcinogens on their developing systems, are not included in the worker population and risk estimates based on occupational epidemiological data are more uncertain for children than adults. Finally, the quantification of each uncertainty applied in the estimate of cancer potency is itself uncertain.

Thus, risk estimates generated by an HRA should not be interpreted as the expected rates of disease in the exposed population but rather as estimates of potential risk, based on current knowledge and a number of assumptions. Additionally, the uncertainty factors integrated within the estimates of noncancer RELs are meant to err on the side of public health protection in order to avoid underestimation of risk. Risk assessment is best used as a ruler to compare one source with another and to prioritize concerns. Consistent approaches to risk assessment are necessary to fulfill this function.

Modeling Parameters Uncertainty

There are uncertainties in the predicted risks, that are associated with the air dispersion modeling portion of the HRA. For example, specific assumptions and/or decisions regarding the selection of meteorological data, source representation, source parameters, plume rise adjustments, and the use of buildings and the resulting uncertainty associated with these assumptions can have an effect on the HRA results.

Uncertainty in forecasting source activity (e.g., traffic volumes) is an important source of potential error, as truck emissions tend to have a significant contribution to risks. For this HRA, to ensure that a conservative analysis is conducted the best available information was used in selecting:

1. An appropriate dispersion mode for establish ground-level concentrations;
2. Meteorological data which are representative of local conditions, including the use of a split domain to cover both off-shore and on-shore meteorological conditions;
3. Source representation;
4. Source parameters; and
5. Plume rise adjustments and building downwash considerations, etc.

This HRA analysis used EPA's AERMOD, representing the latest default regulatory dispersion model. Dispersion models have historically been unable to predict concentrations for a particular time and place with great reliability for short averaging times. According to EPA's Guideline on Air Quality Models (40 CFR 51 Appendix W):

1. Models are more reliable for estimating longer time-averaged concentrations than for estimating short-term concentrations at specific locations; and
2. The models are reasonably reliable in estimating the magnitude of the highest concentrations occurring at a certain time and location. For example, errors in highest estimated concentrations of ± 10 to 40 percent are found to be typical, that is, certainly well within the often-quoted factor-of-two accuracy that has been recognized for these models. However, predicted short-term concentrations for

specific locations typically would correlate poorly with actual observed concentrations.

10.0 REFERENCES

California Air Resources Board. 2011. Home Page: Speciation Profiles Used in ARB Modeling. Available at http://www.arb.ca.gov/ei/speciate/speciate.htm.

_____. 2012. Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values. Web site: http://www.arb.ca.gov/toxics/healthval/contable.pdf.

_____. 2014. Hotspots Analysis Reporting Program. Website: http://www.arb.ca.gov/toxics/harp/harp.htm.

_____. 2004a. Recommended Interim Risk Management Policy. Web site: http://www.arb.ca.gov/toxics/harp/rmpolicyfaq.htm.

_____. 2005a. Personal communication with Larry Hunsaker.

_____. 2008a. Methodology for Estimating Premature Deaths Associated with Long-term Exposure to Fine Airborne Particulate Matter in California. http://www.arb.ca.gov/research/health/pm-mort/pm-mort_final.pdf.

MCC. 2010. Ammonia emissions provided to the Port on August 15, 2012.

Office of Environmental Health Hazard Assessment (OEHHA). 2003. Air Toxics Hot Spots Program Risk Assessment Guidelines. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

South Coast Air Quality Management District (SCAQMD). 2003. Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions.

_____. 2005. Risk Assessment Procedures for Rules 1401 and 212. Version 7.0. Available at http://www.aqmd.gov/home/permits/risk-assessment.

_____. 2011a. Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics “Hot Spots” Information and Assessment Act (AB2588). Available at http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=4.

_____. 2011b. Air Quality Significance Thresholds. Web site: http://www.aqmd.gov/ceqa/handbook/signthres.doc. October.

Wikipedia. 2014. Portland Cement. Available at http://en.wikipedia.org/wiki/Portland_cement.

Tables

This page intentionally left blank.

Tables

Table A-3-1. Speciation Profiles Used in the HRA (page 1 of 2)							
Pollutant	**CAS Number**	**Weight Percent of TOG or PM10**					
		TOG Profile No. 504	**PM_{10} Profile No. 111**	**PM_{10} Profile No. 112**	**PM_{10} Profile No. 472**	**PM_{10} Profile No. 473**	**PM_{10} Profile**
Acetaldehyde	75070						
Ammonia	7664417				0.019	0.003	
Antimony	7440360						
Arsenic	7440382		0.04	0.54		0.001	
Benzene	71432	1.91					
Bromine	7726956				0.002	0.004	
Cadmium	7440439			0.05			
Chlorine	7782505				0.78	0.15	
Copper	7440508		0.05		0.049	1.149	
Formaldehyde	50000	0.088					
Hexavalent Chromium	18540299		0.028	0.027	0.0002	0.006	
Lead	7439921			0.55	0.016	0.005	
Manganese	7439965		0.05		0.01	0.17	
Mercury	7439976						
Naphthalene	91203	0.062					
n-Hexane	110543	1.403					
Nickel	7440020		0.55	0.05	0.005	0.066	
Phosphorous	7723140				0.125		
Propylene	115071	4.023					
Silica	1175						22
Sulfates	9960		50.26	25	0.25		
Toluene	108883	1.897					
Vanadium	7440622		0.55			0.066	
Xylene	1210	0.971					
Zinc	7440666			0.55	0.531	0.027	
Applicable Emission Sources		Ship boilers (residual or distillate)	Ship boilers (residual fuel)	Ship boilers (distillate fuel)	Tire wear	Brake wear	Cement Dust

Notes:

1. TOG = total organic gas, of which VOC is a subset.
2. For Profile No. 504, TOG = VOC ÷ 0.8347.
3. For all PM_{10} profiles, hexavalent chromium is assumed to be 5 percent of total chromium, according to ARB's AB2588 Technical Support Document, page 57 (1989).
4. TACs contributing a negligible amount to the total health risk results were screened out of the HRA and are not shown in this table.
5. Profile for cement dust derived from mass balance of calcium silicate.

Source: ARB 2011, except profile for cement dust from (Wikipedia 2014).

Table A-3-1. Speciation Profiles Used in the HRA (page 2 of 2)

Pollutant	CAS Number	Weight Percent of TOG or PM10		
		Higher of TOG Profile Nos. 9/818	Higher of PM Profile Nos. 116/425	PM Profile No. 425
1,3 Butadiene	106990	7		
Acetaldehyde	75070	7		
Ammonia	7664417		0.3	0.3
Antimony	7440360			
Arsenic	7440382		0.0004	0.0004
Benzene	71432	8		
Bromine	7726956			
Cadmium	7440439		0.01	0.01
Chlorine	7782505		0.03	0.03
Copper	7440508		0.003	0.003
Ethyl benzene	100414	0.3		
Formaldehyde	50000	15		
Hexavalent Chromium	18540299		0.000005	0.000005
Lead	7439921		0.003	0.003
Manganese	7439965		0.002	0.002
Mercury	7439976		0.003	0.003
Methanol	67561	0.03		
Methyl Ethyl Ketone	78933	1		
m-xylene	108383	1		
Naphthalene	91203	0.1		
n-Hexane	110543	0.2		
Nickel	7440020		0.002	0.002
o-xylene	95476	0.3		
Phosphorous	7723140			
Propylene	115071	17		
p-xylene	106423	0.1		
Selenium	7782492		0.001	0.001
Silica	1175			
Styrene	100425	01		
Sulfates	9960		15	
Toluene	108883	1		
Vanadium	7440622		1	0.002
Xylene	1210			
Zinc	7440666			
Applicable Emission Sources		OGV, Tugboat, Truck, and Payloader IC Engines	OGV IC Engine	Tugboat, Truck, and Payloader IC Engine

Notes:

1. TOG = total organic gas, of which VOC is a subset.
2. For Profile Nos. 9/818, TOG = VOC ÷ 0.8347.
3. For all PM_{10} profiles, hexavalent chromium is assumed to be 5 percent of total chromium, according to ARB's AB2588 Technical Support Document, page 57 (1989).
4. TACs contributing a negligible amount to the total health risk results were screened out of the HRA and are not shown in this table.

Source: ARB 2011.

Table A-3-2. Sensitive Receptors Evaluated in the HRA

Sensitive Receptor	Street Address	City	E UTM (m)	N UTM (m)
Day Care Centers				
12th Street Head Start	1212 Long Beach Blvd	Long Beach	389912	3738586
8th Street Early Head Start	820 Long Beach Boulevard	Long Beach	389883	3738053
A Love 4 Learning Academy	306 Elm Avenue	Long Beach	390048	3737366
ABC 123 Long Beach Learning Center	909 Pine Avenue	Long Beach	389599	3738178
Alpha Project	1301 W. 12th Street	Long Beach	388060	3738639
Aspiranet Foster Family Agency - Sub Agency	1043 Pine Avenue	Long Beach	389600	3738360
Atlantic Headstart	1862 Atlantic Ave	Long Beach	390314	3739617
Benford Family Child Care	530 E 8th St.	Long Beach	390224	3738014
Cabrillo Child Development Center	2205 San Gabriel Ave.	Long Beach	386680	3739773
Child Care Center At St Mary Medical Center	930 Elm Ave	Long Beach	390021	3738204
Childtime Learning Center	1 World Trade Ctr # 199	Long Beach	388899	3737062
Comprehensive Child Development	2565 Pacific Ave.	Long Beach	389484	3741031
Elm Street Head Start	1425 & 1429 Elm Avenue	Long Beach	389991	3738889
Fords Family Day Care	2726 San Francisco Ave	Long Beach	388588	3741372
Garfield Head Start	2240 Baltic Avenue	Long Beach	387670	3740408
Jenkins Day Care	1720 Cerritos Ave	Long Beach	390961	3739326
Job Corp Head Start	1903 Santa Fe Ave.	Long Beach	387501	3739748
Jones Family Child Care	744 East 15th Street	Long Beach	390444	3739033
Kelly's Care	943 N Washington Pl	Long Beach	390636	3738218
Kelly's Kids Daycare Center	855 W Willow St	Long Beach	388761	3741139
Little Lighthouse Educational Childcare Center	911 Pine Avenue	Long Beach	389577	3738176
Long Beach Blvd Head Start	2236 Long Beach Blvd.	Long Beach	389931	3740374
Long Beach Center For Child Development	622 E. Hill Street	Long Beach	390330	3740309
Long Beach Child Development Center	2222 Olive Ave	Long Beach	390492	3740339
Long Beach Day Nursery	2801 Atlantic Ave	Long Beach	390295	3741518
Long Beach Day Nursery - West Branch	1548 Chestnut Ave	Long Beach	389282	3739139
Loves Family Child Care	527 Daisy Ave.	Long Beach	388917	3737693
Lucy's Baby Care	940 Maine Ave	Long Beach	388828	3738211
N2 Lil Folkz	1624 Chestnut Ave	Long Beach	389217	3739222
Oakwood Children's Center	2650 Pacific Ave	Long Beach	389536	3741216
Old King Cole Day Care	3300 Oregon Ave	Long Beach	388795	3742493
P.A.L. Family Day Care	1980 Daisy Ave	Long Beach	389000	3739857
Pacific Head Start	2179 Pacific Ave	Long Beach	389473	3740259
Pine Head Start	927 Pine Ave.	Long Beach	389581	3738225
Progressive Steps Children Center	911 Pine Ave	Long Beach	389621	3738176
Ruiz Family Daycare	2670 Daisy Ave	Long Beach	388990	3741078
Ruiz Family Daycare	2670 Daisy Ave	Long Beach	388979	3741256
Smart & Manageable	2054 Myrtle Ave	Long Beach	390588	3739997
Tender Child Care	211 E 29th St	Long Beach	389844	3741688
Un Mundo De Amigos Preschool	1480 Long Beach Blvd.	Long Beach	389894	3738960
West Anaheim Child Care Center	440 W. Anaheim Street	Long Beach	389183	3738668
West Child Development Center	2125 Santa Fe Ave.	Long Beach	387505	3740187
YMCA Fairfield 3rd Street Preschool	607 E. 3rd Street	Long Beach	390292	3737325
Young Horizons Child Development Centers	501 Atlantic Ave	Long Beach	390248	3737631
Young Horizons Child Development Centers	1840 Pacific Ave	Long Beach	389515	3739582
Young Horizons Child Development Centers	2418 Pacific Ave	Long Beach	389526	3740732
Young Horizons/El Jardin De La Felicidad	507 Pacific Ave.	Long Beach	389513	3738709

Note: E = Easting and N = Northing geographic reference locations in Universal Transverse Mercator (UTM) coordinates.

Table A-3-2. Sensitive Receptors Evaluated in the HRA (continued)

Sensitive Receptor	Street Address	City	E UTM (m)	N UTM (m)
Schools				
Abraham Lincoln Elementary School (ES)	1175 E 11th St	Long Beach	390986	3738499
Artesia Well Preparatory Academy	1235 Pacific Ave	Long Beach	389454	3738592
Birney Elementary	710 West Spring St.	Long Beach	388875	3741876
Burnett Elementary	565 East Hill St.	Long Beach	390228	3740326
Cabrillo (Juan Rodriguez) High School (HS)	2001 Santa Fe Ave.	Long Beach	387438	3739936
Cambodian Christian	2474 Pacific Ave	Long Beach	389562	3740833
Cesar Chavez Elementary	730 West Third St.	Long Beach	388744	3737296
Constellation Community Charter Middle	620 Olive Ave.	Long Beach	390505	3737788
Edison Elementary	625 Maine Ave.	Long Beach	388805	3737814
First Baptist Church School	1000 Pine Ave	Long Beach	389638	3738317
First Lutheran Day Care, Preschool and ES	946 Linden Ave	Long Beach	390184	3738233
Franklin Classical Middle	540 Cerritos Ave.	Long Beach	390943	3737669
George Washington Middle School	1450 Cedar Ave	Long Beach	389390	3738917
Holy Innocents Elementary School	2500 Pacific Ave	Long Beach	389544	3740927
Horace Mann Elementary School	257 Coronado Ave.	Long Beach	393125	3736887
Hudson Development Center Daycare and ES	2335 Webster Ave	Long Beach	387067	3740604
International Elementary School	700 Locust Ave.	Long Beach	389714	3737893
Jackie Robinson Academy	2750 Pine Ave	Long Beach	389600	3741418
James A Garfield Elementary	2240 Baltic Ave	Long Beach	387710	3740410
Lafayette Elementary School	2445 Chestnut Ave	Long Beach	389278	3740828
Long Beach Montessori School	525 E. 7th St	Long Beach	390202	3737906
Mary McLeod Bethune Elementary School	2101 San Gabriel Ave.	Long Beach	386739	3740042
Muir Elementary	3038 Delta Ave.	Long Beach	387933	3742038
New City School	1230 Pine Ave	Long Beach	389586	3738611
Oakwood Academy	2951 Long Beach Blvd	Long Beach	389888	3741829
PAAL Academy HS	1545 Long Beach Blvd.	Long Beach	389834	3739078
Polytechnic High School	1600Atlantic Ave.	Long Beach	390337	3739143
Regency High School	490 W. 14th Street	Long Beach	389126	3738772
Renaissance High School for the Arts	235 East Eighth St.	Long Beach	389785	3738088
Roosevelt Elementary School	1574 Linden Ave.	Long Beach	390166	3739112
Saint Anthony High School	620 Olive Ave.	Long Beach	390534	3737794
Saint Anthony Preschool/ Elementary School	855 East Fifth St.	Long Beach	390580	3737582
Saint Lucy School	2320 Cota Ave.	Long Beach	387406	3740569
Select Community Day (Secondary)	5869 Atlantic Ave.	Long Beach	390248	3737371
Stephens Middle	1830 West Columbia St.	Long Beach	387350	3741632
Stevenson Elementary School	515 Lime Ave.	Long Beach	390365	3737647
True Social Justice Academy	905 Atlantic Avenue	Long Beach	390276	3738162
Will J Reid HS	2153 Hill St.	Long Beach	387259	3740150

Note: E = Easting and N = Northing geographic reference locations in UTM coordinates.

Table A-3-2. Sensitive Receptors Evaluated in the HRA (continued)

Sensitive Receptor	Street Address	City	E UTM (m)	N UTM (m)
Convalescent Homes				
Akin's Post Acute Rehab Hospital; Atlantic Memorial Healthcare Center	2750 Atlantic Ave	Long Beach	390344	3741381
Bay Breeze Care	1653 Santa Fe Ave	Long Beach	387445	3739252
Bellagio Manor	1046 East 4th St.	Long Beach	390833	3737451
Breakers Of Long Beach, The	210 E Ocean Blvd	Long Beach	389740	3736892
Burnett Home Care	1740 West Burnett St.	Long Beach	387440	3740697
Caruthers Royale Care	2204 Lime Ave.	Long Beach	390386	3740307
Deluxe Guest Home	3260 Pine Ave.	Long Beach	389587	3740686
Deluxe Guest Home Ii	3266 Pine Avenue	Long Beach	389586	3740722
Harbor View Rehabilitation Center	490 W. 14th Street	Long Beach	389116	3738782
Healthview Pine Villa Assisted Living	117 East 8th Street	Long Beach	389645	3737994
Loram Manor	1925 Gemini Street	Long Beach	387269	3740453
Olive Tree Home	1035 Olive Street	Long Beach	390455	3738345
Padua House	940 Atlantic Avenue	Long Beach	390278	3738221
Regency High School	490 W. 14th Street	Long Beach	389126	3738772
Rmr Residential Care Facility, LLC	2900 De Forest Avenue	Long Beach	388554	3741647
Royal Care Skilled Nursing Center	2725 Pacific Avenue	Long Beach	389543	3741355
Villa Maria Care Center	723 E 9th St	Long Beach	390433	3738121
Hospitals				
Earl & Lorraine Miller Children's Hospital; Long Beach Memorial Medical Center and Hospital	2801 Atlantic Ave	Long Beach	390174	3741497
Long Beach Doctors Hospital	1725 Pacific Ave	Long Beach	389456	3739345
Pacific Hospital of Long Beach	2776 Pacific Ave	Long Beach	389484	3741460
St Mary Medical Center	1050 Linden Ave	Long Beach	390100	3738380
Tom Redgate Memorial Hospital	1775 Chestnut Ave	Long Beach	389227	3739447

Note:
E = Easting and N = Northing geographic reference locations in UTM coordinates.

Table A-3-3. Toxicity Factors Used in the MCC Project HRA Analysis

Pollutant	CAS Number	Inhalation Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Chronic Inhalation REL ($\mu g/m^3$)	Target Organ for Chronic Exposure	Acute Inhalation REL ($\mu g/m^3$)	Target Organ for Acute Exposure
DPM [a]	9901	1.1	5	I	—	—
Acetaldehyde	75070	0.01	9	I	—	—
Antimony	7440360	—	0.2	I	—	—
Benzene	71432	0.1	60	C,E,G	1,300	C,E,F,H
Chlorine	7782505	—	0.2	I	210	D,I
Formaldehyde	50000	0.021	3	D,I	94	D,F,I
Hex. Chromium [b]	18540299	510	0.2	E,I	—	—
Xylenes	1210	—	700	G,I	22,000	D,I
Naphthalene	91203	0.12	9	I	—	—
n-Hexane	110543	—	7,000	G	—	—
Phosphorous	7723140	—	0.07	C,H	—	—
Propylene	115071	—	3,000	I	—	—
Toluene	108883	—	300	C,G,I	37,000	C,D,G,H,I
Ammonia	7664417	—	200	I	3,200	D,I
Arsenic [b]	7440382	12	0.03	B,C,G,J	0.19	C,H
Bromine	7726956	—	1.7	I	—	—
Cadmium [b]	7440439	15	0.02	I,M	—	—
Copper	7440508	—	2.4	I	100	I
Lead [b]	7439921	0.042	—	—	—	—
Manganese	7439965	—	0.2	G	—	—
Mercury [b]	7439976	—	0.09	F,G,M	1.8	C,H
Nickel [b]	7440020	0.91	0.05	A,E,I	6.0	F,I
Silica	1175	—	3	I	—	—
Sulfates	9960	—	25	I	120	I
Zinc	7440666	—	35	B,E,I	—	—
Vanadium	7440622	—	—	—	30	D,I

Notes:

a. For diesel internal combustion engines, only DPM emissions were evaluated for cancer risk and chronic hazard indices, because DPM is a surrogate for the combined health effects associated with exposure to diesel exhaust emissions. For the acute hazard indices, DPM was not evaluated; rather, emissions of the 14 other toxic air contaminants, derived from combustion speciation profiles, were evaluated for all emission sources.

b. Arsenic, cadmium, hexavalent chromium, lead, mercury, and nickel were also evaluated for noninhalation exposure pathways. For arsenic, the cancer risk oral slope factor is 1.5 $(mg/kg/day)^{-1}$, and the noncancer chronic oral REL is 0.0003 mg/kg/day. For cadmium, the noncancer chronic oral REL is 0.0005 mg/kg/day. For cadmium, the noncancer chronic oral REL is 0.02 mg/kg/day. For lead, the cancer risk oral slope factor is 0.0085 $(mg/kg/day)^{-1}$. For mercury, the noncancer chronic oral REL is 0.0003 mg/kg/day. For nickel, the noncancer chronic oral REL is 0.05 mg/kg/day.

c. The acute exposure period is 1 hour for all compounds except benzene (6 hours) and arsenic (4 hours).

Key to noncancer acute and chronic exposure target organs:

A. Alimentary Tract
B. Cardiovascular System
C. Developmental System
D. Eye
E. Hematologic System
F. Immune System
G. Nervous System
H. Reproductive System
I. Respiratory System
J. Skin
K. Bone
L. Endocrine System
M. Kidney

Source: ARB 2012.

Table A-3-4. Exposure Assumptions for Individual Lifetime Cancer Risk

Receptor Type	Exposure Frequency		Exposure Duration (Years)	Breathing Rate (L/kg-day)
	Hours/Day	Days/Year		
Residential	24	350	70	302
Occupational	8	245	40	447
Sensitive	24	350	70	302

Notes:

The residential breathing rate of 302 L/kg BW-day represents the 80th percentile breathing rate.

The occupational exposure frequency of 245 days/year represents five days/week, 49 weeks/year. The occupational breathing rate of 447 L/kg BW-day equates to 149 L/kg BW-day over an eight-hour work day (OEHHA 2003, ARB 2004a, and SCAQMD 2005).

Table A-3-5. Annual 2005 Statewide PM and Ozone Health Effects Associated with Ports and Goods Movement in California[1]

Health Outcome	Cases Per Year	Uncertainty Range (Cases per Year) [2]
Premature Death	2,400	720 to 4,100
Hospital Admissions (respiratory causes)	2,000	1,200 to 2,800
Hospital Admissions (cardiovascular causes)	830	530 to 1,300
Asthma and Other Lower Respiratory Symptoms	62,000	24,000 to 99,000
Acute Bronchitis	5,100	-1,200 to 11,000
Work Loss Days	360,000	310,000 to 420,000
Minor Restricted Activity Days	3,900,000	2,200,000 to 5,800,000
School Absence Days	1,100,000	460,000 to 1,800,000

Notes:

1 Does not include the contributions from particle sulfate formed from SO_x emissions, which is being addressed with several ongoing emissions, measurement, and modeling studies.

2 Range reflects uncertainty in health concentration-response functions, but not in emissions or exposure estimates. A negative value as a lower bound of the uncertainty range is not meant to imply that exposure to pollutants is beneficial; rather, it is a reflection of the adequacy of the data used to develop these uncertainty range estimates (ARB 2008a).

This page intentionally left blank.

Figures

This page intentionally left blank.

Figure A-3-2. CEQA Baseline Cancer Risk Isopleths (probability per million of causing cancer).

Figure A-3-3. Unmitigated Alternative 1 Cancer Risk Isopleths (probability per million of causing cancer).

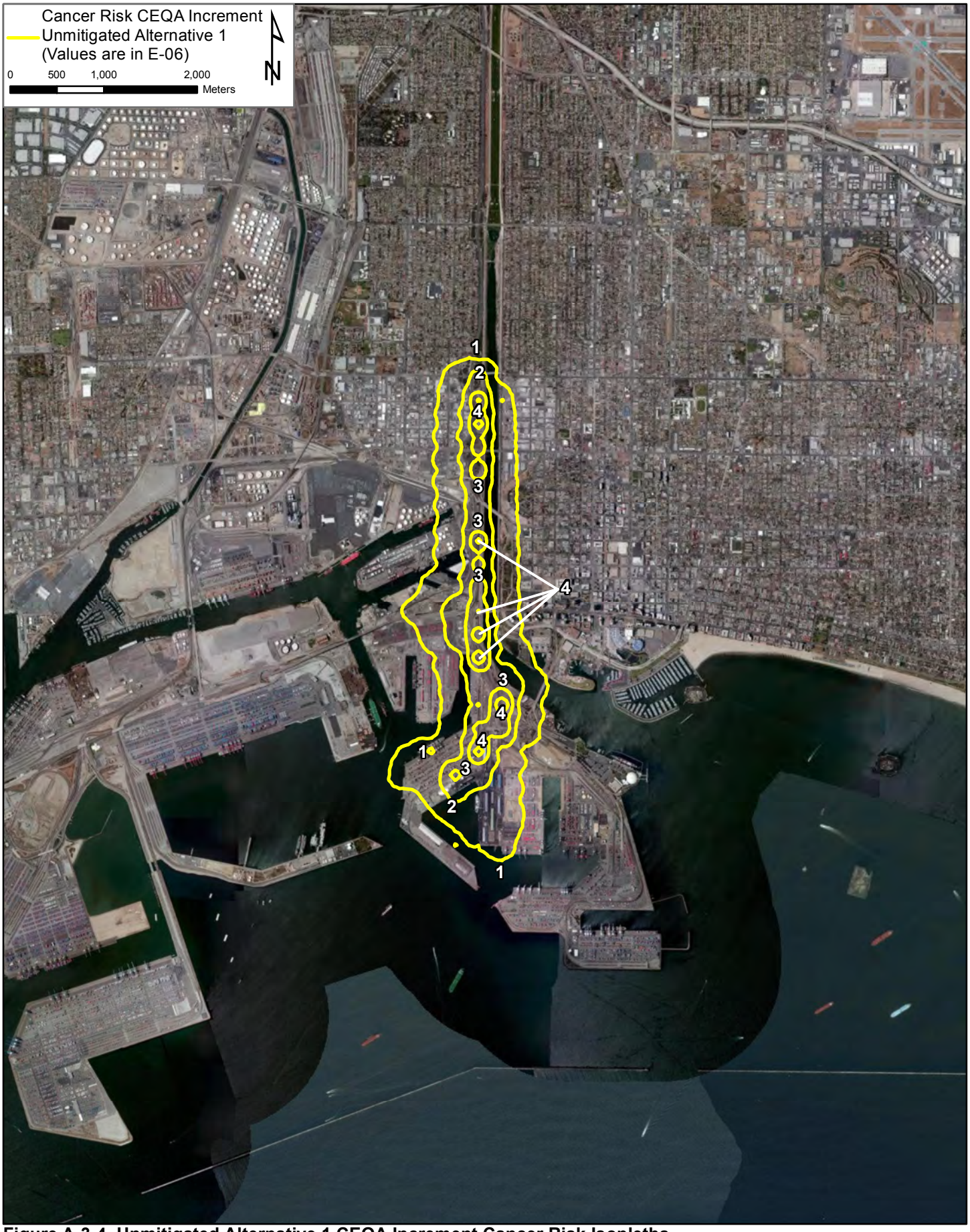


Figure A-3-4. Unmitigated Alternative 1 CEQA Increment Cancer Risk Isopleths (probability per million of causing cancer).

Figure A-3-5. Unmitigated Alternative 2 Cancer Risk Isopleths (probability per million of causing cancer).

Figure A-3-6. Unmitigated Alternative 2 CEQA Increment Cancer Risk Isopleths (probability per million of causing cancer).

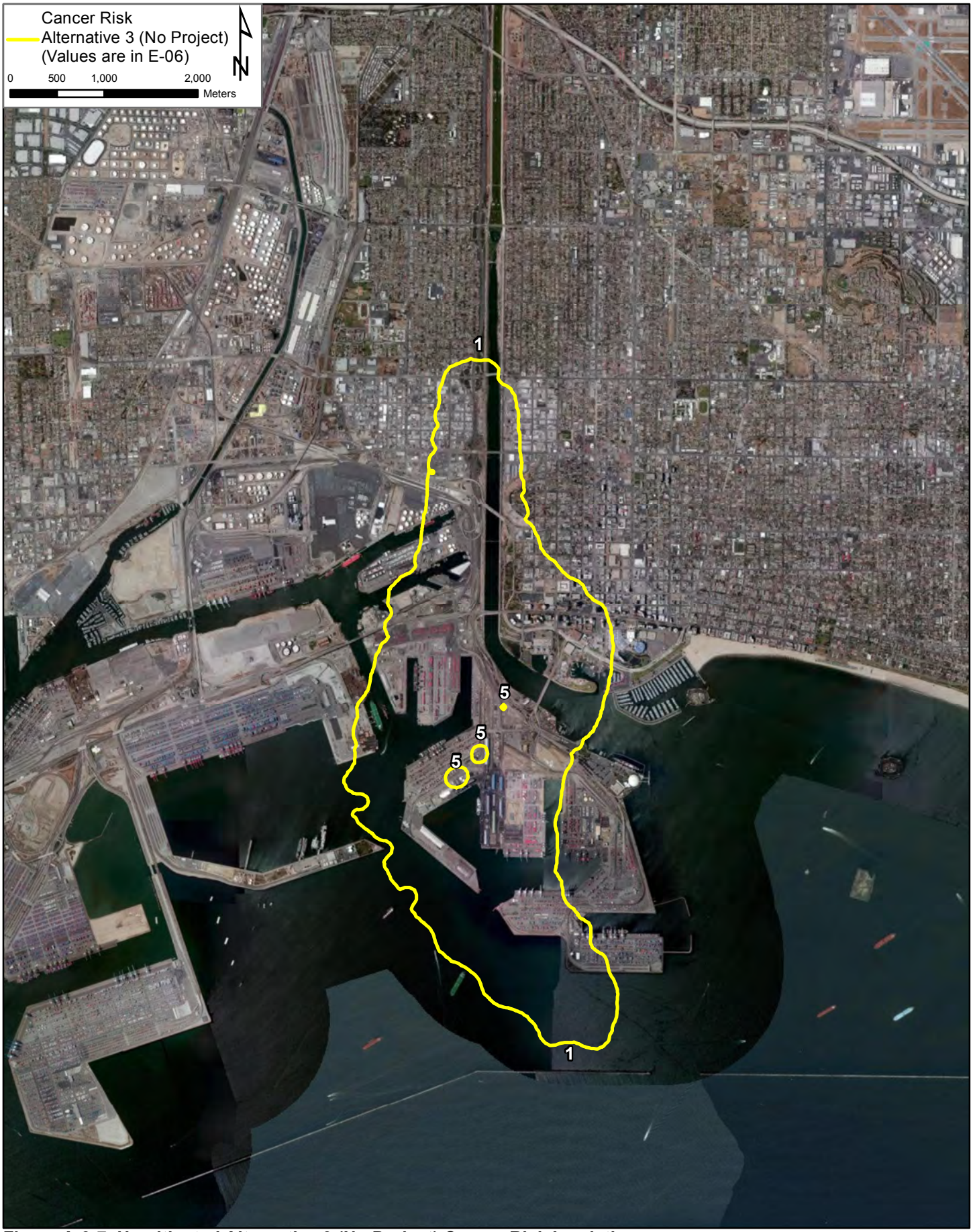


Figure A-3-7. Unmitigated Alternative 3 (No Project) Cancer Risk Isopleths (probability per million of causing cancer).

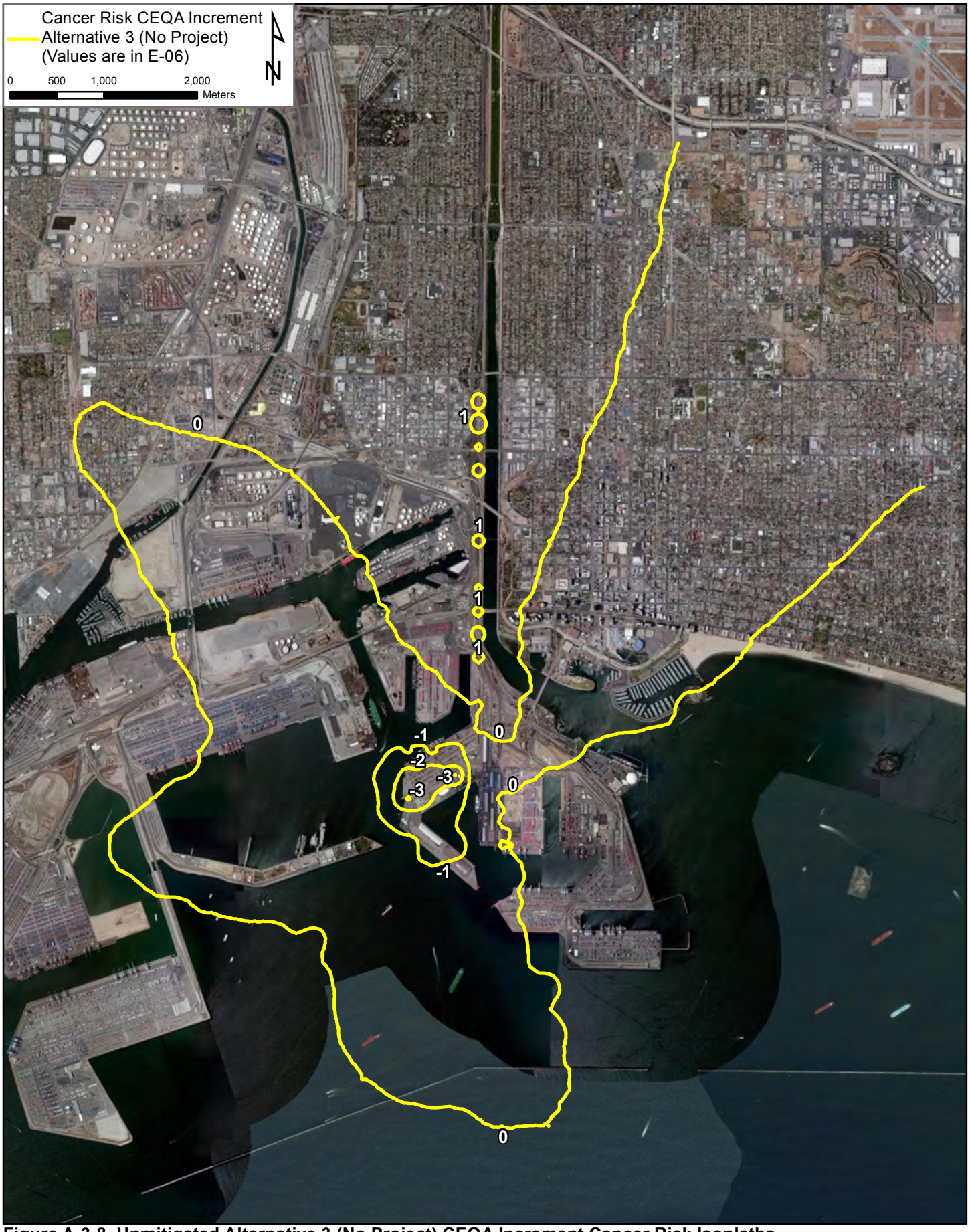


Figure A-3-8. Unmitigated Alternative 3 (No Project) CEQA Increment Cancer Risk Isopleths (probability per million of causing cancer).

This page intentionally left blank.

Appendix A3
Attachment 1
HRA Emission Calculations

This page intentionally left blank.

Table of Contents for HRA Emissions Calculations

Table of Contents for HRA Emissions Calculations

Table of Contents for HRA Emissions Calculations

Table A.3.1-1 Annual DPM Emissions for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Source Activity	*Pounds per Year DPM*
Construction	
OGV - Fairway Transit	803.3
OGV - Precautionary Area Transit	105.7
OGV - Harbor Transit	33.9
OGV - Docking	21.1
OGV - Hoteling - Auxiliary Generators	318.6
Tugs - Harbor Transit	24.2
Tugs - Docking	8.1
Kovaco Cement Unloader	
vanAalst Cement Unloader	
Payloaders	1.1
Storage Warehouse Dust Collector DC-01	
Truck Loading Dust Collector DC-02	
Truck Loading Dust Collector DC-03	
Truck Loading Dust Collector DC-21	
Truck Loading - Dust	
Trucks - On-Terminal Idling (1)	52.7
Trucks - On-Terminal Driving	2.6
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	24.1
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	2.0
Pico Ave: Harbor Scenic Connector - Harbor Plaza	6.9
Harbor Plaza: Pier F Ave - Pier G Ave	1.5
Pier F Ave: MCC Gate - Harbor Plaza	11.3
Pico Ave: Pier E St to Harbor Scenic Connector	0.7
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.3
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.1
Ocean Blvd: West of D St. On-ramp	0.6
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.2
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.3
Total	**1,419.2**

Notes: (1) Assigned to the Truck Loading Source

Table A.3.1-2 Annual DPM Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	Volume Source Lb/Year DPM
Construction							
		40	1,600	5	8,000	0.20	-
Subtotals			**-**	**5**	**8,000**	**-**	**-**
OGV - Fairway Transit							
		200	40,000	43	1,720,000	0.02	18.6805
Subtotals			**-**	**43**	**1,720,000**	**-**	**803.2628**
OGV - Precautionary Area Transit							
		200	40,000	33	1,320,000	0.03	3.2032
Subtotals			**-**	**33**	**1,320,000**	**-**	**105.7049**
OGV - Harbor Transit							
		100	10,000	20	200,000	0.05	1.6959
Subtotals			**-**	**20**	**-**	**-**	**33.9172**
OGV - Docking							
		100	10,000	1	10,000	1.00	21.1087
Subtotals			**-**	**1**	**-**	**-**	**21.1087**
OGV - Hoteling - Auxiliary Generators							
	G	NA	NA	1	NA	1.00	318.6493
Subtotals			**-**	**1**	**-**	**-**	**318.6493**
Tugs - Harbor Transit							
		100	10,000	20	200,000	0.05	1.2102
Subtotals			**-**	**20**	**-**	**-**	**24.2046**
Tugs - Docking							
		100	40,000	1	40,000	1.00	8.0682
Subtotals			**-**	**1**	**40,000**	**-**	**8.0682**
Kovaco Cement Unloader							
		10	100	1	100	1.00	-
Subtotals			**-**	**1**	**100**	**-**	**-**
vanAalst Cement Unloader							
		10	100	1	100	1.00	-
Subtotals			**-**	**1**	**100**	**-**	**-**
Payloaders							
		10	100	2	200	0.50	0.5535
Subtotals			**-**	**2**	**200**	**-**	**1.1069**
Kovaco Cement Unloader+50%Payloaders							
	E	10	100	1	100	1.00	0.5535
Subtotals			**-**	**1**	**100**	**-**	**0.5535**
vanAalst Cement Unloader+50%Payloaders							
	F	10	100	1	100	1.00	0.5535
Subtotals			**-**	**1**	**100**	**-**	**0.5535**
Storage Warehouse Dust Collector DC-01							
		NA	NA	1	NA	1.00	-
Subtotals			**-**	**1**	**-**	**-**	**-**
Truck Loading Dust Collector DC-02							
		NA	NA	1	NA	1.00	-
Subtotals			**-**	**1**	**-**	**-**	**-**
Truck Loading Dust Collector DC-03							
		NA	NA	1	NA	1.00	-
Subtotals			**-**	**1**	**-**	**-**	**-**
Truck Loading Dust Collector DC-21							
		NA	NA	1	NA	1.00	-
Subtotals			**-**	**1**	**-**	**-**	**-**
Truck Loading - Dust							
		20	400	1	400	1.00	-
Subtotals			**-**	**1**	**400**	**-**	**-**
Trucks - On-Terminal Idling (1)							

Table A.3.1-2 Annual DPM Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	Volume Source Lb/Year DPM
		20	400	1	400	1.00	52.6574
Subtotals			**-**	**1**	**400**	**-**	**52.6574**
Truck Loading Dust + On-Terminal Idling							
	6	20	400	1	400	1.00	52.6574
Subtotals			**-**	**1**	**400**	**-**	**52.6574**
Trucks - On-Terminal Driving							
		20	400	8	3,200	0.13	0.3190
Subtotals			**-**	**8**	**3,200**	**-**	**2.5518**
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)							
		31	961	43	41,323	0.02	0.5593
Subtotals			**-**	**43**	**41,323**	**-**	**24.0511**
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)							
		36	1,296	4	5,184	0.25	0.5018
Subtotals			**-**	**4**	**5,184**	**-**	**2.0071**
Pico Ave: Harbor Scenic Connector - Harbor Plaza							
		27	400	14	5,600	0.07	0.4939
Subtotals			**-**	**14**	**5,600**	**-**	**6.9140**
Harbor Plaza: Pier F Ave - Pier G Ave							
		24	400	4	5,600	0.25	0.3721
Subtotals			**-**	**4**	**5,600**	**-**	**1.4882**
Pier F Ave: MCC Gate - Harbor Plaza							
		24	400	25	5,600	0.04	0.4521
Subtotals			**-**	**25**	**5,600**	**-**	**11.3022**
Pico Ave: Pier E St to Harbor Scenic Connector							
		27	729	8	10,206	0.13	0.0926
Subtotals			**-**	**8**	**10,206**	**-**	**0.7407**
Pico Ave: Pier E St. to Ocean Blvd. On-ramp							
		27	729	6	2,916	0.17	0.0449
Subtotals			**-**	**6**	**2,916**	**-**	**0.2694**
Ocean Blvd. On-ramp: Pier D St. to OB (WB)							
		25	625	4	15,625	0.25	0.0358
Subtotals			**-**	**4**	**15,625**	**-**	**0.1431**
Ocean Blvd: West of D St. On-ramp							
		28	784	6	6,272	0.17	0.1070
Subtotals			**-**	**6**	**6,272**	**-**	**0.6422**
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp							
		28	784	4	4,704	0.25	0.0414
Subtotals			**-**	**4**	**4,704**	**-**	**0.1656**
Pier E St Off Ramp : Pico Ave - Ocean Blvd							
		14	196	11	784	0.09	0.0257
Subtotals			**-**	**11**	**784**	**-**	**0.2831**

Table A.3.1-3 Annual TOG Emissions for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Source Activity	*Pounds per Year TOG*
Construction	
OGV - Fairway Transit	
OGV - Precautionary Area Transit	
OGV - Harbor Transit	
OGV - Docking	
OGV - Hoteling - Boilers	194.8
Tugs - Harbor Transit	
Tugs - Docking	
Kovaco Cement Unloader	
vanAalst Cement Unloader	
Payloaders	
Storage Warehouse Dust Collector DC-01	
Truck Loading Dust Collector DC-02	
Truck Loading Dust Collector DC-03	
Truck Loading Dust Collector DC-21	
Truck Loading - Dust	
Trucks - On-Terminal Idling (1)	
Trucks - On-Terminal Driving	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
Pico Ave: Harbor Scenic Connector - Harbor Plaza	
Harbor Plaza: Pier F Ave - Pier G Ave	
Pier F Ave: MCC Gate - Harbor Plaza	
Pico Ave: Pier E St to Harbor Scenic Connector	
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
Ocean Blvd: West of D St. On-ramp	
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
Pier E St Off Ramp : Pico Ave - Ocean Blvd	
Total	**194.8**

Notes: (1) Assigned to the Truck Loading Source

Table A.3.1-4 Annual TOG Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*TOG*	1,3-butadiene	acetaldehyde	benzene	chlorobenzene
Construction											
			-		-						
Subtotals			**-**	**-**	**-**	**-**	**-**				
OGV - Fairway Transit											
		200	40,000	43	1,720,000	0.02	-				
Subtotals			**-**	**43**	**1,720,000**	**-**	**-**				
OGV - Precautionary Area Transit											
		200	40,000	33	1,320,000	0.03	-				
Subtotals			**-**	**33**	**1,320,000**	**-**	**-**				
OGV - Harbor Transit											
		100	10,000	20	200,000	0.05	-				
Subtotals			**-**	**20**	**-**	**-**	**-**				
OGV - Docking											
		100	10,000	1	10,000	1.00	-				
Subtotals			**-**	**1**	**-**	**-**	**-**				
OGV - Hoteling - Boilers											
		NA	NA	1	NA	1.00	194.7560	-	-	4.20673	0.09738
Subtotals			**-**	**1**	**-**	**-**	**194.7560**				

Table A.3.1-4 Annual TOG Emission Simulations for th

Activity/Source ID	Volume Source Lb/Year									
	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene
Construction										
Subtotals										
OGV - Fairway Transit										
Subtotals										
OGV - Precautionary Area Transit										
Subtotals										
OGV - Harbor Transit										
Subtotals										
OGV - Docking										
Subtotals										
OGV - Hoteling - Boilers										
	0.13633	0.19476	0.66217	-	-	0.87640	0.13633	3.09662	0.60374	8.88087
Subtotals										

Table A.3.1-4 Annual TOG Emission Simulations for th

Activity/Source ID	p-xylene	styrene	toluene
Construction			
Subtotals			
OGV - Fairway Transit			
Subtotals			
OGV - Precautionary Area Transit			
Subtotals			
OGV - Harbor Transit			
Subtotals			
OGV - Docking			
Subtotals			
OGV - Hoteling - Boilers			
	-	-	4.18725
Subtotals			

Table A.3.1-5 Annual PM Emissions for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Source Activity	*Pounds per Year PM*
Construction	
OGV - Fairway Transit	
OGV - Precautionary Area Transit	
OGV - Harbor Transit	
OGV - Docking	
OGV - Hoteling - Boilers	368.8
Tugs - Harbor Transit	
Tugs - Docking	
Kovaco Cement Unloader	
vanAalst Cement Unloader	
Payloaders	
Storage Warehouse Dust Collector DC-01	
Truck Loading Dust Collector DC-02	
Truck Loading Dust Collector DC-03	
Truck Loading Dust Collector DC-21	
Truck Loading - Dust	
Trucks - On-Terminal Idling (1)	
Trucks - On-Terminal Driving	
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
Pico Ave: Harbor Scenic Connector - Harbor Plaza	
Harbor Plaza: Pier F Ave - Pier G Ave	
Pier F Ave: MCC Gate - Harbor Plaza	
Pico Ave: Pier E St to Harbor Scenic Connector	
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
Ocean Blvd: West of D St. On-ramp	
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
Pier E St Off Ramp : Pico Ave - Ocean Blvd	
Total	**368.8**

Notes: (1) Assigned to the Truck Loading Source

Table A.3.1-6 Annual PM Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	PM	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM
Construction												
			-		-							
Subtotals			**-**	**-**	**-**							
OGV - Fairway Transit												
		200	40,000	43	1,720,000	0.02	-					
Subtotals			**-**	**43**	**1,720,000**	**-**	**-**					
OGV - Precautionary Area Transit												
		200	40,000	33	1,320,000	0.03	-					
Subtotals			**-**	**33**	**1,320,000**	**-**	**-**					
OGV - Harbor Transit												
		100	10,000	20	200,000	0.05	-					
Subtotals			**-**	**20**	**-**	**-**	**-**					
OGV - Docking												
		100	10,000	1	10,000	1.00	-					
Subtotals			**-**	**1**	**-**	**-**	**-**					
OGV - Hoteling - Boilers												
		NA	NA	1	NA	1.00	368.8458	-	1.95488	0.18442	-	0.10143
Subtotals			**-**	**1**	**-**	**-**	**368.8458**					

Table A.3.1-6 Annual PM Emission Simulations for the

Activity/Source ID	*Volume Source Lb/Year* COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Construction								
Subtotals								
OGV - Fairway Transit								
Subtotals								
OGV - Precautionary Area Transit								
Subtotals								
OGV - Harbor Transit								
Subtotals								
OGV - Docking								
Subtotals								
OGV - Hoteling - Boilers								
	0.18442	2.02865	0.18442	-	2.02865	0.18442	162.73478	2.02865
Subtotals								

Table A.3.1-7 Annual Tire Dust Emissions for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Source Activity	*Pounds per Year PM*
Construction	
OGV - Fairway Transit	
OGV - Precautionary Area Transit	
OGV - Harbor Transit	
OGV - Docking	
OGV - Hoteling - Boilers	
Tugs - Harbor Transit	
Tugs - Docking	
Kovaco Cement Unloader	
vanAalst Cement Unloader	
Payloaders	
Storage Warehouse Dust Collector DC-01	
Truck Loading Dust Collector DC-02	
Truck Loading Dust Collector DC-03	
Truck Loading Dust Collector DC-21	
Truck Loading - Dust	
Trucks - On-Terminal Idling (1)	
Trucks - On-Terminal Driving	0.61
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	8.96
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.68
Pico Ave: Harbor Scenic Connector - Harbor Plaza	2.86
Harbor Plaza: Pier F Ave - Pier G Ave	0.61
Pier F Ave: MCC Gate - Harbor Plaza	4.67
Pico Ave: Pier E St to Harbor Scenic Connector	0.31
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.11
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.06
Ocean Blvd: West of D St. On-ramp	0.27
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.07
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.12
Total	**19.31**

Notes: (1) Assigned to the Truck Loading Source

Table A.3.1-8 Annual Tire Dust Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	PM	AMMONIA	ARSENIC	CADMIUM
Construction										
			-		-					
Subtotals			**-**	**-**	**-**	**-**	**-**			
OGV - Fairway Transit										
		200	40,000	43	1,720,000	0.02	-			
Subtotals			**-**	**43**	**1,720,000**	**-**	**-**			
OGV - Precautionary Area Transit										
		200	40,000	33	1,320,000	0.03	-			
Subtotals			**-**	**33**	**1,320,000**	**-**	**-**			
OGV - Harbor Transit										
		100	10,000	20	200,000	0.05	-			
Subtotals			**-**	**20**	**-**	**-**	**-**			
OGV - Docking										
		100	10,000	1	10,000	1.00	-			
Subtotals			**-**	**1**	**-**	**-**	**-**			
OGV - Hoteling - Boilers										
		NA	NA	1	NA	1.00	-			
Subtotals			**-**	**1**	**-**	**-**	**-**			
Tugs - Harbor Transit										
		100	10,000	20	200,000	0.05	-			
Subtotals			**-**	**20**	**-**	**-**	**-**			
Tugs - Docking										
		100	40,000	1	40,000	1.00	-			
Subtotals			**-**	**1**	**40,000**	**-**	**-**			
Kovaco Cement Unloader										
		10	100	1	100	1.00	-			
Subtotals			**-**	**1**	**100**	**-**	**-**			
vanAalst Cement Unloader										
		10	100	1	100	1.00	-			
Subtotals			**-**	**1**	**100**	**-**	**-**			
Payloaders										
		10	100	2	200	0.50	-			
Subtotals			**-**	**2**	**200**	**-**	**-**			
Kovaco Cement Unloader+50%Payloaders										
	E	10	100	1	100	1.00	-			
Subtotals			**-**	**1**	**100**	**-**	**-**			
vanAalst Cement Unloader+50%Payloaders										
	F	10	100	1	100	1.00	-			
Subtotals			**-**	**1**	**100**	**-**	**-**			
Storage Warehouse Dust Collector DC-01										

Table A.3.1-8 Annual Tire Dust Emission Simulations f

Activity/Source ID	Volume Source Lb/Year									
	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Construction										
Subtotals										
OGV - Fairway Transit										
Subtotals										
OGV - Precautionary Area Transit										
Subtotals										
OGV - Harbor Transit										
Subtotals										
OGV - Docking										
Subtotals										
OGV - Hoteling - Boilers										
Subtotals										
Tugs - Harbor Transit										
Subtotals										
Tugs - Docking										
Subtotals										
Kovaco Cement Unloader										
Subtotals										
vanAalst Cement Unloader										
Subtotals										
Payloaders										
Subtotals										
Kovaco Cement Unloader+50%Payloaders										
Subtotals										
vanAalst Cement Unloader+50%Payloaders										
Subtotals										
Storage Warehouse Dust Collector DC-01										

Table A.3.1-8 Annual Tire Dust Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	PM	AMMONIA	ARSENIC	CADMIUM
		NA	NA	1	NA	1.00	-			
Subtotals			**-**	**1**	**-**	**-**	**-**			
Truck Loading Dust Collector DC-02										
		NA	NA	1	NA	1.00	-			
Subtotals			**-**	**1**	**-**	**-**	**-**			
Truck Loading Dust Collector DC-03										
		NA	NA	1	NA	1.00	-			
Subtotals			**-**	**1**	**-**	**-**	**-**			
Truck Loading Dust Collector DC-21										
		NA	NA	1	NA	1.00	-			
Subtotals			**-**	**1**	**-**	**-**	**-**			
Truck Loading - Dust										
		20	400	1	400	1.00	-			
Subtotals			**-**	**1**	**400**	**-**	**-**			
Trucks - On-Terminal Idling (1)										
		20	400	1	400	1.00	-			
Subtotals			**-**	**1**	**400**	**-**	**-**			
Truck Loading Dust + On-Terminal Idling										
	6	20	400	1	400	1.00	-			
Subtotals			**-**	**1**	**400**	**-**	**-**			
Trucks - On-Terminal Driving										
		20	400	8	3,200	0.13	0.0768	0.00	-	-
Subtotals			**-**	**8**	**3,200**	**-**	**0.6142**			
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)										
		31	961	43	41,323	0.02	0.2083	0.00	-	-
Subtotals			**-**	**43**	**41,323**	**-**	**8.9582**			
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)										
		36	1,296	4	5,184	0.25	0.1692	0.00	-	-
Subtotals			**-**	**4**	**5,184**	**-**	**0.6768**			
Pico Ave: Harbor Scenic Connector - Harbor Plaza										
		27	400	14	5,600	0.07	0.2040	0.00	-	-
Subtotals			**-**	**14**	**5,600**	**-**	**2.8562**			
Harbor Plaza: Pier F Ave - Pier G Ave										
		24	400	4	5,600	0.25	0.1526	0.00	-	-
Subtotals			**-**	**4**	**5,600**	**-**	**0.6106**			
Pier F Ave: MCC Gate - Harbor Plaza										
		24	400	25	5,600	0.04	0.1868	0.00	-	-
Subtotals			**-**	**25**	**5,600**	**-**	**4.6690**			
Pico Ave: Pier E St to Harbor Scenic Connector										
		27	729	8	10,206	0.13	0.0382	0.00	-	-

Table A.3.1-8 Annual Tire Dust Emission Simulations f

Activity/Source ID	Volume Source Lb/Year									
	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Subtotals										
Truck Loading Dust Collector DC-02										
Subtotals										
Truck Loading Dust Collector DC-03										
Subtotals										
Truck Loading Dust Collector DC-21										
Subtotals										
Truck Loading - Dust										
Subtotals										
Trucks - On-Terminal Idling (1)										
Subtotals										
Truck Loading Dust + On-Terminal Idling										
Subtotals										
Trucks - On-Terminal Driving										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Pico Ave: Harbor Scenic Connector - Harbor Plaza										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Harbor Plaza: Pier F Ave - Pier G Ave										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Pier F Ave: MCC Gate - Harbor Plaza										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Pico Ave: Pier E St to Harbor Scenic Connector										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-

Table A.3.1-8 Annual Tire Dust Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM
Subtotals			**-**	**8**	**10,206**	**-**	**0.3060**			
Pico Ave: Pier E St. to Ocean Blvd. On-ramp										
		27	729	6	2,916	0.17	0.0185	0.00	-	-
Subtotals			**-**	**6**	**2,916**	**-**	**0.1113**			
Ocean Blvd. On-ramp: Pier D St. to OB (WB)										
		25	625	4	15,625	0.25	0.0147	0.00	-	-
Subtotals			**-**	**4**	**15,625**	**-**	**0.0587**			
Ocean Blvd: West of D St. On-ramp										
		28	784	6	6,272	0.17	0.0442	0.00	-	-
Subtotals			**-**	**6**	**6,272**	**-**	**0.2653**			
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp										
		28	784	4	4,704	0.25	0.0171	0.00	-	-
Subtotals			**-**	**4**	**4,704**	**-**	**0.0684**			
Pier E St Off Ramp : Pico Ave - Ocean Blvd										
		14	196	11	784	0.09	0.0106	0.00	-	-
Subtotals			**-**	**11**	**784**	**-**	**0.1170**			

Table A.3.1-8 Annual Tire Dust Emission Simulations f

Activity/Source ID	*Volume Source Lb/Year*									
	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Subtotals										
Pico Ave: Pier E St. to Ocean Blvd. On-ramp										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Ocean Blvd. On-ramp: Pier D St. to OB (WB)										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Ocean Blvd: West of D St. On-ramp										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										
Pier E St Off Ramp : Pico Ave - Ocean Blvd										
	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals										

Table A.3.1-9 Annual Brake Dust Emissions for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Source Activity	*Pounds per Year PM*
Construction	
OGV - Fairway Transit	
OGV - Precautionary Area Transit	
OGV - Harbor Transit	
OGV - Docking	
OGV - Hoteling - Boilers	
Tugs - Harbor Transit	
Tugs - Docking	
Kovaco Cement Unloader	
vanAalst Cement Unloader	
Payloaders	
Storage Warehouse Dust Collector DC-01	
Truck Loading Dust Collector DC-02	
Truck Loading Dust Collector DC-03	
Truck Loading Dust Collector DC-21	
Truck Loading - Dust	
Trucks - On-Terminal Idling (1)	
Trucks - On-Terminal Driving	1.41
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	20.57
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1.55
Pico Ave: Harbor Scenic Connector - Harbor Plaza	6.56
Harbor Plaza: Pier F Ave - Pier G Ave	1.40
Pier F Ave: MCC Gate - Harbor Plaza	10.72
Pico Ave: Pier E St to Harbor Scenic Connector	0.70
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.26
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.13
Ocean Blvd: West of D St. On-ramp	0.61
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.16
Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.27
Total	**44.34**

Notes: (1) Assigned to the Truck Loading Source

Table A.3.1-10 Annual Brake Dust Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	PM	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER
													Volume Source L
Construction													
			-		-								
Subtotals			**-**	**-**	**-**	**-**	**-**						
OGV - Fairway Transit													
		200	40,000	43	1,720,000	0.02	-						
Subtotals			**-**	**43**	**1,720,000**	**-**	**-**						
OGV - Precautionary Area Transit													
		200	40,000	33	1,320,000	0.03	-						
Subtotals			**-**	**33**	**1,320,000**	**-**	**-**						
OGV - Harbor Transit													
		100	10,000	20	200,000	0.05	-						
Subtotals			**-**	**20**	**-**	**-**	**-**						
OGV - Docking													
		100	10,000	1	10,000	1.00	-						
Subtotals			**-**	**1**	**-**	**-**	**-**						
OGV - Hoteling - Boilers													
		NA	NA	1	NA	1.00	-						
Subtotals			**-**	**1**	**-**	**-**	**-**						
Tugs - Harbor Transit													
		100	10,000	20	200,000	0.05	-						
Subtotals			**-**	**20**	**-**	**-**	**-**						
Tugs - Docking													
		100	40,000	1	40,000	1.00	-						
Subtotals			**-**	**1**	**40,000**	**-**	**-**						
Kovaco Cement Unloader													
		10	100	1	100	1.00	-						
Subtotals			**-**	**1**	**100**	**-**	**-**						
vanAalst Cement Unloader													
		10	100	1	100	1.00	-						
Subtotals			**-**	**1**	**100**	**-**	**-**						
Payloaders													
		10	100	2	200	0.50	-						
Subtotals			**-**	**2**	**200**	**-**	**-**						
Kovaco Cement Unloader+50%Payloaders													
	E	10	100	1	100	1.00	-						
Subtotals			**-**	**1**	**100**	**-**	**-**						
vanAalst Cement Unloader+50%Payloaders													
	F	10	100	1	100	1.00	-						
Subtotals			**-**	**1**	**100**	**-**	**-**						
Storage Warehouse Dust Collector DC-01													
		NA	NA	1	NA	1.00	-						
Subtotals			**-**	**1**	**-**	**-**	**-**						
Truck Loading Dust Collector DC-02													
		NA	NA	1	NA	1.00	-						
Subtotals			**-**	**1**	**-**	**-**	**-**						
Truck Loading Dust Collector DC-03													
		NA	NA	1	NA	1.00	-						
Subtotals			**-**	**1**	**-**	**-**	**-**						
Truck Loading Dust Collector DC-21													

Table A.3.1-10 Annual Brake Dust Emission Simulatior

Activity/Source ID	lb/Year LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Construction							
Subtotals							
OGV - Fairway Transit							
Subtotals							
OGV - Precautionary Area Transit							
Subtotals							
OGV - Harbor Transit							
Subtotals							
OGV - Docking							
Subtotals							
OGV - Hoteling - Boilers							
Subtotals							
Tugs - Harbor Transit							
Subtotals							
Tugs - Docking							
Subtotals							
Kovaco Cement Unloader							
Subtotals							
vanAalst Cement Unloader							
Subtotals							
Payloaders							
Subtotals							
Kovaco Cement Unloader+50%Payloaders							
Subtotals							
vanAalst Cement Unloader+50%Payloaders							
Subtotals							
Storage Warehouse Dust Collector DC-01							
Subtotals							
Truck Loading Dust Collector DC-02							
Subtotals							
Truck Loading Dust Collector DC-03							
Subtotals							
Truck Loading Dust Collector DC-21							

Table A.3.1-10 Annual Brake Dust Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	PM	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER
		NA	NA	1	NA	1.00	-						
Subtotals			**-**	**1**	**-**	**-**	**-**						
Truck Loading - Dust													
		20	400	1	400	1.00	-						
Subtotals			**-**	**1**	**400**	**-**	**-**						
Trucks - On-Terminal Idling (1)													
		20	400	1	400	1.00	-						
Subtotals			**-**	**1**	**400**	**-**	**-**						
Truck Loading Dust + On-Terminal Idling													
	6	20	400	1	400	1.00	-						
Subtotals			**-**	**1**	**400**	**-**	**-**						
Trucks - On-Terminal Driving													
		20	400	8	3,200	0.13	0.1763	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**8**	**3,200**	**-**	**1.4102**						
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)													
		31	961	43	41,323	0.02	0.4783	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**43**	**41,323**	**-**	**20.5673**						
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)													
		36	1,296	4	5,184	0.25	0.3885	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**4**	**5,184**	**-**	**1.5538**						
Pico Ave: Harbor Scenic Connector - Harbor Plaza													
		27	400	14	5,600	0.07	0.4684	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**14**	**5,600**	**-**	**6.5576**						
Harbor Plaza: Pier F Ave - Pier G Ave													
		24	400	4	5,600	0.25	0.3505	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**4**	**5,600**	**-**	**1.4018**						
Pier F Ave: MCC Gate - Harbor Plaza													
		24	400	25	5,600	0.04	0.4288	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**25**	**5,600**	**-**	**10.7195**						
Pico Ave: Pier E St to Harbor Scenic Connector													
		27	729	8	10,206	0.13	0.0878	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**8**	**10,206**	**-**	**0.7025**						
Pico Ave: Pier E St. to Ocean Blvd. On-ramp													
		27	729	6	2,916	0.17	0.0426	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**6**	**2,916**	**-**	**0.2555**						
Ocean Blvd. On-ramp: Pier D St. to OB (WB)													
		25	625	4	15,625	0.25	0.0337	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**4**	**15,625**	**-**	**0.1348**						
Ocean Blvd: West of D St. On-ramp													
		28	784	6	6,272	0.17	0.1015	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**6**	**6,272**	**-**	**0.6091**						
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp													
		28	784	4	4,704	0.25	0.0393	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**4**	**4,704**	**-**	**0.1570**						
Pier E St Off Ramp : Pico Ave - Ocean Blvd													
		14	196	11	784	0.09	0.0244	0.00	-	-	0.00	0.00	0.00
Subtotals			**-**	**11**	**784**	**-**	**0.2685**						

Volume Source L

Table A.3.1-10 Annual Brake Dust Emission Simulatior

Activity/Source ID	lb/Year LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Subtotals							
Truck Loading - Dust							
Subtotals							
Trucks - On-Terminal Idling (1)							
Subtotals							
Truck Loading Dust + On-Terminal Idling							
Subtotals							
Trucks - On-Terminal Driving							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Pico Ave: Harbor Scenic Connector - Harbor Plaza							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Harbor Plaza: Pier F Ave - Pier G Ave							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Pier F Ave: MCC Gate - Harbor Plaza							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Pico Ave: Pier E St to Harbor Scenic Connector							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Pico Ave: Pier E St. to Ocean Blvd. On-ramp							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Ocean Blvd. On-ramp: Pier D St. to OB (WB)							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Ocean Blvd: West of D St. On-ramp							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							
Pier E St Off Ramp : Pico Ave - Ocean Blvd							
	0.00	0.00	-	0.00	0.00	0.00	-
Subtotals							

Table A.3.1-11. Total Annual PPY Cancer TAC Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project.

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	DPM	1,3-butadiene	acetaldehyde	benzene	chlorobenzene
Construction						CAS #	9901	106990	75070	71432	108907
		40	1,600	5	8,000	0.20	-				
Subtotals			**-**	**5**	**8,000**	**-**	**-**				
OGV - Fairway Transit											
		200	40,000	43	1,720,000	0.02	18.6805				
Subtotals			**-**	**43**	**1,720,000**	**-**	**803.2628**				
OGV - Precautionary Area Transit											
		200	40,000	33	1,320,000	0.03	3.2032				
Subtotals			**-**	**33**	**1,320,000**	**-**	**105.7049**				
OGV - Harbor Transit											
		100	10,000	20	200,000	0.05	1.6959				
Subtotals			**-**	**20**	**-**	**-**	**33.9172**				
OGV - Docking											
		100	10,000	1	10,000	1.00	21.1087				
Subtotals			**-**	**1**	**-**	**-**	**21.1087**				
OGV - Hoteling - ICEs + Boiler											
		NA	NA	1	NA	1.00	318.6493	-	-	4.20673	0.09738
Subtotals			**-**	**1**	**-**	**-**	**318.6493**				
Tugs - Harbor Transit											
		100	10,000	20	200,000	0.05	1.2102				
Subtotals			**-**	**20**	**-**	**-**	**24.2046**				
Tugs - Docking											
		100	40,000	1	40,000	1.00	8.0682				
Subtotals			**-**	**1**	**40,000**	**-**	**8.0682**				
Kovaco Cement Unloader											
		10	100	1	100	1.00	-				
Subtotals			**-**	**1**	**100**	**-**	**-**				
vanAalst Cement Unloader											
		10	100	1	100	1.00	-				
Subtotals			**-**	**1**	**100**	**-**	**-**				
Payloaders											
		10	100	2	200	0.50	0.5535				
Subtotals			**-**	**2**	**200**	**-**	**1.1069**				
Kovaco Cement Unloader+50%Payloaders											
	E	10	100	1	100	1.00	0.5535				
Subtotals			**-**	**1**	**100**	**-**	**0.5535**				
vanAalst Cement Unloader+50%Payloaders											
	F	10	100	1	100	1.00	0.5535				
Subtotals			**-**	**1**	**100**	**-**	**0.5535**				
Storage Warehouse Dust Collector DC-01											
		NA	NA	1	NA	1.00	-				
Subtotals			**-**	**1**	**-**	**-**	**-**				
Truck Loading Dust Collector DC-02											

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

Volume Sc

Activity/Source ID	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene
Construction	100414	50000	1210	67561	78933	108383	91203	110543	95476	115071
Subtotals										
OGV - Fairway Transit										
Subtotals										
OGV - Precautionary Area Transit										
Subtotals										
OGV - Harbor Transit										
Subtotals										
OGV - Docking										
Subtotals										
OGV - Hoteling - ICEs + Boiler										
	0.13633	0.19476	0.66217	-	-	0.87640	0.13633	3.09662	0.60374	8.88087
Subtotals										
Tugs - Harbor Transit										
Subtotals										
Tugs - Docking										
Subtotals										
Kovaco Cement Unloader										
Subtotals										
vanAalst Cement Unloader										
Subtotals										
Payloaders										
Subtotals										
Kovaco Cement Unloader+50%Payloaders										
Subtotals										
vanAalst Cement Unloader+50%Payloaders										
Subtotals										
Storage Warehouse Dust Collector DC-01										
Subtotals										
Truck Loading Dust Collector DC-02										

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

Activity/Source ID	urce Lb/Year p-xylene	styrene	toluene	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE
Construction	106423	100425	108883	7664417	7440382	7440439	7782505	18540299	7440508	7439921	7439965
Subtotals											
OGV - Fairway Transit											
Subtotals											
OGV - Precautionary Area Transit											
Subtotals											
OGV - Harbor Transit											
Subtotals											
OGV - Docking											
Subtotals											
OGV - Hoteling - ICEs + Boiler											
	-	-	4.18725	-	1.95488	0.18442	-	0.10143	0.18442	2.02865	0.18442
Subtotals											
Tugs - Harbor Transit											
Subtotals											
Tugs - Docking											
Subtotals											
Kovaco Cement Unloader											
Subtotals											
vanAalst Cement Unloader											
Subtotals											
Payloaders											
Subtotals											
Kovaco Cement Unloader+50%Payloaders											
Subtotals											
vanAalst Cement Unloader+50%Payloaders											
Subtotals											
Storage Warehouse Dust Collector DC-01											
Subtotals											
Truck Loading Dust Collector DC-02											

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

Activity/Source ID	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Construction	7439976	7440020	7782492	9960	7440622
Subtotals					
OGV - Fairway Transit					
Subtotals					
OGV - Precautionary Area Transit					
Subtotals					
OGV - Harbor Transit					
Subtotals					
OGV - Docking					
Subtotals					
OGV - Hoteling - ICEs + Boiler					
	-	2.02865	0.18442	162.73478	2.02865
Subtotals					
Tugs - Harbor Transit					
Subtotals					
Tugs - Docking					
Subtotals					
Kovaco Cement Unloader					
Subtotals					
vanAalst Cement Unloader					
Subtotals					
Payloaders					
Subtotals					
Kovaco Cement Unloader+50%Payloaders					
Subtotals					
vanAalst Cement Unloader+50%Payloaders					
Subtotals					
Storage Warehouse Dust Collector DC-01					
Subtotals					
Truck Loading Dust Collector DC-02					

Table A.3.1-11. Total Annual PPY Cancer TAC Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project.

Activity/Source ID	Source Number(s)	Width (meters)	Area (m2)	# of Sources	Total Source Area (m2)	Source Area/ Total Source Area	DPM	1,3-butadiene	acetaldehyde	benzene	chlorobenzene
		NA	NA	1	NA	1.00	-				
Subtotals			**-**	**1**	**-**	**-**	**-**				
Truck Loading Dust Collector DC-03											
		NA	NA	1	NA	1.00	-				
Subtotals			**-**	**1**	**-**	**-**	**-**				
Truck Loading Dust Collector DC-21											
		NA	NA	1	NA	1.00	-				
Subtotals			**-**	**1**	**-**	**-**	**-**				
Truck Loading - Dust											
		20	400	1	400	1.00	-				
Subtotals			**-**	**1**	**400**	**-**	**-**				
Trucks - On-Terminal Idling (1)											
		20	400	1	400	1.00	52.6574				
Subtotals			**-**	**1**	**400**	**-**	**52.6574**				
Truck Loading Dust + On-Terminal Idling											
	6	20	400	1	400	1.00	52.6574				
Subtotals			**-**	**1**	**400**	**-**	**52.6574**				
Trucks - On-Terminal Driving											
		20	400	8	3,200	0.13	0.3190	-	-	-	-
Subtotals			**-**	**8**	**3,200**	**-**	**2.5518**				
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)											
		31	961	43	41,323	0.02	0.5593	-	-	-	-
Subtotals			**-**	**43**	**41,323**	**-**	**24.0511**				
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)											
		36	1,296	4	5,184	0.25	0.5018	-	-	-	-
Subtotals			**-**	**4**	**5,184**	**-**	**2.0071**				
Pico Ave: Harbor Scenic Connector - Harbor Plaza											
		27	400	14	5,600	0.07	0.4939	-	-	-	-
Subtotals			**-**	**14**	**5,600**	**-**	**6.9140**				
Harbor Plaza: Pier F Ave - Pier G Ave											
		24	400	4	5,600	0.25	0.3721	-	-	-	-
Subtotals			**-**	**4**	**5,600**	**-**	**1.4882**				
Pier F Ave: MCC Gate - Harbor Plaza											
		24	400	25	5,600	0.04	0.4521	-	-	-	-
Subtotals			**-**	**25**	**5,600**	**-**	**11.3022**				
Pico Ave: Pier E St to Harbor Scenic Connector											
		27	729	8	10,206	0.13	0.0926	-	-	-	-
Subtotals			**-**	**8**	**10,206**	**-**	**0.7407**				
Pico Ave: Pier E St. to Ocean Blvd. On-ramp											
		27	729	6	2,916	0.17	0.0449	-	-	-	-
Subtotals			**-**	**6**	**2,916**	**-**	**0.2694**				
Ocean Blvd. On-ramp: Pier D St. to OB (WB)											
		25	625	4	15,625	0.25	0.0358	-	-	-	-

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

Volume Sc

Activity/Source ID	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene
Subtotals										
Truck Loading Dust Collector DC-03										
Subtotals										
Truck Loading Dust Collector DC-21										
Subtotals										
Truck Loading - Dust										
Subtotals										
Trucks - On-Terminal Idling (1)										
Subtotals										
Truck Loading Dust + On-Terminal Idling										
Subtotals										
Trucks - On-Terminal Driving	-	-	-	-	-	-	-	-	-	-
Subtotals										
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	-	-	-	-	-	-	-	-	-	-
Subtotals										
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	-	-	-	-	-	-	-	-	-	-
Subtotals										
Pico Ave: Harbor Scenic Connector - Harbor Plaza	-	-	-	-	-	-	-	-	-	-
Subtotals										
Harbor Plaza: Pier F Ave - Pier G Ave	-	-	-	-	-	-	-	-	-	-
Subtotals										
Pier F Ave: MCC Gate - Harbor Plaza	-	-	-	-	-	-	-	-	-	-
Subtotals										
Pico Ave: Pier E St to Harbor Scenic Connector	-	-	-	-	-	-	-	-	-	-
Subtotals										
Pico Ave: Pier E St. to Ocean Blvd. On-ramp	-	-	-	-	-	-	-	-	-	-
Subtotals										
Ocean Blvd. On-ramp: Pier D St. to OB (WB)	-	-	-	-	-	-	-	-	-	-

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

Activity/Source ID	urce Lb/Year p-xylene	styrene	toluene	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE
Subtotals											
Truck Loading Dust Collector DC-03											
Subtotals											
Truck Loading Dust Collector DC-21											
Subtotals											
Truck Loading - Dust											
Subtotals											
Trucks - On-Terminal Idling (1)											
Subtotals											
Truck Loading Dust + On-Terminal Idling											
Subtotals											
Trucks - On-Terminal Driving											
	-	-	-	0.00004808	-	-	0.00197375	0.00000038	0.00012399	0.00004049	0.00002530
Subtotals											
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)											
	-	-	-	0.00013046	-	-	0.00535580	0.00000103	0.00033645	0.00010986	0.00006866
Subtotals											
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)											
	-	-	-	0.00010595	-	-	0.00434969	0.00000084	0.00027325	0.00008922	0.00005577
Subtotals											
Pico Ave: Harbor Scenic Connector - Harbor Plaza											
	-	-	-	0.00012776	-	-	0.00524481	0.00000101	0.00032948	0.00010759	0.00006724
Subtotals											
Harbor Plaza: Pier F Ave - Pier G Ave											
	-	-	-	0.00009559	-	-	0.00392411	0.00000075	0.00024651	0.00008049	0.00005031
Subtotals											
Pier F Ave: MCC Gate - Harbor Plaza											
	-	-	-	0.00011695	-	-	0.00480121	0.00000092	0.00030161	0.00009849	0.00006155
Subtotals											
Pico Ave: Pier E St to Harbor Scenic Connector											
	-	-	-	0.00002395	-	-	0.00098329	0.00000019	0.00006177	0.00002017	0.00001261
Subtotals											
Pico Ave: Pier E St. to Ocean Blvd. On-ramp											
	-	-	-	0.00001161	-	-	0.00047677	0.00000009	0.00002995	0.00000978	0.00000611
Subtotals											
Ocean Blvd. On-ramp: Pier D St. to OB (WB)											
	-	-	-	0.00000919	-	-	0.00037728	0.00000007	0.00002370	0.00000774	0.00000484

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

Activity/Source ID	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Subtotals					
Truck Loading Dust Collector DC-03					
Subtotals					
Truck Loading Dust Collector DC-21					
Subtotals					
Truck Loading - Dust					
Subtotals					
Trucks - On-Terminal Idling (1)					
Subtotals					
Truck Loading Dust + On-Terminal Idling					
Subtotals					
Trucks - On-Terminal Driving					
	-	0.00001265	0.00000506	0.00063261	-
Subtotals					
I-710/HSD: PCH to Pico Ave. Connector (NB/SB)					
	-	0.00003433	0.00001373	0.00171660	-
Subtotals					
Pico Ave. Connector: HSD to Pico Ave. (NB/SB)					
	-	0.00002788	0.00001115	0.00139413	-
Subtotals					
Pico Ave: Harbor Scenic Connector - Harbor Plaza					
	-	0.00003362	0.00001345	0.00168103	-
Subtotals					
Harbor Plaza: Pier F Ave - Pier G Ave					
	-	0.00002515	0.00001006	0.00125773	-
Subtotals					
Pier F Ave: MCC Gate - Harbor Plaza					
	-	0.00003078	0.00001231	0.00153885	-
Subtotals					
Pico Ave: Pier E St to Harbor Scenic Connector					
	-	0.00000630	0.00000252	0.00031516	-
Subtotals					
Pico Ave: Pier E St. to Ocean Blvd. On-ramp					
	-	0.00000306	0.00000122	0.00015281	-
Subtotals					
Ocean Blvd. On-ramp: Pier D St. to OB (WB)					
	-	0.00000242	0.00000097	0.00012092	-

Table A.3.1-11. Total Annual PPY Cancer TAC Emission Simulations for the CEQA Baseline - Cancer Analysis - POLB MCC Project.

Activity/Source ID	*Source Number(s)*	*Width (meters)*	*Area (m2)*	*# of Sources*	*Total Source Area (m2)*	*Source Area/ Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene	chlorobenzene
Subtotals			**-**	**4**	**15,625**	**-**	**0.1431**				
Ocean Blvd: West of D St. On-ramp											
		28	784	6	6,272	0.17	0.1070	-	-	-	-
Subtotals			**-**	**6**	**6,272**	**-**	**0.6422**				
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp											
		28	784	4	4,704	0.25	0.0414	-	-	-	-
Subtotals			**-**	**4**	**4,704**	**-**	**0.1656**				
Pier E St Off Ramp : Pico Ave - Ocean Blvd											
		14	196	11	784	0.09	0.0257	-	-	-	-
Subtotals			**-**	**11**	**784**	**-**	**0.2831**				

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

										Volume Sc
Activity/Source ID	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene
Subtotals										
Ocean Blvd: West of D St. On-ramp										
	-	-	-	-	-	-	-	-	-	-
Subtotals										
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp										
	-	-	-	-	-	-	-	-	-	-
Subtotals										
Pier E St Off Ramp : Pico Ave - Ocean Blvd										
	-	-	-	-	-	-	-	-	-	-
Subtotals										

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

	urce Lb/Year										
Activity/Source ID	p-xylene	styrene	toluene	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE
Subtotals											
Ocean Blvd: West of D St. On-ramp											
	-	-	-	0.00002769	-	-	0.00113678	0.00000022	0.00007141	0.00002332	0.00001457
Subtotals											
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp											
	-	-	-	0.00001071	-	-	0.00043963	0.00000008	0.00002762	0.00000902	0.00000564
Subtotals											
Pier E St Off Ramp : Pico Ave - Ocean Blvd											
	-	-	-	0.00000666	-	-	0.00027333	0.00000005	0.00001717	0.00000561	0.00000350
Subtotals											

Table A.3.1-11. Total Annual PPY Cancer TAC Emissio

Activity/Source ID	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
Subtotals					
Ocean Blvd: West of D St. On-ramp					
	-	0.00000729	0.00000291	0.00036435	-
Subtotals					
Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp					
	-	0.00000282	0.00000113	0.00014091	-
Subtotals					
Pier E St Off Ramp : Pico Ave - Ocean Blvd					
	-	0.00000175	0.00000070	0.00008761	-
Subtotals					

	A	B
1	**Table A.3.1-12. Annual DPM Emissions for the Full Expansion Project - Cancer Analysis - POLB MCC Pro**	
2	*Source Activity*	*Pounds per Year*
3		*DPM*
4	Construction	13.2
5	OGV - Fairway Transit	2,083.5
6	OGV - Precautionary Area Transit	290.7
7	OGV - Harbor Transit	96.0
8	OGV - Docking	59.7
9	OGV - Hoteling - Auxiliary Generators	259.7
10	Tugs - Harbor Transit	64.4
11	Tugs - Docking	21.5
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	2.7
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	3.30
21	Trucks - On-Terminal Driving	11.2
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	75.42
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	6.29
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	21.68
25	Harbor Plaza: Pier F Ave - Pier G Ave	4.67
26	Pier F Ave: MCC Gate - Harbor Plaza	35.44
27	Pico Ave: Pier E St to Harbor Scenic Connector	2.32
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.84
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.45
30	Ocean Blvd: West of D St. On-ramp	2.01
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.52
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.89
33	**Total**	**3,056.271**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K
1	**Table A.3.1-13 Annual DPM Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
4	*Construction*							
5			40	1,600	5	8,000	0.20	2.6403
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**13.2013**
7	*OGV - Fairway Transit*							
8			200	40,000	43	1,720,000	0.02	48.4525
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**2,083.4560**
10	*OGV - Precautionary Area Transit*							
11			200	40,000	33	1,320,000	0.03	8.8077
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**290.6547**
13	*OGV - Harbor Transit*							
14			100	10,000	20	200,000	0.05	4.7992
15	**Subtotals**			**-**	**20**	**-**	**-**	**95.9834**
16	*OGV - Docking*							
17			100	10,000	1	10,000	1.00	59.7361
18	**Subtotals**			**-**	**1**	**-**	**-**	**59.7361**
19	*OGV Hoteling + SCR Duct Burner = DOCCS Stack*							
20		H	NA	NA	1	NA	1.00	259.6630
21	**Subtotals**			**-**	**1**	**-**	**-**	**259.6630**
22	*Tugs - Harbor Transit*							
23			100	10,000	20	200,000	0.05	3.2203
24	**Subtotals**			**-**	**20**	**-**	**-**	**64.4058**
25	*Tugs - Docking*							
26			100	40,000	1	40,000	1.00	21.4686
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**21.4686**
28	*Kovaco Cement Unloader*							
29			10	100	1	100	1.00	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**
31	*vanAalst Cement Unloader*							
32			10	100	1	100	1.00	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**
34	*Payloaders*							
35			10	100	2	200	0.50	1.3324
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.6648**
37	*Kovaco Cement Unloader+50%Payloaders*							
38		E	10	100	1	100	1.00	1.3324
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.3324**
40	*vanAalst Cement Unloader+50%Payloaders*							
41		F	10	100	1	100	1.00	1.3324
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.3324**
43	*Storage Warehouse Dust Collector DC-01*							
44			NA	NA	1	NA	1.00	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**
46	*Truck Loading Dust Collector DC-02*							
47			NA	NA	1	NA	1.00	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**
49	*Truck Loading Dust Collector DC-03*							
50			NA	NA	1	NA	1.00	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**
52	*Truck Loading Dust Collector DC-21*							
53			NA	NA	1	NA	1.00	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**
55	*Truck Loading - Dust*							
56			20	400	1	400	1.00	-
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**
58	*Trucks - On-Terminal Idling (1)*							

	D	E	F	G	H	I	J	K
1	**Table A.3.1-13 Annual DPM Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
59			20	400	1	400	1.00	3.30
60	**Subtotals**			**-**	**1**	**400**	**-**	**3.30**
61	*Truck Loading Dust + On-Terminal Idling*							
62		1646X	20	400	1	400	1.00	1.98
63	**Subtotals**			**-**	**1**	**400**	**-**	**1.98**
64	*Truck Loading Dust + On-Terminal Idling*							
65		1655X	20	400	1	400	1.00	0.66
66	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**
67	*Truck Loading Dust + On-Terminal Idling*							
68		1656X	20	400	1	400	1.00	0.66
69	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**
70	*Trucks - On-Terminal Driving*							
71			20	400	13	5,200	0.08	0.8617
72	**Subtotals**			**-**	**13**	**5,200**	**-**	**11.20**
73	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*							
74			31	961	43	41,323	0.02	1.7539
75	**Subtotals**			**-**	**43**	**41,323**	**-**	**75.4161**
76	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*							
77			36	1,296	4	5,184	0.25	1.5734
78	**Subtotals**			**-**	**4**	**5,184**	**-**	**6.2936**
79	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*							
80			27	400	14	5,600	0.07	1.5486
81	**Subtotals**			**-**	**14**	**5,600**	**-**	**21.6799**
82	*Harbor Plaza: Pier F Ave - Pier G Ave*							
83			24	400	4	5,600	0.25	1.1667
84	**Subtotals**			**-**	**4**	**5,600**	**-**	**4.6666**
85	*Pier F Ave: MCC Gate - Harbor Plaza*							
86			24	400	25	5,600	0.04	1.4176
87	**Subtotals**			**-**	**25**	**5,600**	**-**	**35.4397**
88	*Pico Ave: Pier E St to Harbor Scenic Connector*							
89			27	729	8	10,206	0.13	0.2903
90	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.3226**
91	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*							
92			27	729	6	2,916	0.17	0.1408
93	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.8446**
94	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*							
95			25	625	4	15,625	0.25	0.1122
96	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.4487**
97	*Ocean Blvd: West of D St. On-ramp*							
98			28	784	6	6,272	0.17	0.3356
99	**Subtotals**			**-**	**6**	**6,272**	**-**	**2.0138**
100	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*							
101			28	784	4	4,704	0.25	0.1298
102	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.5192**
103	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*							
104			14	196	11	784	0.09	0.0807
105	**Subtotals**			**-**	**11**	**784**	**-**	**0.8877**

	A	B
1	**Table A.3.1-14 Annual TOG Emissions for the Full Expansion Project - Cancer Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*TOG*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	146.8
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**146.8**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-15 Annual TOG Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*TOG*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*										
5			40	1,600		-					
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	-			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	-			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	-			
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	-			
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
19	*OGV - Hoteling - Boilers*										
20			NA	NA	1	NA	1.00	146.8119	-	-	3.17114
21	**Subtotals**			**-**	**1**	**-**	**-**	**146.8119**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2	*Volume Source Lb/Year*													
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.07341	0.10277	0.14681	0.49916	-	-	0.66065	0.10277	2.33431	0.45512	6.69462	-	-	3.15646
21														

	A	B
1	**Table A.3.1-16 Annual PM Emissions for the Full Expansion Project - Cancer Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	278.0
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**278.0**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE
1	**Table A.3.1-17 Annual PM Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM
4	*Construction*										
5			40	1,600		-					
6	**Subtotals**			**-**	**-**	**-**					
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	-			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	-			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	-			
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	-			
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
19	*OGV - Hoteling - Boilers*										
20			NA	NA	1	NA	1.00	278.0451	-	1.47364	0.13902
21	**Subtotals**			**-**	**1**	**-**	**-**	**278.0451**			

	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1										
2				*Volume Source Lb/Year*						
3	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	-	0.07646	0.13902	1.52925	0.13902	-	1.52925	0.13902	122.67349	1.52925
21										

	A	B
1	**Table A.3.1-18 Annual Tire Dust Emissions for the Full Expansion Project - Cancer Analysis - POLB MCC Proje**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	2.70
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	28.09
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	2.12
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	8.96
25	Harbor Plaza: Pier F Ave - Pier G Ave	1.91
26	Pier F Ave: MCC Gate - Harbor Plaza	14.64
27	Pico Ave: Pier E St to Harbor Scenic Connector	0.96
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.35
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.18
30	Ocean Blvd: West of D St. On-ramp	0.83
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.21
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.37
33	**Total**	**61.32**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-19 Annual Tire Dust Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*vanAalst Cement Unloader*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*vanAalst Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-19 Annual Tire Dust Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*Truck Loading Dust Collector DC-02*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-03*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-21*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading - Dust*											
56			20	400	1	400	1.00	-				
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
58	*Trucks - On-Terminal Idling (1)*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Truck Loading Dust + On-Terminal Idling*											
62		6	20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Truck Loading Dust + On-Terminal Idling*											
65												
66	**Subtotals**											
67	*Truck Loading Dust + On-Terminal Idling*											
68												
69	**Subtotals**											
70	*Trucks - On-Terminal Driving*											
71			20	400	13	5,200	0.08	0.2074	0.00	-	-	0.00
72	**Subtotals**			**-**	**13**	**5,200**	**-**	**2.6963**				
73	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
74			31	961	43	41,323	0.02	0.6533	0.00	-	-	0.01
75	**Subtotals**			**-**	**43**	**41,323**	**-**	**28.0899**				
76	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
77			36	1,296	4	5,184	0.25	0.5305	0.00	-	-	0.00
78	**Subtotals**			**-**	**4**	**5,184**	**-**	**2.1221**				
79	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
80			27	400	14	5,600	0.07	0.6397	0.00	-	-	0.00
81	**Subtotals**			**-**	**14**	**5,600**	**-**	**8.9560**				
82	*Harbor Plaza: Pier F Ave - Pier G Ave*											
83			24	400	4	5,600	0.25	0.4786	0.00	-	-	0.00
84	**Subtotals**			**-**	**4**	**5,600**	**-**	**1.9145**				
85	*Pier F Ave: MCC Gate - Harbor Plaza*											
86			24	400	25	5,600	0.04	0.5856	0.00	-	-	0.00
87	**Subtotals**			**-**	**25**	**5,600**	**-**	**14.6402**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68									
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-19 Annual Tire Dust Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Pico Ave: Pier E St to Harbor Scenic Connector*											
89			27	729	8	10,206	0.13	0.1199	0.00	-	-	0.00
90	**Subtotals**			**-**	**8**	**10,206**	**-**	**0.9595**				
91	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
92			27	729	6	2,916	0.17	0.0582	0.00	-	-	0.00
93	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.3489**				
94	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
95			25	625	4	15,625	0.25	0.0460	0.00	-	-	0.00
96	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.1841**				
97	*Ocean Blvd: West of D St. On-ramp*											
98			28	784	6	6,272	0.17	0.1387	0.00	-	-	0.00
99	**Subtotals**			**-**	**6**	**6,272**	**-**	**0.8319**				
100	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
101			28	784	4	4,704	0.25	0.0536	0.00	-	-	0.00
102	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.2145**				
103	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
104			14	196	11	784	0.09	0.0333	0.00	-	-	0.00
105	**Subtotals**			**-**	**11**	**784**	**-**	**0.3667**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									
100									
101	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
102									
103									
104	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
105									

	A	B
1	**Table A.3.1-20 Annual Brake Dust Emissions for the Full Expansion Project - Cancer Analysis - POLB MCC Pro**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	6.19
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	64.49
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	4.87
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	20.56
25	Harbor Plaza: Pier F Ave - Pier G Ave	4.40
26	Pier F Ave: MCC Gate - Harbor Plaza	33.61
27	Pico Ave: Pier E St to Harbor Scenic Connector	2.20
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.80
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.42
30	Ocean Blvd: West of D St. On-ramp	1.91
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.49
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.84
33	**Total**	**140.80**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-21 Annual Brake Dust Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*vanAalst Cement Unloader*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*vanAalst Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-21 Annual Brake Dust Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*Truck Loading Dust Collector DC-02*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-03*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-21*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading - Dust*											
56			20	400	1	400	1.00	-				
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
58	*Trucks - On-Terminal Idling (1)*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Truck Loading Dust + On-Terminal Idling*											
62		6	20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Truck Loading Dust + On-Terminal Idling*											
65												
66	**Subtotals**											
67	*Truck Loading Dust + On-Terminal Idling*											
68												
69	**Subtotals**											
70	*Trucks - On-Terminal Driving*											
71			20	400	13	5,200	0.08	0.4762	0.00	-	-	0.00
72	**Subtotals**			**-**	**13**	**5,200**	**-**	**6.1905**				
73	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
74			31	961	43	41,323	0.02	1.4998	0.00	-	-	0.01
75	**Subtotals**			**-**	**43**	**41,323**	**-**	**64.4922**				
76	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
77			36	1,296	4	5,184	0.25	1.2181	0.00	-	-	0.01
78	**Subtotals**			**-**	**4**	**5,184**	**-**	**4.8723**				
79	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
80			27	400	14	5,600	0.07	1.4687	0.00	-	-	0.01
81	**Subtotals**			**-**	**14**	**5,600**	**-**	**20.5623**				
82	*Harbor Plaza: Pier F Ave - Pier G Ave*											
83			24	400	4	5,600	0.25	1.0989	0.00	-	-	0.01
84	**Subtotals**			**-**	**4**	**5,600**	**-**	**4.3956**				
85	*Pier F Ave: MCC Gate - Harbor Plaza*											
86			24	400	25	5,600	0.04	1.3445	0.00	-	-	0.01
87	**Subtotals**			**-**	**25**	**5,600**	**-**	**33.6128**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68									
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-21 Annual Brake Dust Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Pico Ave: Pier E St to Harbor Scenic Connector*											
89			27	729	8	10,206	0.13	0.2754	0.00	-	-	0.00
90	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.2029**				
91	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
92			27	729	6	2,916	0.17	0.1335	0.00	-	-	0.00
93	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.8011**				
94	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
95			25	625	4	15,625	0.25	0.1057	0.00	-	-	0.00
96	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.4226**				
97	*Ocean Blvd: West of D St. On-ramp*											
98			28	784	6	6,272	0.17	0.3183	0.00	-	-	0.00
99	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.9100**				
100	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
101			28	784	4	4,704	0.25	0.1231	0.00	-	-	0.00
102	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.4924**				
103	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
104			14	196	11	784	0.09	0.0765	0.00	-	-	0.00
105	**Subtotals**			**-**	**11**	**784**	**-**	**0.8420**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									
100									
101	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
102									
103									
104	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
105									

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-22. Total Annual PPY Cancer TAC Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*						*CAS #*	9901	106990	75070	71432
5			40	1,600	5	8,000	0.20	2.6403			
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**13.2013**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	48.4525			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**2,083.4560**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	8.8077			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**290.6547**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	4.7992			
15	**Subtotals**			**-**	**20**	**-**	**-**	**95.9834**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	59.7361			
18	**Subtotals**			**-**	**1**	**-**	**-**	**59.7361**			
19	*OGV Hoteling + SCR Duct Burner = DOCCS Stack*										
20		H	NA	NA	1	NA	1.00	259.6630	-	-	3.17114
21	**Subtotals**			**-**	**1**	**-**	**-**	**259.6630**			
22	*Tugs - Harbor Transit*										
23			100	10,000	20	200,000	0.05	3.2203			
24	**Subtotals**			**-**	**20**	**-**	**-**	**64.4058**			
25	*Tugs - Docking*										
26			100	40,000	1	40,000	1.00	21.4686			
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**21.4686**			
28	*Kovaco Cement Unloader*										
29			10	100	1	100	1.00	-			
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
31	*vanAalst Cement Unloader*										
32			10	100	1	100	1.00	-			
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
34	*Payloaders*										
35			10	100	2	200	0.50	1.3324			
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.6648**			
37	*Kovaco Cement Unloader+50%Payloaders*										
38		E	10	100	1	100	1.00	1.3324			
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.3324**			
40	*vanAalst Cement Unloader+50%Payloaders*										
41		F	10	100	1	100	1.00	1.3324			
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.3324**			
43	*Storage Warehouse Dust Collector DC-01*										
44			NA	NA	1	NA	1.00	-			
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4	108907	100414	50000	1210	67561	78933	108383	91203	110543	95476	115071	106423	100425	108883
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.07341	0.10277	0.14681	0.49916	-	-	0.66065	0.10277	2.33431	0.45512	6.69462	-	-	3.15646
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														
35														
36														
37														
38														
39														
40														
41														
42														
43														
44														
45														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4	7664417	7440382	7440439	7782505	18540299	7440508	7439921	7439965	7439976	7440020	7782492	9960	7440622
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20	-	1.47364	0.13902	-	0.07646	0.13902	1.52925	0.13902	-	1.52925	0.13902	122.67349	1.52925
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													
45													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-22. Total Annual PPY Cancer TAC Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
46	*Truck Loading Dust Collector DC-02*										
47			NA	NA	1	NA	1.00	-			
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
49	*Truck Loading Dust Collector DC-03*										
50			NA	NA	1	NA	1.00	-			
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
52	*Truck Loading Dust Collector DC-21*										
53			NA	NA	1	NA	1.00	-			
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
55	*Truck Loading - Dust*										
56			20	400	1	400	1.00	-			
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**			
58	*Trucks - On-Terminal Idling (1)*										
59			20	400	1	400	1.00	3.3023			
60	**Subtotals**			**-**	**1**	**400**	**-**	**3.3023**			
61	*Truck Loading Dust + On-Terminal Idling*										
62		1646X	20	400	1	400	1.00	1.9814			
63	**Subtotals**			**-**	**1**	**400**	**-**	**1.9814**			
64	*Truck Loading Dust + On-Terminal Idling*										
65		1655X	20	400	1	400	1.00	0.6605			
66	**Subtotals**			**-**	**1**	**400**	**-**	**0.6605**			
67	*Truck Loading Dust + On-Terminal Idling*										
68		1656X	20	400	1	400	1.00	0.6605			
69	**Subtotals**			**-**	**1**	**400**	**-**	**0.6605**			
70	*Trucks - On-Terminal Driving*										
71			20	400	13	5,200	0.08	0.8617	-	-	-
72	**Subtotals**			**-**	**13**	**5,200**	**-**	**11.2023**			
73	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*										
74			31	961	43	41,323	0.02	1.7539	-	-	-
75	**Subtotals**			**-**	**43**	**41,323**	**-**	**75.4161**			
76	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*										
77			36	1,296	4	5,184	0.25	1.5734	-	-	-
78	**Subtotals**			**-**	**4**	**5,184**	**-**	**6.2936**			
79	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*										
80			27	400	14	5,600	0.07	1.5486	-	-	-
81	**Subtotals**			**-**	**14**	**5,600**	**-**	**21.6799**			
82	*Harbor Plaza: Pier F Ave - Pier G Ave*										
83			24	400	4	5,600	0.25	1.1667	-	-	-
84	**Subtotals**			**-**	**4**	**5,600**	**-**	**4.6666**			
85	*Pier F Ave: MCC Gate - Harbor Plaza*										
86			24	400	25	5,600	0.04	1.4176	-	-	-
87	**Subtotals**			**-**	**25**	**5,600**	**-**	**35.4397**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
46														
47														
48														
49														
50														
51														
52														
53														
54														
55														
56														
57														
58														
59														
60														
61														
62														
63														
64														
65														
66														
67														
68														
69														
70														
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72														
73														
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75														
76														
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78														
79														
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81														
82														
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84														
85														
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46													
47													
48													
49													
50													
51													
52													
53													
54													
55													
56													
57													
58													
59													
60													
61													
62													
63													
64													
65													
66													
67													
68													
69													
70													
71	0.00012988	-	-	0.00533206	0.00000103	0.00033496	0.00010938	0.00006836	-	0.00003418	0.00001367	0.00170899	-
72													
73													
74	0.00040908	-	-	0.01679396	0.00000323	0.00105501	0.00034449	0.00021531	-	0.00010765	0.00004306	0.00538268	-
75													
76													
77	0.00033224	-	-	0.01363913	0.00000262	0.00085682	0.00027978	0.00017486	-	0.00008743	0.00003497	0.00437152	-
78													
79													
80	0.00040061	-	-	0.01644594	0.00000316	0.00103314	0.00033735	0.00021085	-	0.00010542	0.00004217	0.00527114	-
81													
82													
83	0.00029973	-	-	0.01230467	0.00000237	0.00077299	0.00025240	0.00015775	-	0.00007888	0.00003155	0.00394381	-
84													
85													
86	0.00036672	-	-	0.01505495	0.00000290	0.00094576	0.00030882	0.00019301	-	0.00009651	0.00003860	0.00482530	-
87													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-22. Total Annual PPY Cancer TAC Emission Simulations for the Full Expansion Project - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
88	*Pico Ave: Pier E St to Harbor Scenic Connector*										
89			27	729	8	10,206	0.13	0.2903	-	-	-
90	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.3226**			
91	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*										
92			27	729	6	2,916	0.17	0.1408	-	-	-
93	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.8446**			
94	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*										
95			25	625	4	15,625	0.25	0.1122	-	-	-
96	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.4487**			
97	*Ocean Blvd: West of D St. On-ramp*										
98			28	784	6	6,272	0.17	0.3356	-	-	-
99	**Subtotals**			**-**	**6**	**6,272**	**-**	**2.0138**			
100	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*										
101			28	784	4	4,704	0.25	0.1298	-	-	-
102	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.5192**			
103	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*										
104			14	196	11	784	0.09	0.0807	-	-	-
105	**Subtotals**			**-**	**11**	**784**	**-**	**0.8877**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
88														
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90														
91														
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93														
94														
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96														
97														
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99														
100														
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102														
103														
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88													
89	0.00007511	-	-	0.00308328	0.00000059	0.00019369	0.00006325	0.00003953	-	0.00001976	0.00000791	0.00098823	-
90													
91													
92	0.00003642	-	-	0.00149499	0.00000029	0.00009392	0.00003067	0.00001917	-	0.00000958	0.00000383	0.00047916	-
93													
94													
95	0.00002882	-	-	0.00118301	0.00000023	0.00007432	0.00002427	0.00001517	-	0.00000758	0.00000303	0.00037917	-
96													
97													
98	0.00008683	-	-	0.00356455	0.00000069	0.00022393	0.00007312	0.00004570	-	0.00002285	0.00000914	0.00114248	-
99													
100													
101	0.00003358	-	-	0.00137853	0.00000027	0.00008660	0.00002828	0.00001767	-	0.00000884	0.00000353	0.00044184	-
102													
103													
104	0.00002088	-	-	0.00085708	0.00000016	0.00005384	0.00001758	0.00001099	-	0.00000549	0.00000220	0.00027471	-
105													

	A	B
1	**Table A.3.1-23. Annual DPM Emissions for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Pr**	
2	*Source Activity*	*Pounds per Year*
3		*DPM*
4	Construction	13.2
5	OGV - Fairway Transit	1,666.8
6	OGV - Precautionary Area Transit	232.5
7	OGV - Harbor Transit	76.8
8	OGV - Docking	47.8
9	OGV - Hoteling - Auxiliary Generators	207.7
10	Tugs - Harbor Transit	51.5
11	Tugs - Docking	17.2
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	2.1
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	2.6
22	Trucks - On-Terminal Driving	10.6
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	60.33
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	5.03
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	17.34
26	Harbor Plaza: Pier F Ave - Pier G Ave	3.73
27	Pier F Ave: MCC Gate - Harbor Plaza	28.35
28	Pico Ave: Pier E St to Harbor Scenic Connector	1.86
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.68
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.36
31	Ocean Blvd: West of D St. On-ramp	1.61
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.42
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.71
34	**Total**	**2,449.271**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K
1	**Table A.3.1-24 Annual DPM Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
4	*Construction*							
5			40	1,600	5	8,000	0.20	2.6403
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**13.2013**
7	*OGV - Fairway Transit*							
8			200	40,000	43	1,720,000	0.02	38.7620
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**1,666.7648**
10	*OGV - Precautionary Area Transit*							
11			200	40,000	33	1,320,000	0.03	7.0462
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**232.5237**
13	*OGV - Harbor Transit*							
14			100	10,000	20	200,000	0.05	3.8393
15	**Subtotals**			**-**	**20**	**-**	**-**	**76.7867**
16	*OGV - Docking*							
17			100	10,000	1	10,000	1.00	47.7889
18	**Subtotals**			**-**	**1**	**-**	**-**	**47.7889**
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*							
20		H	NA	NA	1	NA	1.00	207.7304
21	**Subtotals**			**-**	**1**	**-**	**-**	**207.7304**
22	*Tugs - Harbor Transit*							
23			100	10,000	20	200,000	0.05	2.5762
24	**Subtotals**			**-**	**20**	**-**	**-**	**51.5246**
25	*Tugs - Docking*							
26			100	40,000	1	40,000	1.00	17.1749
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**17.1749**
28	*Kovaco Cement Unloader*							
29			10	100	1	100	1.00	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**
31	*vanAalst Cement Unloader*							
32			10	100	1	100	1.00	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**
34	*Payloaders*							
35			10	100	2	200	0.50	1.0659
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.1319**
37	*Kovaco Cement Unloader+50%Payloaders*							
38		E	10	100	1	100	1.00	1.0659
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.0659**
40	*vanAalst Cement Unloader+50%Payloaders*							
41		F	10	100	1	100	1.00	1.0659
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.0659**
43	*Storage Warehouse Dust Collector DC-01*							
44			NA	NA	1	NA	1.00	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**
46	*Truck Loading Dust Collector DC-02*							
47			NA	NA	1	NA	1.00	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**
49	*Truck Loading Dust Collector DC-03*							
50			NA	NA	1	NA	1.00	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**
52	*Truck Loading Dust Collector DC-21*							
53			NA	NA	1	NA	1.00	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**
55	*Truck Loading - Dust*							
56			20	400	1	400	1.00	-
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**
58	*Trucks - On-Terminal Idling (1)*							
59			20	400	1	400	1.00	2.6419
60	**Subtotals**			**-**	**1**	**400**	**-**	**2.6419**

	D	E	F	G	H	I	J	K
1	**Table A.3.1-24 Annual DPM Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
61	*Truck Loading Dust + On-Terminal Idling*							
62		1646X	20	400	1	400	1.00	1.9814
63	**Subtotals**			**-**	**1**	**400**	**-**	**1.9814**
64	*Truck Loading Dust + On-Terminal Idling*							
65		1655X	20	400	1	400	1.00	0.6605
66	**Subtotals**			**-**	**1**	**400**	**-**	**0.6605**
67	*Trucks - On-Terminal Driving*							
68			20	400	13	5,200	0.08	0.8135
69	**Subtotals**			**-**	**13**	**5,200**	**-**	**10.5755**
70	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*							
71			31	961	43	41,323	0.02	1.4031
72	**Subtotals**			**-**	**43**	**41,323**	**-**	**60.3329**
73	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*							
74			36	1,296	4	5,184	0.25	1.2587
75	**Subtotals**			**-**	**4**	**5,184**	**-**	**5.0349**
76	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*							
77			27	400	14	5,600	0.07	1.2389
78	**Subtotals**			**-**	**14**	**5,600**	**-**	**17.3439**
79	*Harbor Plaza: Pier F Ave - Pier G Ave*							
80			24	400	4	5,600	0.25	0.9333
81	**Subtotals**			**-**	**4**	**5,600**	**-**	**3.7333**
82	*Pier F Ave: MCC Gate - Harbor Plaza*							
83			24	400	25	5,600	0.04	1.1341
84	**Subtotals**			**-**	**25**	**5,600**	**-**	**28.3518**
85	*Pico Ave: Pier E St to Harbor Scenic Connector*							
86			27	729	8	10,206	0.13	0.2323
87	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.8581**
88	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*							
89			27	729	6	2,916	0.17	0.1126
90	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.6757**
91	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*							
92			25	625	4	15,625	0.25	0.0897
93	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.3589**
94	*Ocean Blvd: West of D St. On-ramp*							
95			28	784	6	6,272	0.17	0.2685
96	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.6111**
97	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*							
98			28	784	4	4,704	0.25	0.1038
99	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.4154**
100	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*							
101			14	196	11	784	0.09	0.0646
102	**Subtotals**			**-**	**11**	**784**	**-**	**0.7102**

	A	B
1	**Table A.3.1-25 Annual TOG Emissions for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC P**	
2	*Source Activity*	*Pounds per Year*
3		*TOG*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	117.4
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**117.4**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-26 Annual TOG Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*TOG*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*										
5			40	1,600		-					
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	-			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	-			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	-			
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	-			
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*										
20		H	NA	NA	1	NA	1.00	117.4495	-	-	2.53691
21	**Subtotals**			**-**	**1**	**-**	**-**	**117.4495**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2	*Volume Source Lb/Year*													
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.05872	0.08221	0.11745	0.39933	-	-	0.52852	0.08221	1.86745	0.36409	5.35570	-	-	2.52516
21														

	A	B
1	**Table A.3.1-27 Annual PM Emissions for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Pr**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	222.4
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**222.4**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-28 Annual PM Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**						
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*											
20		H	NA	NA	1	NA	1.00	222.4361	-	1.17891	0.11122	-
21	**Subtotals**			**-**	**1**	**-**	**-**	**222.4361**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	0.06117	0.11122	1.22340	0.11122	-	1.22340	0.11122	98.13879	1.22340
21									

	A	B
1	**Table A.3.1-29 Annual Tire Dust Emissions for the Reduced Expansion Alternative - Cancer Analysis - POLB M**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	2.16
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	22.47
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1.70
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	7.16
25	Harbor Plaza: Pier F Ave - Pier G Ave	1.53
26	Pier F Ave: MCC Gate - Harbor Plaza	11.71
27	Pico Ave: Pier E St to Harbor Scenic Connector	0.77
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.28
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.15
30	Ocean Blvd: West of D St. On-ramp	0.67
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.17
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.29
33	**Total**	**49.06**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF	AG	AH
1	**Table A.3.1-30 Annual Tire Dust Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**													
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*							*Volume Source I*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER
4	*Construction*													
5			40	1,600		-								
6	**Subtotals**			-	-	-	-	-						
7	*OGV - Fairway Transit*													
8			200	40,000	43	1,720,000	0.02	-						
9	**Subtotals**			-	**43**	**1,720,000**	-	-						
10	*OGV - Precautionary Area Transit*													
11			200	40,000	33	1,320,000	0.03	-						
12	**Subtotals**			-	**33**	**1,320,000**	-	-						
13	*OGV - Harbor Transit*													
14			100	10,000	20	200,000	0.05	-						
15	**Subtotals**			-	**20**	-	-	-						
16	*OGV - Docking*													
17			100	10,000	1	10,000	1.00	-						
18	**Subtotals**			-	**1**	-	-	-						
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*													
20		H	NA	NA	1	NA	1.00	-						
21	**Subtotals**			-	**1**	-	-	-						
22	*Tugs - Harbor Transit*													
23			100	10,000	20	200,000	0.05	-						
24	**Subtotals**			-	**20**	-	-	-						
25	*Tugs - Docking*													
26			100	40,000	1	40,000	1.00	-						
27	**Subtotals**			-	**1**	**40,000**	-	-						
28	*Kovaco Cement Unloader*													
29			10	100	1	100	1.00	-						
30	**Subtotals**			-	**1**	**100**	-	-						
31	*vanAalst Cement Unloader*													
32			10	100	1	100	1.00	-						
33	**Subtotals**			-	**1**	**100**	-	-						
34	*Payloaders*													
35			10	100	2	200	0.50	-						
36	**Subtotals**			-	**2**	**200**	-	-						
37	*Kovaco Cement Unloader+50%Payloaders*													
38		E	10	100	1	100	1.00	-						
39	**Subtotals**			-	**1**	**100**	-	-						
40	*vanAalst Cement Unloader+50%Payloaders*													
41		F	10	100	1	100	1.00	-						
42	**Subtotals**			-	**1**	**100**	-	-						
43	*Storage Warehouse Dust Collector DC-01*													
44			NA	NA	1	NA	1.00	-						
45	**Subtotals**			-	**1**	-	-	-						
46	*Truck Loading Dust Collector DC-02*													
47			NA	NA	1	NA	1.00	-						
48	**Subtotals**			-	**1**	-	-	-						
49	*Truck Loading Dust Collector DC-03*													
50			NA	NA	1	NA	1.00	-						
51	**Subtotals**			-	**1**	-	-	-						
52	*Truck Loading Dust Collector DC-21*													

	AI	AJ	AK	AL	AM	AN	AO
1							
2	*.b/Year*						
3	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							

	D	E	F	G	H	I	J	K	AC	AD	AE	AF	AG	AH
1	**Table A.3.1-30 Annual Tire Dust Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**													
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*							*Volume Source I*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER
53			NA	NA	1	NA	1.00	-						
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**						
55	*Truck Loading - Dust*													
56			20	400	1	400	1.00	-						
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**						
58	*Trucks - On-Terminal Idling (1)*													
59			20	400	1	400	1.00	-						
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**						
61	*Truck Loading Dust + On-Terminal Idling*													
62		6	20	400	1	400	1.00	-						
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**						
64	*Trucks - On-Terminal Driving*													
65			20	400	13	5,200	0.08	0.1659	0.00	-	-	0.00	0.00	0.00
66	**Subtotals**			**-**	**13**	**5,200**	**-**	**2.1570**						
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*													
68			31	961	43	41,323	0.02	0.5226	0.00	-	-	0.00	0.00	0.00
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**22.4719**						
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*													
71			36	1,296	4	5,184	0.25	0.4244	0.00	-	-	0.00	0.00	0.00
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**1.6977**						
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*													
74			27	400	14	5,600	0.07	0.5118	0.00	-	-	0.00	0.00	0.00
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**7.1648**						
76	*Harbor Plaza: Pier F Ave - Pier G Ave*													
77			24	400	4	5,600	0.25	0.3829	0.00	-	-	0.00	0.00	0.00
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**1.5316**						
79	*Pier F Ave: MCC Gate - Harbor Plaza*													
80			24	400	25	5,600	0.04	0.4685	0.00	-	-	0.00	0.00	0.00
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**11.7122**						
82	*Pico Ave: Pier E St to Harbor Scenic Connector*													
83			27	729	8	10,206	0.13	0.0959	0.00	-	-	0.00	0.00	0.00
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**0.7676**						
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*													
86			27	729	6	2,916	0.17	0.0465	0.00	-	-	0.00	0.00	0.00
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.2791**						
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*													
89			25	625	4	15,625	0.25	0.0368	0.00	-	-	0.00	0.00	0.00
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.1473**						
91	*Ocean Blvd: West of D St. On-ramp*													
92			28	784	6	6,272	0.17	0.1109	0.00	-	-	0.00	0.00	0.00
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**0.6655**						
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*													
95			28	784	4	4,704	0.25	0.0429	0.00	-	-	0.00	0.00	0.00
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.1716**						
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*													
98			14	196	11	784	0.09	0.0267	0.00	-	-	0.00	0.00	0.00
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.2934**						

	AI	AJ	AK	AL	AM	AN	AO
1							
2	*.b/Year*						
3	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
53							
54							
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65	0.00	0.00	-	0.00	0.00	0.00	-
66							
67							
68	0.00	0.00	-	0.00	0.00	0.00	-
69							
70							
71	0.00	0.00	-	0.00	0.00	0.00	-
72							
73							
74	0.00	0.00	-	0.00	0.00	0.00	-
75							
76							
77	0.00	0.00	-	0.00	0.00	0.00	-
78							
79							
80	0.00	0.00	-	0.00	0.00	0.00	-
81							
82							
83	0.00	0.00	-	0.00	0.00	0.00	-
84							
85							
86	0.00	0.00	-	0.00	0.00	0.00	-
87							
88							
89	0.00	0.00	-	0.00	0.00	0.00	-
90							
91							
92	0.00	0.00	-	0.00	0.00	0.00	-
93							
94							
95	0.00	0.00	-	0.00	0.00	0.00	-
96							
97							
98	0.00	0.00	-	0.00	0.00	0.00	-
99							

	A	B
1	**Table A.3.1-31 Annual Brake Dust Emissions for the Reduced Expansion Alternative - Cancer Analysis - POLB**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	4.95
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	51.59
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	3.90
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	16.45
25	Harbor Plaza: Pier F Ave - Pier G Ave	3.52
26	Pier F Ave: MCC Gate - Harbor Plaza	26.89
27	Pico Ave: Pier E St to Harbor Scenic Connector	1.76
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.64
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.34
30	Ocean Blvd: West of D St. On-ramp	1.53
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.39
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.67
33	**Total**	**112.64**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF	AG	AH
1	**Table A.3.1-32 Annual Brake Dust Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**													
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*							*Volume Source I*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER
4	*Construction*													
5			40	1,600		-								
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**						
7	*OGV - Fairway Transit*													
8			200	40,000	43	1,720,000	0.02	-						
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**						
10	*OGV - Precautionary Area Transit*													
11			200	40,000	33	1,320,000	0.03	-						
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**						
13	*OGV - Harbor Transit*													
14			100	10,000	20	200,000	0.05	-						
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**						
16	*OGV - Docking*													
17			100	10,000	1	10,000	1.00	-						
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**						
19	*OGV - Hoteling - Boilers*													
20			NA	NA	1	NA	1.00	-						
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**						
22	*Tugs - Harbor Transit*													
23			100	10,000	20	200,000	0.05	-						
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**						
25	*Tugs - Docking*													
26			100	40,000	1	40,000	1.00	-						
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**						
28	*Kovaco Cement Unloader*													
29			10	100	1	100	1.00	-						
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**						
31	*vanAalst Cement Unloader*													
32			10	100	1	100	1.00	-						
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**						
34	*Payloaders*													
35			10	100	2	200	0.50	-						
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**						
37	*Kovaco Cement Unloader+50%Payloaders*													
38		E	10	100	1	100	1.00	-						
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**						
40	*vanAalst Cement Unloader+50%Payloaders*													
41		F	10	100	1	100	1.00	-						
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**						
43	*Storage Warehouse Dust Collector DC-01*													
44			NA	NA	1	NA	1.00	-						
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**						
46	*Truck Loading Dust Collector DC-02*													
47			NA	NA	1	NA	1.00	-						
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**						
49	*Truck Loading Dust Collector DC-03*													
50			NA	NA	1	NA	1.00	-						
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**						
52	*Truck Loading Dust Collector DC-21*													

	AI	AJ	AK	AL	AM	AN	AO
1							
2	*.b/Year*						
3	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							

	D	E	F	G	H	I	J	K	AC	AD	AE	AF	AG	AH
1	**Table A.3.1-32 Annual Brake Dust Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project**													
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*							*Volume Source I*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER
53			NA	NA	1	NA	1.00	-						
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**						
55	*Truck Loading - Dust*													
56			20	400	1	400	1.00	-						
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**						
58	*Trucks - On-Terminal Idling (1)*													
59			20	400	1	400	1.00	-						
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**						
61	*Truck Loading Dust + On-Terminal Idling*													
62		6	20	400	1	400	1.00	-						
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**						
64	*Trucks - On-Terminal Driving*													
65			20	400	13	5,200	0.08	0.3810	0.00	-	-	0.00	0.00	0.00
66	**Subtotals**			**-**	**13**	**5,200**	**-**	**4.9524**						
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*													
68			31	961	43	41,323	0.02	1.1999	0.00	-	-	0.01	0.00	0.00
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**51.5937**						
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*													
71			36	1,296	4	5,184	0.25	0.9745	0.00	-	-	0.01	0.00	0.00
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**3.8978**						
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*													
74			27	400	14	5,600	0.07	1.1750	0.00	-	-	0.01	0.00	0.00
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**16.4499**						
76	*Harbor Plaza: Pier F Ave - Pier G Ave*													
77			24	400	4	5,600	0.25	0.8791	0.00	-	-	0.01	0.00	0.00
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**3.5165**						
79	*Pier F Ave: MCC Gate - Harbor Plaza*													
80			24	400	25	5,600	0.04	1.0756	0.00	-	-	0.01	0.00	0.00
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**26.8902**						
82	*Pico Ave: Pier E St to Harbor Scenic Connector*													
83			27	729	8	10,206	0.13	0.2203	0.00	-	-	0.00	0.00	0.00
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.7623**						
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*													
86			27	729	6	2,916	0.17	0.1068	0.00	-	-	0.00	0.00	0.00
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.6409**						
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*													
89			25	625	4	15,625	0.25	0.0845	0.00	-	-	0.00	0.00	0.00
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.3381**						
91	*Ocean Blvd: West of D St. On-ramp*													
92			28	784	6	6,272	0.17	0.2547	0.00	-	-	0.00	0.00	0.00
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.5280**						
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*													
95			28	784	4	4,704	0.25	0.0985	0.00	-	-	0.00	0.00	0.00
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.3940**						
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*													
98			14	196	11	784	0.09	0.0612	0.00	-	-	0.00	0.00	0.00
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.6736**						

	AI	AJ	AK	AL	AM	AN	AO
1							
2	*.b/Year*						
3	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
53							
54							
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65	0.00	0.00	-	0.00	0.00	0.00	-
66							
67							
68	0.00	0.00	-	0.00	0.00	0.00	-
69							
70							
71	0.00	0.00	-	0.00	0.00	0.00	-
72							
73							
74	0.00	0.00	-	0.00	0.00	0.00	-
75							
76							
77	0.00	0.00	-	0.00	0.00	0.00	-
78							
79							
80	0.00	0.00	-	0.00	0.00	0.00	-
81							
82							
83	0.00	0.00	-	0.00	0.00	0.00	-
84							
85							
86	0.00	0.00	-	0.00	0.00	0.00	-
87							
88							
89	0.00	0.00	-	0.00	0.00	0.00	-
90							
91							
92	0.00	0.00	-	0.00	0.00	0.00	-
93							
94							
95	0.00	0.00	-	0.00	0.00	0.00	-
96							
97							
98	0.00	0.00	-	0.00	0.00	0.00	-
99							

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-33. Total Annual PPY Cancer TAC Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*						CAS #	9901	106990	75070	71432
5			40	1,600	5	8,000	0.20	2.6403			
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**13.2013**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	38.7620			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**1,666.7648**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	7.0462			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**232.5237**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	3.8393			
15	**Subtotals**			**-**	**20**	**-**	**-**	**76.7867**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	47.7889			
18	**Subtotals**			**-**	**1**	**-**	**-**	**47.7889**			
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*										
20		H	NA	NA	1	NA	1.00	207.7304	-	-	2.53691
21	**Subtotals**			**-**	**1**	**-**	**-**	**207.7304**			
22	*Tugs - Harbor Transit*										
23			100	10,000	20	200,000	0.05	2.5762			
24	**Subtotals**			**-**	**20**	**-**	**-**	**51.5246**			
25	*Tugs - Docking*										
26			100	40,000	1	40,000	1.00	17.1749			
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**17.1749**			
28	*Kovaco Cement Unloader*										
29			10	100	1	100	1.00	-			
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
31	*vanAalst Cement Unloader*										
32			10	100	1	100	1.00	-			
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
34	*Payloaders*										
35			10	100	2	200	0.50	1.0659			
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.1319**			
37	*Kovaco Cement Unloader+50%Payloaders*										
38		E	10	100	1	100	1.00	1.0659			
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.0659**			
40	*vanAalst Cement Unloader+50%Payloaders*										
41		F	10	100	1	100	1.00	1.0659			
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.0659**			
43	*Storage Warehouse Dust Collector DC-01*										
44			NA	NA	1	NA	1.00	-			
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4	108907	100414	50000	1210	67561	78933	108383	91203	110543	95476	115071	106423	100425	108883
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.05872	0.08221	0.11745	0.39933	-	-	0.52852	0.08221	1.86745	0.36409	5.35570	-	-	2.52516
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														
35														
36														
37														
38														
39														
40														
41														
42														
43														
44														
45														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4	7664417	7440382	7440439	7782505	18540299	7440508	7439921	7439965	7439976	7440020	7782492	9960	7440622
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20	-	1.17891	0.11122	-	0.06117	0.11122	1.22340	0.11122	-	1.22340	0.11122	98.13879	1.22340
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													
45													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-33. Total Annual PPY Cancer TAC Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
46	*Truck Loading Dust Collector DC-02*										
47			NA	NA	1	NA	1.00	-			
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
49	*Truck Loading Dust Collector DC-03*										
50			NA	NA	1	NA	1.00	-			
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
52	*Truck Loading Dust Collector DC-21*										
53			NA	NA	1	NA	1.00	-			
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
55	*Truck Loading - Dust*										
56			20	400	1	400	1.00	-			
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**			
58	*Trucks - On-Terminal Idling (1)*										
59			20	400	1	400	1.00	2.6419			
60	**Subtotals**			**-**	**1**	**400**	**-**	**2.6419**			
61	*Truck Loading Dust + On-Terminal Idling*										
62		1646X	20	400	1	400	1.00	1.9814			
63	**Subtotals**			**-**	**1**	**400**	**-**	**1.9814**			
64	*Truck Loading Dust + On-Terminal Idling*										
65		1655X	20	400	1	400	1.00	0.6605			
66				**-**	**1**	**400**	**-**	**0.6605**			
67	*Trucks - On-Terminal Driving*										
68			20	400	13	5,200	0.08	0.8135	-	-	-
69	**Subtotals**			**-**	**13**	**5,200**	**-**	**10.5755**			
70	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*										
71			31	961	43	41,323	0.02	1.4031	-	-	-
72	**Subtotals**			**-**	**43**	**41,323**	**-**	**60.3329**			
73	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*										
74			36	1,296	4	5,184	0.25	1.2587	-	-	-
75	**Subtotals**			**-**	**4**	**5,184**	**-**	**5.0349**			
76	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*										
77			27	400	14	5,600	0.07	1.2389	-	-	-
78	**Subtotals**			**-**	**14**	**5,600**	**-**	**17.3439**			
79	*Harbor Plaza: Pier F Ave - Pier G Ave*										
80			24	400	4	5,600	0.25	0.9333	-	-	-
81	**Subtotals**			**-**	**4**	**5,600**	**-**	**3.7333**			
82	*Pier F Ave: MCC Gate - Harbor Plaza*										
83			24	400	25	5,600	0.04	1.1341	-	-	-
84	**Subtotals**			**-**	**25**	**5,600**	**-**	**28.3518**			
85	*Pico Ave: Pier E St to Harbor Scenic Connector*										
86			27	729	8	10,206	0.13	0.2323	-	-	-
87	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.8581**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
46														
47														
48														
49														
50														
51														
52														
53														
54														
55														
56														
57														
58														
59														
60														
61														
62														
63														
64														
65														
66														
67														
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69														
70														
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72														
73														
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75														
76														
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78														
79														
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81														
82														
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84														
85														
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46													
47													
48													
49													
50													
51													
52													
53													
54													
55													
56													
57													
58													
59													
60													
61													
62													
63													
64													
65													
66													
67													
68	0.00010391	-	-	0.00426565	0.00000082	0.00026797	0.00008750	0.00005469	-	0.00002734	0.00001094	0.00136720	-
69													
70													
71	0.00032727	-	-	0.01343517	0.00000258	0.00084400	0.00027559	0.00017225	-	0.00008612	0.00003445	0.00430614	-
72													
73													
74	0.00026579	-	-	0.01091130	0.00000210	0.00068545	0.00022382	0.00013989	-	0.00006994	0.00002798	0.00349721	-
75													
76													
77	0.00032049	-	-	0.01315676	0.00000253	0.00082651	0.00026988	0.00016868	-	0.00008434	0.00003374	0.00421691	-
78													
79													
80	0.00023978	-	-	0.00984374	0.00000189	0.00061839	0.00020192	0.00012620	-	0.00006310	0.00002524	0.00315504	-
81													
82													
83	0.00029338	-	-	0.01204396	0.00000232	0.00075661	0.00024706	0.00015441	-	0.00007720	0.00003088	0.00386024	-
84													
85													
86	0.00006008	-	-	0.00246662	0.00000047	0.00015495	0.00005060	0.00003162	-	0.00001581	0.00000632	0.00079058	-
87													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-33. Total Annual PPY Cancer TAC Emission Simulations for the Reduced Expansion Alternative - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
88	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*										
89			27	729	6	2,916	0.17	0.1126	-	-	-
90	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.6757**			
91	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*										
92			25	625	4	15,625	0.25	0.0897	-	-	-
93	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.3589**			
94	*Ocean Blvd: West of D St. On-ramp*										
95			28	784	6	6,272	0.17	0.2685	-	-	-
96	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.6111**			
97	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*										
98			28	784	4	4,704	0.25	0.1038	-	-	-
99	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.4154**			
100	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*										
101			14	196	11	784	0.09	0.0646	-	-	-
102	**Subtotals**			**-**	**11**	**784**	**-**	**0.7102**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
88														
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90														
91														
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93														
94														
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96														
97														
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99														
100														
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88													
89	0.00002913	-	-	0.00119599	0.00000023	0.00007513	0.00002453	0.00001533	-	0.00000767	0.00000307	0.00038333	-
90													
91													
92	0.00002305	-	-	0.00094641	0.00000018	0.00005945	0.00001941	0.00001213	-	0.00000607	0.00000243	0.00030334	-
93													
94													
95	0.00006946	-	-	0.00285164	0.00000055	0.00017914	0.00005850	0.00003656	-	0.00001828	0.00000731	0.00091399	-
96													
97													
98	0.00002686	-	-	0.00110282	0.00000021	0.00006928	0.00002262	0.00001414	-	0.00000707	0.00000283	0.00035347	-
99													
100													
101	0.00001670	-	-	0.00068567	0.00000013	0.00004307	0.00001406	0.00000879	-	0.00000440	0.00000176	0.00021977	-
102													

	A	B
1	**Table A.3.1-34. Annual DPM Emissions for the No Project Alternative - Cancer Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*DPM*
4	Construction	
5	OGV - Fairway Transit	1,409.3
6	OGV - Precautionary Area Transit	196.6
7	OGV - Harbor Transit	64.9
8	OGV - Docking	40.4
9	OGV - Hoteling - Auxiliary Generators	202.3
10	Tugs - Harbor Transit	43.6
11	Tugs - Docking	14.5
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	2.1
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	1.8
21	Trucks - On-Terminal Driving	5.0
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	40.7
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	3.4
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	11.7
25	Harbor Plaza: Pier F Ave - Pier G Ave	2.5
26	Pier F Ave: MCC Gate - Harbor Plaza	19.1
27	Pico Ave: Pier E St to Harbor Scenic Connector	1.3
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.5
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.2
30	Ocean Blvd: West of D St. On-ramp	1.1
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.3
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.5
33	**Total**	**2,061.7**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K
1	**Table A.3.1-35 Annual DPM Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Year*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
4	*Construction*							
5				-	5	-	0.20	-
6	**Subtotals**			**-**	**5**	**-**	**-**	**-**
7	*OGV - Fairway Transit*							
8			200	40,000	43	1,720,000	0.02	32.7753
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**1,409.3378**
10	*OGV - Precautionary Area Transit*							
11			200	40,000	33	1,320,000	0.03	5.9579
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**196.6111**
13	*OGV - Harbor Transit*							
14			100	10,000	20	200,000	0.05	3.2464
15	**Subtotals**			**-**	**20**	**-**	**-**	**64.9273**
16	*OGV - Docking*							
17			100	10,000	1	10,000	1.00	40.4080
18	**Subtotals**			**-**	**1**	**-**	**-**	**40.4080**
19	*OGV - Hoteling - Auxiliary Generators*							
20		G	NA	NA	1	NA	1.00	202.2840
21	**Subtotals**			**-**	**1**	**-**	**-**	**202.2840**
22	*Tugs - Harbor Transit*							
23			100	10,000	20	200,000	0.05	2.1783
24	**Subtotals**			**-**	**20**	**-**	**-**	**43.5668**
25	*Tugs - Docking*							
26			100	40,000	1	40,000	1.00	14.5223
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**14.5223**
28	*Kovaco Cement Unloader*							
29			10	100	1	100	1.00	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**
31	*vanAalst Cement Unloader*							
32			10	100	1	100	1.00	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**
34	*Payloaders*							
35			10	100	2	200	0.50	1.0301
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.0601**
37	*Kovaco Cement Unloader+50%Payloaders*							
38		E	10	100	1	100	1.00	1.0301
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.0301**
40	*vanAalst Cement Unloader+50%Payloaders*							
41		F	10	100	1	100	1.00	1.0301
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.0301**
43	*Storage Warehouse Dust Collector DC-01*							
44			NA	NA	1	NA	1.00	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**
46	*Truck Loading Dust Collector DC-02*							
47			NA	NA	1	NA	1.00	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**
49	*Truck Loading Dust Collector DC-03*							
50			NA	NA	1	NA	1.00	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**
52	*Truck Loading Dust Collector DC-21*							
53			NA	NA	1	NA	1.00	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**
55	*Truck Loading - Dust*							
56			20	400	1	400	1.00	-
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**
58	*Trucks - On-Terminal Idling (1)*							
59			20	400	1	400	1.00	1.7833
60	**Subtotals**			**-**	**1**	**400**	**-**	**1.7833**

	D	E	F	G	H	I	J	K
1	**Table A.3.1-35 Annual DPM Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Year*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
61	*Truck Loading Dust + On-Terminal Idling*							
62		6	20	400	1	400	1.00	1.7833
63	**Subtotals**			**-**	**1**	**400**	**-**	**1.7833**
64	*Trucks - On-Terminal Driving*							
65			20	400	8	3,200	0.13	0.6192
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**4.9535**
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*							
68			31	961	43	41,323	0.02	0.9471
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**40.7247**
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*							
71			36	1,296	4	5,184	0.25	0.8496
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**3.3986**
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*							
74			27	400	14	5,600	0.07	0.8362
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**11.7072**
76	*Harbor Plaza: Pier F Ave - Pier G Ave*							
77			24	400	4	5,600	0.25	0.6300
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**2.5200**
79	*Pier F Ave: MCC Gate - Harbor Plaza*							
80			24	400	25	5,600	0.04	0.7655
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**19.1374**
82	*Pico Ave: Pier E St to Harbor Scenic Connector*							
83			27	729	8	10,206	0.13	0.1568
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.2542**
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*							
86			27	729	6	2,916	0.17	0.0760
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.4561**
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*							
89			25	625	4	15,625	0.25	0.0606
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.2423**
91	*Ocean Blvd: West of D St. On-ramp*							
92			28	784	6	6,272	0.17	0.1812
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.0875**
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*							
95			28	784	4	4,704	0.25	0.0701
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.2804**
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*							
98			14	196	11	784	0.09	0.0436
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.4794**

	A	B
1	**Table A.3.1-36 Annual TOG Emissions for the No Project Alternative - Cancer Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*TOG*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	115.6
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**115.590**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-37 Annual TOG Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*TOG*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*										
5				-		-					
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	-			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	-			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	-			
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	-			
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
19	*OGV - Hoteling - Boilers*										
20			NA	NA	1	NA	1.00	115.5901	-	-	2.49675
21	**Subtotals**			**-**	**1**	**-**	**-**	**115.5901**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2	*Volume Source Lb/Year*													
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.05780	0.08091	0.11559	0.39301	-	-	0.52016	0.08091	1.83788	0.35833	5.27091	-	-	2.48519
21														

	A	B
1	**Table A.3.1-38 Annual PM Emissions for the No Project Alternative - Cancer Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	218.9
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**218.9**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-39 Annual PM Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5				-		-						
6	**Subtotals**			**-**	**-**	**-**						
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	218.9145	-	1.16025	0.10946	-
21	**Subtotals**			**-**	**1**	**-**	**-**	**218.9145**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20	0.06020	0.10946	1.20403	0.10946	-	1.20403	0.10946	96.58507	1.20403
21									

	A	B
1	**Table A.3.1-40 Annual Tire Dust Emissions for the No Project Alternative - Cancer Analysis - POLB MCC Projec**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	1.04
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	15.17
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1.15
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	4.84
25	Harbor Plaza: Pier F Ave - Pier G Ave	1.03
26	Pier F Ave: MCC Gate - Harbor Plaza	7.91
27	Pico Ave: Pier E St to Harbor Scenic Connector	0.52
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.19
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.10
30	Ocean Blvd: West of D St. On-ramp	0.45
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.12
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.20
33	**Total**	**32.70**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-41 Annual Tire Dust Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5				-		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*vanAalst Cement Unloader*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*vanAalst Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-41 Annual Tire Dust Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*Truck Loading Dust Collector DC-02*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-03*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-21*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading - Dust*											
56			20	400	1	400	1.00	-				
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
58	*Trucks - On-Terminal Idling (1)*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Truck Loading Dust + On-Terminal Idling*											
62		6	20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Trucks - On-Terminal Driving*											
65			20	400	8	3,200	0.13	0.1300	0.00	-	-	0.00
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**1.0400**				
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
68			31	961	43	41,323	0.02	0.3528	0.00	-	-	0.00
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**15.1686**				
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
71			36	1,296	4	5,184	0.25	0.2865	0.00	-	-	0.00
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**1.1460**				
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
74			27	400	14	5,600	0.07	0.3454	0.00	-	-	0.00
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**4.8363**				
76	*Harbor Plaza: Pier F Ave - Pier G Ave*											
77			24	400	4	5,600	0.25	0.2585	0.00	-	-	0.00
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**1.0338**				
79	*Pier F Ave: MCC Gate - Harbor Plaza*											
80			24	400	25	5,600	0.04	0.3162	0.00	-	-	0.00
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**7.9057**				
82	*Pico Ave: Pier E St to Harbor Scenic Connector*											
83			27	729	8	10,206	0.13	0.0648	0.00	-	-	0.00
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**0.5181**				
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
86			27	729	6	2,916	0.17	0.0314	0.00	-	-	0.00
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.1884**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
66									
67									
68	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-41 Annual Tire Dust Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
89			25	625	4	15,625	0.25	0.0248	0.00	-	-	0.00
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.0994**				
91	*Ocean Blvd: West of D St. On-ramp*											
92			28	784	6	6,272	0.17	0.0749	0.00	-	-	0.00
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**0.4492**				
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
95			28	784	4	4,704	0.25	0.0290	0.00	-	-	0.00
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.1158**				
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
98			14	196	11	784	0.09	0.0180	0.00	-	-	0.00
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.1980**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									

	A	B
1	**Table A.3.1-42 Annual Brake Dust Emissions for the No Project Alternative - Cancer Analysis - POLB MCC Proj**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	2.39
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	34.83
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	2.63
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	11.10
25	Harbor Plaza: Pier F Ave - Pier G Ave	2.37
26	Pier F Ave: MCC Gate - Harbor Plaza	18.15
27	Pico Ave: Pier E St to Harbor Scenic Connector	1.19
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.43
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.23
30	Ocean Blvd: West of D St. On-ramp	1.03
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.27
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.45
33	**Total**	**75.08**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-43 Annual Brake Dust Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5				-		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*vanAalst Cement Unloader*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*vanAalst Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-43 Annual Brake Dust Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*Truck Loading Dust Collector DC-02*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-03*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-21*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading - Dust*											
56			20	400	1	400	1.00	-				
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
58	*Trucks - On-Terminal Idling (1)*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Truck Loading Dust + On-Terminal Idling*											
62		6	20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Trucks - On-Terminal Driving*											
65			20	400	8	3,200	0.13	0.2985	0.00	-	-	0.00
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**2.3878**				
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
68			31	961	43	41,323	0.02	0.8099	0.00	-	-	0.01
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**34.8258**				
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
71			36	1,296	4	5,184	0.25	0.6578	0.00	-	-	0.01
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**2.6310**				
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
74			27	400	14	5,600	0.07	0.7931	0.00	-	-	0.01
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**11.1037**				
76	*Harbor Plaza: Pier F Ave - Pier G Ave*											
77			24	400	4	5,600	0.25	0.5934	0.00	-	-	0.00
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**2.3736**				
79	*Pier F Ave: MCC Gate - Harbor Plaza*											
80			24	400	25	5,600	0.04	0.7260	0.00	-	-	0.01
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**18.1509**				
82	*Pico Ave: Pier E St to Harbor Scenic Connector*											
83			27	729	8	10,206	0.13	0.1487	0.00	-	-	0.00
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.1895**				
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
86			27	729	6	2,916	0.17	0.0721	0.00	-	-	0.00
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.4326**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
66									
67									
68	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-43 Annual Brake Dust Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
89			25	625	4	15,625	0.25	0.0571	0.00	-	-	0.00
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.2282**				
91	*Ocean Blvd: West of D St. On-ramp*											
92			28	784	6	6,272	0.17	0.1719	0.00	-	-	0.00
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.0314**				
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
95			28	784	4	4,704	0.25	0.0665	0.00	-	-	0.00
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.2659**				
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
98			14	196	11	784	0.09	0.0413	0.00	-	-	0.00
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.4547**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-44. Total Annual PPY Cancer TAC Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*						*CAS #*	9901	106990	75070	71432
5				-	5	-	0.20	-			
6	**Subtotals**			**-**	**5**	**-**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	32.7753			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**1,409.3378**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	5.9579			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**196.6111**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	3.2464			
15	**Subtotals**			**-**	**20**	**-**	**-**	**64.9273**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	40.4080			
18	**Subtotals**			**-**	**1**	**-**	**-**	**40.4080**			
19	*OGV - Hoteling - ICEs + Boiler*										
20			NA	NA	1	NA	1.00	202.2840	-	-	2.49675
21	**Subtotals**			**-**	**1**	**-**	**-**	**202.2840**			
22	*Tugs - Harbor Transit*										
23			100	10,000	20	200,000	0.05	2.1783			
24	**Subtotals**			**-**	**20**	**-**	**-**	**43.5668**			
25	*Tugs - Docking*										
26			100	40,000	1	40,000	1.00	14.5223			
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**14.5223**			
28	*Kovaco Cement Unloader*										
29			10	100	1	100	1.00	-			
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
31	*vanAalst Cement Unloader*										
32			10	100	1	100	1.00	-			
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
34	*Payloaders*										
35			10	100	2	200	0.50	1.0301			
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.0601**			
37	*Kovaco Cement Unloader+50%Payloaders*										
38		E	10	100	1	100	1.00	1.0301			
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.0301**			
40	*vanAalst Cement Unloader+50%Payloaders*										
41		F	10	100	1	100	1.00	1.0301			
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.0301**			
43	*Storage Warehouse Dust Collector DC-01*										
44			NA	NA	1	NA	1.00	-			
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4	108907	100414	50000	1210	67561	78933	108383	91203	110543	95476	115071	106423	100425	108883
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.05780	0.08091	0.11559	0.39301	-	-	0.52016	0.08091	1.83788	0.35833	5.27091	-	-	2.48519
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														
35														
36														
37														
38														
39														
40														
41														
42														
43														
44														
45														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4	7664417	7440382	7440439	7782505	18540299	7440508	7439921	7439965	7439976	7440020	7782492	9960	7440622
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20	-	1.16025	0.10946	-	0.06020	0.10946	1.20403	0.10946	-	1.20403	0.10946	96.58507	1.20403
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43													
44													
45													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-44. Total Annual PPY Cancer TAC Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
46	*Truck Loading Dust Collector DC-02*										
47			NA	NA	1	NA	1.00	-			
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
49	*Truck Loading Dust Collector DC-03*										
50			NA	NA	1	NA	1.00	-			
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
52	*Truck Loading Dust Collector DC-21*										
53			NA	NA	1	NA	1.00	-			
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
55	*Truck Loading - Dust*										
56			20	400	1	400	1.00	-			
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**			
58	*Trucks - On-Terminal Idling (1)*										
59			20	400	1	400	1.00	1.7833			
60	**Subtotals**			**-**	**1**	**400**	**-**	**1.7833**			
61	*Truck Loading Dust + On-Terminal Idling*										
62		6	20	400	1	400	1.00	1.7833			
63	**Subtotals**			**-**	**1**	**400**	**-**	**1.7833**			
64	*Trucks - On-Terminal Driving*										
65			20	400	8	3,200	0.13	0.6192	-	-	-
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**4.9535**			
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*										
68			31	961	43	41,323	0.02	0.9471	-	-	-
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**40.7247**			
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*										
71			36	1,296	4	5,184	0.25	0.8496	-	-	-
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**3.3986**			
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*										
74			27	400	14	5,600	0.07	0.8362	-	-	-
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**11.7072**			
76	*Harbor Plaza: Pier F Ave - Pier G Ave*										
77			24	400	4	5,600	0.25	0.6300	-	-	-
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**2.5200**			
79	*Pier F Ave: MCC Gate - Harbor Plaza*										
80			24	400	25	5,600	0.04	0.7655	-	-	-
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**19.1374**			
82	*Pico Ave: Pier E St to Harbor Scenic Connector*										
83			27	729	8	10,206	0.13	0.1568	-	-	-
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.2542**			
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*										
86			27	729	6	2,916	0.17	0.0760	-	-	-
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.4561**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
46														
47														
48														
49														
50														
51														
52														
53														
54														
55														
56														
57														
58														
59														
60														
61														
62														
63														
64														
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66														
67														
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69														
70														
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72														
73														
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75														
76														
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78														
79														
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81														
82														
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84														
85														
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46													
47													
48													
49													
50													
51													
52													
53													
54													
55													
56													
57													
58													
59													
60													
61													
62													
63													
64													
65	0.00008141	-	-	0.00334206	0.00000064	0.00020995	0.00006856	0.00004285	-	0.00002142	0.00000857	0.00107117	-
66													
67													
68	0.00022091	-	-	0.00906874	0.00000174	0.00056970	0.00018603	0.00011627	-	0.00005813	0.00002325	0.00290665	-
69													
70													
71	0.00017941	-	-	0.00736513	0.00000142	0.00046268	0.00015108	0.00009442	-	0.00004721	0.00001888	0.00236062	-
72													
73													
74	0.00021633	-	-	0.00888081	0.00000171	0.00055790	0.00018217	0.00011386	-	0.00005693	0.00002277	0.00284641	-
75													
76													
77	0.00016185	-	-	0.00664452	0.00000128	0.00041741	0.00013630	0.00008519	-	0.00004259	0.00001704	0.00212966	-
78													
79													
80	0.00019803	-	-	0.00812967	0.00000156	0.00051071	0.00016676	0.00010423	-	0.00005211	0.00002085	0.00260566	-
81													
82													
83	0.00004056	-	-	0.00166497	0.00000032	0.00010459	0.00003415	0.00002135	-	0.00001067	0.00000427	0.00053364	-
84													
85													
86	0.00001966	-	-	0.00080729	0.00000016	0.00005071	0.00001656	0.00001035	-	0.00000517	0.00000207	0.00025875	-
87													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-44. Total Annual PPY Cancer TAC Emission Simulations for the No Project Alternative - Cancer Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*										
89			25	625	4	15,625	0.25	0.0606	-	-	-
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.2423**			
91	*Ocean Blvd: West of D St. On-ramp*										
92			28	784	6	6,272	0.17	0.1812	-	-	-
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.0875**			
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*										
95			28	784	4	4,704	0.25	0.0701	-	-	-
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.2804**			
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*										
98			14	196	11	784	0.09	0.0436	-	-	-
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.4794**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
88														
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90														
91														
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93														
94														
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96														
97														
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88													
89	0.00001556	-	-	0.00063883	0.00000012	0.00004013	0.00001310	0.00000819	-	0.00000410	0.00000164	0.00020475	-
90													
91													
92	0.00004689	-	-	0.00192486	0.00000037	0.00012092	0.00003948	0.00002468	-	0.00001234	0.00000494	0.00061694	-
93													
94													
95	0.00001813	-	-	0.00074441	0.00000014	0.00004676	0.00001527	0.00000954	-	0.00000477	0.00000191	0.00023859	-
96													
97													
98	0.00001127	-	-	0.00046283	0.00000009	0.00002907	0.00000949	0.00000593	-	0.00000297	0.00000119	0.00014834	-
99													

	A	B
1	**Table A.3.1-45 Annual DPM Emissions for the CEQA Baseline - Chronic Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*DPM*
4	Construction	
5	OGV - Fairway Transit	803.3
6	OGV - Precautionary Area Transit	105.7
7	OGV - Harbor Transit	33.9
8	OGV - Docking	21.1
9	OGV - Hoteling - Auxiliary Generators	318.6
10	Tugs - Harbor Transit	31.6
11	Tugs - Docking	10.5
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	1.1
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	52.7
21	Trucks - On-Terminal Driving	9.8
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	34.6
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	2.7
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	12.1
25	Harbor Plaza: Pier F Ave - Pier G Ave	2.9
26	Pier F Ave: MCC Gate - Harbor Plaza	19.8
27	Pico Ave: Pier E St to Harbor Scenic Connector	1.3
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.5
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.3
30	Ocean Blvd: West of D St. On-ramp	1.1
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.3
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.5
33	**Total**	**1,464.47**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K
1	**Table A.3.1-46 Annual DPM Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
4	*Construction*							
5			40	1,600	5	8,000	0.20	-
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**-**
7	*OGV - Fairway Transit*							
8			200	40,000	43	1,720,000	0.02	18.6805
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**803.2628**
10	*OGV - Precautionary Area Transit*							
11			200	40,000	33	1,320,000	0.03	3.2032
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**105.7049**
13	*OGV - Harbor Transit*							
14			100	10,000	20	200,000	0.05	1.6959
15	**Subtotals**			**-**	**20**	**-**	**-**	**33.9172**
16	*OGV - Docking*							
17			100	10,000	1	10,000	1.00	21.1087
18	**Subtotals**			**-**	**1**	**-**	**-**	**21.1087**
19	*OGV - Hoteling - Auxiliary Generators*							
20		G	NA	NA	1	NA	1.00	318.6493
21	**Subtotals**			**-**	**1**	**-**	**-**	**318.6493**
22	*Tugs - Harbor Transit*							
23			100	10,000	20	200,000	0.05	1.5800
24	**Subtotals**			**-**	**20**	**-**	**-**	**31.5992**
25	*Tugs - Docking*							
26			100	40,000	1	40,000	1.00	10.5331
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**10.5331**
28	*Kovaco Cement Unloader*							
29			10	100	1	100	1.00	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**
31	*vanAalst Cement Unloader*							
32			10	100	1	100	1.00	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**
34	*Payloaders*							
35			10	100	2	200	0.50	0.5535
36	**Subtotals**			**-**	**2**	**200**	**-**	**1.1069**
37	*Kovaco Cement Unloader+50%Payloaders*							
38		E	10	100	1	100	1.00	0.5535
39	**Subtotals**			**-**	**1**	**100**	**-**	**0.5535**
40	*vanAalst Cement Unloader+50%Payloaders*							
41		F	10	100	1	100	1.00	0.5535
42	**Subtotals**			**-**	**1**	**100**	**-**	**0.5535**
43	*Storage Warehouse Dust Collector DC-01*							
44			NA	NA	1	NA	1.00	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**
46	*Truck Loading Dust Collector DC-02*							
47			NA	NA	1	NA	1.00	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**
49	*Truck Loading Dust Collector DC-03*							
50			NA	NA	1	NA	1.00	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**
52	*Truck Loading Dust Collector DC-21*							
53			NA	NA	1	NA	1.00	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**
55	*Truck Loading - Dust*							
56			20	400	1	400	1.00	-
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**
58	*Trucks - On-Terminal Idling (1)*							
59			20	400	1	400	1.00	52.6574
60	**Subtotals**			**-**	**1**	**400**	**-**	**52.6574**

	D	E	F	G	H	I	J	K
1	**Table A.3.1-46 Annual DPM Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
61	*Truck Loading Dust + On-Terminal Idling*							
62		6	20	400	1	400	1.00	52.6574
63	**Subtotals**			**-**	**1**	**400**	**-**	**52.6574**
64	*Trucks - On-Terminal Driving*							
65			20	400	8	3,200	0.13	1.2274
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**9.8195**
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*							
68			31	961	43	41,323	0.02	0.8035
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**34.5511**
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*							
71			36	1,296	4	5,184	0.25	0.6772
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**2.7088**
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*							
74			27	400	14	5,600	0.07	0.8665
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**12.1310**
76	*Harbor Plaza: Pier F Ave - Pier G Ave*							
77			24	400	4	5,600	0.25	0.7301
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**2.9204**
79	*Pier F Ave: MCC Gate - Harbor Plaza*							
80			24	400	25	5,600	0.04	0.7932
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**19.8302**
82	*Pico Ave: Pier E St to Harbor Scenic Connector*							
83			27	729	8	10,206	0.13	0.1625
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.2996**
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*							
86			27	729	6	2,916	0.17	0.0788
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.4726**
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*							
89			25	625	4	15,625	0.25	0.0702
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.2808**
91	*Ocean Blvd: West of D St. On-ramp*							
92			28	784	6	6,272	0.17	0.1878
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.1268**
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*							
95			28	784	4	4,704	0.25	0.0726
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.2905**
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*							
98			14	196	11	784	0.09	0.0452
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.4967**

	A	B
1	**Table A.3.1-47 Annual TOG Emissions for the CEQA Baseline - Chronic Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*TOG*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	194.8
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: West of D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**194.8**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-48 Annual TOG Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*TOG*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*										
5			40	1,600		-					
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	-			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	-			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	-			
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	-			
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
19	*OGV - Hoteling - Boilers*										
20			NA	NA	1	NA	1.00	194.7560	-	-	4.20673
21	**Subtotals**			**-**	**1**	**-**	**-**	**194.7560**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2	*Volume Source Lb/Year*													
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.09738	0.13633	0.19476	0.66217	-	-	0.87640	0.13633	3.09662	0.60374	8.88087	-	-	4.18725
21														

	A	B
1	**Table A.3.1-49 Annual PM Emissions for the CEQA Baseline - Chronic Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	368.8
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	954.0
13	vanAalst Cement Unloader	29.2
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	3,328.8
16	Truck Loading Dust Collector DC-02	525.6
17	Truck Loading Dust Collector DC-03	525.6
18	Truck Loading Dust Collector DC-21	525.6
19	Truck Loading - Dust	276.9
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
25	Harbor Plaza: Pier F Ave - Pier G Ave	
26	Pier F Ave: MCC Gate - Harbor Plaza	
27	Pico Ave: Pier E St to Harbor Scenic Connector	
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
30	Ocean Blvd: West of D St. On-ramp	
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
33	**Total**	**6,534.6**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-50 Annual PM Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**						
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	368.8458	-	1.95488	0.18442	-
21	**Subtotals**			**-**	**1**	**-**	**-**	**368.8458**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	953.9880				
30	**Subtotals**			**-**	**1**	**100**	**-**	**953.9880**				
31	*vanAalst Cement Unloader*											
32			10	100	1	100	1.00	29.2194				
33	**Subtotals**			**-**	**1**	**100**	**-**	**29.2194**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	953.9880				
39	**Subtotals**			**-**	**1**	**100**	**-**	**953.9880**				
40	*vanAalst Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	29.2194				
42	**Subtotals**			**-**	**1**	**100**	**-**	**29.2194**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	3,328.8000				
45	**Subtotals**			**-**	**1**	**-**	**-**	**3,328.8000**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1										
2		*Volume Source Lb/Year*								
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	0.10143	0.18442	2.02865	0.18442	-	2.02865	0.18442	162.73478	2.02865	
21										
22										
23										
24										
25										
26										
27										
28										
29										209.877
30										
31										
32										6.428
33										
34										
35										
36										
37										
38										209.877
39										
40										
41										6.428
42										
43										
44										732.336
45										

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-50 Annual PM Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*Truck Loading Dust Collector DC-02*											
47			NA	NA	1	NA	1.00	525.6000				
48	**Subtotals**			**-**	**1**	**-**	**-**	**525.6000**				
49	*Truck Loading Dust Collector DC-03*											
50			NA	NA	1	NA	1.00	525.6000				
51	**Subtotals**			**-**	**1**	**-**	**-**	**525.6000**				
52	*Truck Loading Dust Collector DC-21*											
53			NA	NA	1	NA	1.00	525.6000				
54	**Subtotals**			**-**	**1**	**-**	**-**	**525.6000**				
55	*Truck Loading - Dust*											
56			20	400	1	400	1.00	276.8975				
57	**Subtotals**			**-**	**1**	**400**	**-**	**276.8975**				
58	*Trucks - On-Terminal Idling (1)*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Truck Loading Dust + On-Terminal Idling*											
62		6	20	400	1	400	1.00	276.8975				
63	**Subtotals**			**-**	**1**	**400**	**-**	**276.8975**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1										
2		*Volume Source Lb/Year*								
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
46										
47										115.632
48										
49										
50										115.632
51										
52										
53										115.632
54										
55										
56										60.917
57										
58										
59										
60										
61										
62										60.917
63										

	A	B
1	**Table A.3.1-51 Annual Tire Dust Emissions for the CEQA Baseline - Chronic Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	0.61
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	8.96
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	0.68
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	2.86
25	Harbor Plaza: Pier F Ave - Pier G Ave	0.61
26	Pier F Ave: MCC Gate - Harbor Plaza	4.67
27	Pico Ave: Pier E St to Harbor Scenic Connector	0.31
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.11
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.06
30	Ocean Blvd: West of D St. On-ramp	0.27
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.07
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.12
33	**Total**	**19.31**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC
1	**Table A.3.1-52 Annual Tire Dust Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**								
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*		
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA
4	*Construction*								
5			40	1,600		-			
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**	
7	*OGV - Fairway Transit*								
8			200	40,000	43	1,720,000	0.02	-	
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**	
10	*OGV - Precautionary Area Transit*								
11			200	40,000	33	1,320,000	0.03	-	
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**	
13	*OGV - Harbor Transit*								
14			100	10,000	20	200,000	0.05	-	
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**	
16	*OGV - Docking*								
17			100	10,000	1	10,000	1.00	-	
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
19	*OGV - Hoteling - Boilers*								
20			NA	NA	1	NA	1.00	-	
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
22	*Tugs - Harbor Transit*								
23			100	10,000	20	200,000	0.05	-	
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**	
25	*Tugs - Docking*								
26			100	40,000	1	40,000	1.00	-	
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**	
28	*Kovaco Cement Unloader*								
29			10	100	1	100	1.00	-	
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
31	*vanAalst Cement Unloader*								
32			10	100	1	100	1.00	-	
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
34	*Payloaders*								
35			10	100	2	200	0.50	-	
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**	
37	*Kovaco Cement Unloader+50%Payloaders*								
38		E	10	100	1	100	1.00	-	

	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1												
2	*Volume Source Lb/Year*											
3	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												

	D	E	F	G	H	I	J	K	AC
1	**Table A.3.1-52 Annual Tire Dust Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**								
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*		
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
40	*vanAalst Cement Unloader+50%Payloaders*								
41		F	10	100	1	100	1.00	-	
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
43	*Storage Warehouse Dust Collector DC-01*								
44			NA	NA	1	NA	1.00	-	
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
46	*Truck Loading Dust Collector DC-02*								
47			NA	NA	1	NA	1.00	-	
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
49	*Truck Loading Dust Collector DC-03*								
50			NA	NA	1	NA	1.00	-	
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
52	*Truck Loading Dust Collector DC-21*								
53			NA	NA	1	NA	1.00	-	
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
55	*Truck Loading - Dust*								
56			20	400	1	400	1.00	-	
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**	
58	*Trucks - On-Terminal Idling (1)*								
59			20	400	1	400	1.00	-	
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**	
61	*Truck Loading Dust + On-Terminal Idling*								
62		6	20	400	1	400	1.00	-	
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**	
64	*Trucks - On-Terminal Driving*								
65			20	400	8	3,200	0.13	0.0768	0.00
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**0.6142**	
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*								
68			31	961	43	41,323	0.02	0.2083	0.00
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**8.9582**	
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*								
71			36	1,296	4	5,184	0.25	0.1692	0.00
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**0.6768**	
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*								

	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1												
2	*Volume Source Lb/Year*											
3	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
65	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
66												
67												
68	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69												
70												
71	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72												
73												

	D	E	F	G	H	I	J	K	AC
1	**Table A.3.1-52 Annual Tire Dust Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**								
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*		
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA
74			27	400	14	5,600	0.07	0.2040	0.00
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**2.8562**	
76	*Harbor Plaza: Pier F Ave - Pier G Ave*								
77			24	400	4	5,600	0.25	0.1526	0.00
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**0.6106**	
79	*Pier F Ave: MCC Gate - Harbor Plaza*								
80			24	400	25	5,600	0.04	0.1868	0.00
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**4.6690**	
82	*Pico Ave: Pier E St to Harbor Scenic Connector*								
83			27	729	8	10,206	0.13	0.0382	0.00
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**0.3060**	
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*								
86			27	729	6	2,916	0.17	0.0185	0.00
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.1113**	
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*								
89			25	625	4	15,625	0.25	0.0147	0.00
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.0587**	
91	*Ocean Blvd: West of D St. On-ramp*								
92			28	784	6	6,272	0.17	0.0442	0.00
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**0.2653**	
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*								
95			28	784	4	4,704	0.25	0.0171	0.00
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.0684**	
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*								
98			14	196	11	784	0.09	0.0106	0.00
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.1170**	

	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1												
2	*Volume Source Lb/Year*											
3	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
74	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75												
76												
77	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78												
79												
80	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81												
82												
83	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84												
85												
86	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87												
88												
89	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90												
91												
92	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93												
94												
95	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96												
97												
98	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99												

	A	B
1	**Table A.3.1-53 Annual Brake Dust Emissions for the CEQA Baseline - Chronic Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader	
13	vanAalst Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	Truck Loading Dust Collector DC-02	
17	Truck Loading Dust Collector DC-03	
18	Truck Loading Dust Collector DC-21	
19	Truck Loading - Dust	
20	Trucks - On-Terminal Idling (1)	
21	Trucks - On-Terminal Driving	1.41
22	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	20.57
23	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1.55
24	Pico Ave: Harbor Scenic Connector - Harbor Plaza	6.56
25	Harbor Plaza: Pier F Ave - Pier G Ave	1.40
26	Pier F Ave: MCC Gate - Harbor Plaza	10.72
27	Pico Ave: Pier E St to Harbor Scenic Connector	0.70
28	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.26
29	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.13
30	Ocean Blvd: West of D St. On-ramp	0.61
31	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.16
32	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.27
33	**Total**	**44.34**
34	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC
1	**Table A.3.1-54 Annual Brake Dust Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**								
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*		
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA
4	*Construction*								
5			40	1,600		-			
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**	
7	*OGV - Fairway Transit*								
8			200	40,000	43	1,720,000	0.02	-	
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**	
10	*OGV - Precautionary Area Transit*								
11			200	40,000	33	1,320,000	0.03	-	
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**	
13	*OGV - Harbor Transit*								
14			100	10,000	20	200,000	0.05	-	
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**	
16	*OGV - Docking*								
17			100	10,000	1	10,000	1.00	-	
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
19	*OGV - Hoteling - Boilers*								
20			NA	NA	1	NA	1.00	-	
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
22	*Tugs - Harbor Transit*								
23			100	10,000	20	200,000	0.05	-	
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**	
25	*Tugs - Docking*								
26			100	40,000	1	40,000	1.00	-	
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**	
28	*Kovaco Cement Unloader*								
29			10	100	1	100	1.00	-	
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
31	*vanAalst Cement Unloader*								
32			10	100	1	100	1.00	-	
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
34	*Payloaders*								
35			10	100	2	200	0.50	-	
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**	
37	*Kovaco Cement Unloader+50%Payloaders*								
38		E	10	100	1	100	1.00	-	

	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1												
2	*Volume Source Lb/Year*											
3	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												

	D	E	F	G	H	I	J	K	AC
1	**Table A.3.1-54 Annual Brake Dust Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**								
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*		
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
40	*vanAalst Cement Unloader+50%Payloaders*								
41		F	10	100	1	100	1.00	-	
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**	
43	*Storage Warehouse Dust Collector DC-01*								
44			NA	NA	1	NA	1.00	-	
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
46	*Truck Loading Dust Collector DC-02*								
47			NA	NA	1	NA	1.00	-	
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
49	*Truck Loading Dust Collector DC-03*								
50			NA	NA	1	NA	1.00	-	
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
52	*Truck Loading Dust Collector DC-21*								
53			NA	NA	1	NA	1.00	-	
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**	
55	*Truck Loading - Dust*								
56			20	400	1	400	1.00	-	
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**	
58	*Trucks - On-Terminal Idling (1)*								
59			20	400	1	400	1.00	-	
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**	
61	*Truck Loading Dust + On-Terminal Idling*								
62		6	20	400	1	400	1.00	-	
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**	
64	*Trucks - On-Terminal Driving*								
65			20	400	8	3,200	0.13	0.1763	0.00
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**1.4102**	
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*								
68			31	961	43	41,323	0.02	0.4783	0.00
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**20.5673**	
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*								
71			36	1,296	4	5,184	0.25	0.3885	0.00
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**1.5538**	
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*								

	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1												
2	*Volume Source Lb/Year*											
3	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
39												
40												
41												
42												
43												
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
65	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
66												
67												
68	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69												
70												
71	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72												
73												

	D	E	F	G	H	I	J	K	AC
1	**Table A.3.1-54 Annual Brake Dust Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project**								
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*		
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA
74			27	400	14	5,600	0.07	0.4684	0.00
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**6.5576**	
76	*Harbor Plaza: Pier F Ave - Pier G Ave*								
77			24	400	4	5,600	0.25	0.3505	0.00
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**1.4018**	
79	*Pier F Ave: MCC Gate - Harbor Plaza*								
80			24	400	25	5,600	0.04	0.4288	0.00
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**10.7195**	
82	*Pico Ave: Pier E St to Harbor Scenic Connector*								
83			27	729	8	10,206	0.13	0.0878	0.00
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**0.7025**	
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*								
86			27	729	6	2,916	0.17	0.0426	0.00
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.2555**	
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*								
89			25	625	4	15,625	0.25	0.0337	0.00
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.1348**	
91	*Ocean Blvd: West of D St. On-ramp*								
92			28	784	6	6,272	0.17	0.1015	0.00
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**0.6091**	
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*								
95			28	784	4	4,704	0.25	0.0393	0.00
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.1570**	
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*								
98			14	196	11	784	0.09	0.0244	0.00
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.2685**	

	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1												
2	*Volume Source Lb/Year*											
3	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
74	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75												
76												
77	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78												
79												
80	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81												
82												
83	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84												
85												
86	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87												
88												
89	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90												
91												
92	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93												
94												
95	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96												
97												
98	-	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99												

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-55. Total Annual PPY Chronic TAC Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*						*CAS #*	9901	106990	75070	71432
5			40	1,600	5	8,000	0.20	-			
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	18.6805			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**803.2628**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	3.2032			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**105.7049**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	1.6959			
15	**Subtotals**			**-**	**20**	**-**	**-**	**33.9172**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	21.1087			
18	**Subtotals**			**-**	**1**	**-**	**-**	**21.1087**			
19	*OGV - Hoteling - ICEs + Boiler*										
20		G	NA	NA	1	NA	1.00	318.6493	-	-	4.20673
21	**Subtotals**			**-**	**1**	**-**	**-**	**318.6493**			
22	*Tugs - Harbor Transit*										
23			100	10,000	20	200,000	0.05	1.5800			
24	**Subtotals**			**-**	**20**	**-**	**-**	**31.5992**			
25	*Tugs - Docking*										
26			100	40,000	1	40,000	1.00	10.5331			
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**10.5331**			
28	*Kovaco Cement Unloader*										
29			10	100	1	100	1.00	-	-	-	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
31	*vanAalst Cement Unloader*										
32			10	100	1	100	1.00	-	-	-	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
34	*Payloaders*										
35			10	100	2	200	0.50	0.5535			
36	**Subtotals**			**-**	**2**	**200**	**-**	**1.1069**			
37	*Kovaco Cement Unloader+50%Payloaders*										
38		E	10	100	1	100	1.00	0.5535	-	-	-
39	**Subtotals**			**-**	**1**	**100**	**-**	**0.5535**			
40	*vanAalst Cement Unloader+50%Payloaders*										
41		F	10	100	1	100	1.00	0.5535	-	-	-
42	**Subtotals**			**-**	**1**	**100**	**-**	**0.5535**			
43	*Storage Warehouse Dust Collector DC-01*										
44			NA	NA	1	NA	1.00	-	-	-	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4	108907	100414	50000	1210	67561	78933	108383	91203	110543	95476	115071	106423	100425	108883
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.09738	0.13633	0.19476	0.66217	-	-	0.87640	0.13633	3.09662	0.60374	8.88087	-	-	4.18725
21														
22														
23														
24														
25														
26														
27														
28														
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30														
31														
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33														
34														
35														
36														
37														
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39														
40														
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42														
43														
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1														
2														
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
4	7664417	7440382	7440439	7782505	18540299	7440508	7439921	7439965	7439976	7440020	7782492	9960	7440622	1175
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	-	1.95488	0.18442	-	0.10143	0.18442	2.02865	0.18442	-	2.02865	0.18442	162.73478	2.02865	
21														
22														
23														
24														
25														
26														
27														
28														
29	-	-	-	-	-	-	-	-	-	-	-	-	-	209.88
30														
31														
32	-	-	-	-	-	-	-	-	-	-	-	-	-	6.43
33														
34														
35														
36														
37														
38	-	-	-	-	-	-	-	-	-	-	-	-	-	209.88
39														
40														
41	-	-	-	-	-	-	-	-	-	-	-	-	-	6.43
42														
43														
44	-	-	-	-	-	-	-	-	-	-	-	-	-	732.34
45														

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-55. Total Annual PPY Chronic TAC Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
46	*Truck Loading Dust Collector DC-02*										
47			NA	NA	1	NA	1.00	-	-	-	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
49	*Truck Loading Dust Collector DC-03*										
50			NA	NA	1	NA	1.00	-	-	-	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
52	*Truck Loading Dust Collector DC-21*										
53			NA	NA	1	NA	1.00	-	-	-	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
55	*Truck Loading - Dust*										
56			20	400	1	400	1.00	-	-	-	-
57	**Subtotals**			**-**	**1**	**400**	**-**	**-**			
58	*Trucks - On-Terminal Idling (1)*										
59			20	400	1	400	1.00	52.6574			
60	**Subtotals**			**-**	**1**	**400**	**-**	**52.6574**			
61	*Truck Loading Dust + On-Terminal Idling*										
62		6	20	400	1	400	1.00	52.6574	-	-	-
63	**Subtotals**			**-**	**1**	**400**	**-**	**52.6574**			
64	*Trucks - On-Terminal Driving*										
65			20	400	8	3,200	0.13	1.2274	-	-	-
66	**Subtotals**			**-**	**8**	**3,200**	**-**	**9.8195**			
67	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*										
68			31	961	43	41,323	0.02	0.8035	-	-	-
69	**Subtotals**			**-**	**43**	**41,323**	**-**	**34.5511**			
70	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*										
71			36	1,296	4	5,184	0.25	0.6772	-	-	-
72	**Subtotals**			**-**	**4**	**5,184**	**-**	**2.7088**			
73	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*										
74			27	400	14	5,600	0.07	0.8665	-	-	-
75	**Subtotals**			**-**	**14**	**5,600**	**-**	**12.1310**			
76	*Harbor Plaza: Pier F Ave - Pier G Ave*										
77			24	400	4	5,600	0.25	0.7301	-	-	-
78	**Subtotals**			**-**	**4**	**5,600**	**-**	**2.9204**			
79	*Pier F Ave: MCC Gate - Harbor Plaza*										
80			24	400	25	5,600	0.04	0.7932	-	-	-
81	**Subtotals**			**-**	**25**	**5,600**	**-**	**19.8302**			
82	*Pico Ave: Pier E St to Harbor Scenic Connector*										
83			27	729	8	10,206	0.13	0.1625	-	-	-
84	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.2996**			
85	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*										
86			27	729	6	2,916	0.17	0.0788	-	-	-
87	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.4726**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
46														
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48														
49														
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51														
52														
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54														
55														
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57														
58														
59														
60														
61														
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63														
64														
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66														
67														
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69														
70														
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72														
73														
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75														
76														
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78														
79														
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81														
82														
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84														
85														
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1														
2														
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
46														
47	-	-	-	-	-	-	-	-	-	-	-	-	-	115.63
48														
49														
50	-	-	-	-	-	-	-	-	-	-	-	-	-	115.63
51														
52														
53	-	-	-	-	-	-	-	-	-	-	-	-	-	115.63
54														
55														
56	-	-	-	-	-	-	-	-	-	-	-	-	-	60.92
57														
58														
59														
60														
61														
62	-	-	-	-	-	-	-	-	-	-	-	-	-	60.92
63														
64														
65	0.00004808	-	-	0.00197375	0.00000038	0.00012399	0.00004049	0.00002530	-	0.00001265	0.00000506	0.00063261	-	
66														
67														
68	0.00013046	-	-	0.00535580	0.00000103	0.00033645	0.00010986	0.00006866	-	0.00003433	0.00001373	0.00171660	-	
69														
70														
71	0.00010595	-	-	0.00434969	0.00000084	0.00027325	0.00008922	0.00005577	-	0.00002788	0.00001115	0.00139413	-	
72														
73														
74	0.00012776	-	-	0.00524481	0.00000101	0.00032948	0.00010759	0.00006724	-	0.00003362	0.00001345	0.00168103	-	
75														
76														
77	0.00009559	-	-	0.00392411	0.00000075	0.00024651	0.00008049	0.00005031	-	0.00002515	0.00001006	0.00125773	-	
78														
79														
80	0.00011695	-	-	0.00480121	0.00000092	0.00030161	0.00009849	0.00006155	-	0.00003078	0.00001231	0.00153885	-	
81														
82														
83	0.00002395	-	-	0.00098329	0.00000019	0.00006177	0.00002017	0.00001261	-	0.00000630	0.00000252	0.00031516	-	
84														
85														
86	0.00001161	-	-	0.00047677	0.00000009	0.00002995	0.00000978	0.00000611	-	0.00000306	0.00000122	0.00015281	-	
87														

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-55. Total Annual PPY Chronic TAC Emission Simulations for the CEQA Baseline - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
88	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*										
89			25	625	4	15,625	0.25	0.0702	-	-	-
90	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.2808**			
91	*Ocean Blvd: West of D St. On-ramp*										
92			28	784	6	6,272	0.17	0.1878	-	-	-
93	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.1268**			
94	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*										
95			28	784	4	4,704	0.25	0.0726	-	-	-
96	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.2905**			
97	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*										
98			14	196	11	784	0.09	0.0452	-	-	-
99	**Subtotals**			**-**	**11**	**784**	**-**	**0.4967**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
88														
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90														
91														
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93														
94														
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96														
97														
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1														
2														
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
88														
89	0.00000919	-	-	0.00037728	0.00000007	0.00002370	0.00000774	0.00000484	-	0.00000242	0.00000097	0.00012092	-	
90														
91														
92	0.00002769	-	-	0.00113678	0.00000022	0.00007141	0.00002332	0.00001457	-	0.00000729	0.00000291	0.00036435	-	
93														
94														
95	0.00001071	-	-	0.00043963	0.00000008	0.00002762	0.00000902	0.00000564	-	0.00000282	0.00000113	0.00014091	-	
96														
97														
98	0.00000666	-	-	0.00027333	0.00000005	0.00001717	0.00000561	0.00000350	-	0.00000175	0.00000070	0.00008761	-	
99														

	A	B
1	**Table A.3.1-56. Annual DPM Emissions for the Full Expansion Project - Chronic Analysis - POLB MCC I**	
2	*Source Activity*	*Pounds per Year*
3		*DPM*
4	Construction	
5	OGV - Fairway Transit	2,083.5
6	OGV - Precautionary Area Transit	290.7
7	OGV - Harbor Transit	96.0
8	OGV - Docking	59.7
9	OGV - Hoteling - Auxiliary Generators	259.7
10	Tugs - Harbor Transit	84.1
11	Tugs - Docking	28.0
12	Kovaco 1 Cement Unloader	
13	Kovaco 2 Cement Unloader	
14	Payloaders	2.7
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	3.3
22	Trucks - On-Terminal Driving	13.2
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	89.0
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	7.4
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	25.6
26	Harbor Plaza: Pier F Ave - Pier G Ave	5.5
27	Pier F Ave: MCC Gate - Harbor Plaza	41.8
28	Pico Ave: Pier E St to Harbor Scenic Connector	2.7
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	1.0
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.5
31	Ocean Blvd: West of D St. On-ramp	2.4
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.6
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	1.0
34	**Total**	**3,098.43**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K
1	**Table A.3.1-57 Annual DPM Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
4	*Construction*							
5			40	1,600	5	8,000	0.20	-
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**-**
7	*OGV - Fairway Transit*							
8			200	40,000	43	1,720,000	0.02	48.45
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**2,083.46**
10	*OGV - Precautionary Area Transit*							
11			200	40,000	33	1,320,000	0.03	8.81
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**290.65**
13	*OGV - Harbor Transit*							
14			100	10,000	20	200,000	0.05	4.80
15	**Subtotals**			**-**	**20**	**-**	**-**	**95.98**
16	*OGV - Docking*							
17			100	10,000	1	10,000	1.00	59.74
18	**Subtotals**			**-**	**1**	**-**	**-**	**59.74**
19	*OGV Hoteling + SCR Duct Burner = DOCCS Stack*							
20		H	NA	NA	1	NA	1.00	259.66
21	**Subtotals**			**-**	**1**	**-**	**-**	**259.66**
22	*Tugs - Harbor Transit*							
23			100	10,000	20	200,000	0.05	4.20
24	**Subtotals**			**-**	**20**	**-**	**-**	**84.08**
25	*Tugs - Docking*							
26			100	40,000	1	40,000	1.00	28.03
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**28.03**
28	*Kovaco Cement Unloader*							
29			10	100	1	100	1.00	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**
31	*Kovaco 2 Cement Unloader*							
32			10	100	1	100	1.00	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**
34	*Payloaders*							
35			10	100	2	200	0.50	1.33
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.66**
37	*Kovaco 1 Cement Unloader+50%Payloaders*							
38		E	10	100	1	100	1.00	1.33
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.33**
40	*Kovaco 2 Cement Unloader+50%Payloaders*							
41		F	10	100	1	100	1.00	1.33
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.33**
43	*Storage Warehouse Dust Collector DC-01*							
44			NA	NA	1	NA	1.00	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**
46	*New Storage Silos Dust Collector*							
47			NA	NA	1	NA	1.00	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**
49	*Truck Loading Dust Collector DC-02*							
50			NA	NA	1	NA	1.00	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**
52	*Truck Loading Dust Collector DC-03*							
53			NA	NA	1	NA	1.00	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**
55	*Truck Loading Dust Collector DC-21*							
56			NA	NA	1	NA	1.00	-
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**
58	*Truck Loading - Dust*							
59			20	400	1	400	1.00	-
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**

	D	E	F	G	H	I	J	K
1	**Table A.3.1-57 Annual DPM Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
61	*Trucks - On-Terminal Idling (1)*							
62			20	400	1	400	1.00	3.30
63	**Subtotals**			**-**	**1**	**400**	**-**	**3.30**
64	*Truck Loading Dust + On-Terminal Idling*							
65		1646X	20	400	1	400	1.00	1.98
66	**Subtotals**			**-**	**1**	**400**	**-**	**1.98**
67	*Truck Loading Dust + On-Terminal Idling*							
68		1655X	20	400	1	400	1.00	0.66
69	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**
70	*Truck Loading Dust + On-Terminal Idling*							
71		1656X	20	400	1	400	1.00	0.66
72	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**
73	*Trucks - On-Terminal Driving*							
74			20	400	13	5,200	0.08	1.02
75	**Subtotals**			**-**	**13**	**5,200**	**-**	**13.22**
76	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*							
77			31	961	43	41,323	0.02	2.07
78	**Subtotals**			**-**	**43**	**41,323**	**-**	**89.00**
79	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*							
80			36	1,296	4	5,184	0.25	1.86
81	**Subtotals**			**-**	**4**	**5,184**	**-**	**7.43**
82	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*							
83			27	400	14	5,600	0.07	1.83
84	**Subtotals**			**-**	**14**	**5,600**	**-**	**25.58**
85	*Harbor Plaza: Pier F Ave - Pier G Ave*							
86			24	400	4	5,600	0.25	1.38
87	**Subtotals**			**-**	**4**	**5,600**	**-**	**5.51**
88	*Pier F Ave: MCC Gate - Harbor Plaza*							
89			24	400	25	5,600	0.04	1.67
90	**Subtotals**			**-**	**25**	**5,600**	**-**	**41.82**
91	*Pico Ave: Pier E St to Harbor Scenic Connector*							
92			27	729	8	10,206	0.13	0.34
93	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.74**
94	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*							
95			27	729	6	2,916	0.17	0.17
96	**Subtotals**			**-**	**6**	**2,916**	**-**	**1.00**
97	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*							
98			25	625	4	15,625	0.25	0.13
99	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.53**
100	*Ocean Blvd: West of D St. On-ramp*							
101			28	784	6	6,272	0.17	0.40
102	**Subtotals**			**-**	**6**	**6,272**	**-**	**2.38**
103	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*							
104			28	784	4	4,704	0.25	0.15
105	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.61**
106	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*							
107			14	196	11	784	0.09	0.10
108	**Subtotals**			**-**	**11**	**784**	**-**	**1.05**

	A	B
1	**Table A.3.1-58 Annual TOG Emissions for the Full Expansion Project - Chronic Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*TOG*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	146.8
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco 1 Cement Unloader	
13	Kovaco 2 Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
26	Harbor Plaza: Pier F Ave - Pier G Ave	
27	Pier F Ave: MCC Gate - Harbor Plaza	
28	Pico Ave: Pier E St to Harbor Scenic Connector	
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
31	Ocean Blvd: West of D St. On-ramp	
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
34	**Total**	**146.8**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	**Table A.3.1-59 Annual TOG Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**																								
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*		*Volume Source Lb/Year*																
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*TOG*	1,3-butadiene	acetaldehyde	benzene	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4	*Construction*																								
5			40	1,600		-																			
6	**Subtotals**			-	-	-	-	-																	
7	*OGV - Fairway Transit*																								
8			200	40,000	43	1,720,000	0.02	-																	
9	**Subtotals**			-	**43**	**1,720,000**	-	-																	
10	*OGV - Precautionary Area Transit*																								
11			200	40,000	33	1,320,000	0.03	-																	
12	**Subtotals**			-	**33**	**1,320,000**	-	-																	
13	*OGV - Harbor Transit*																								
14			100	10,000	20	200,000	0.05	-																	
15	**Subtotals**			-	**20**	-	-	-																	
16	*OGV - Docking*																								
17			100	10,000	1	10,000	1.00	-																	
18	**Subtotals**			-	**1**	-	-	-																	
19	*OGV Hoteling + SCR Duct Burner = DOCCS Stack*																								
20		H	NA	NA	1	NA	1.00	146.8119	-	-	3.17114	0.07341	0.10277	0.14681	0.49916	-	-	0.66065	0.10277	2.33431	0.45512	6.69462	-	-	3.15646
21	**Subtotals**			-	**1**	-	-	**146.8119**																	

	A	B
1	**Table A.3.1-60 Annual PM Emissions for the Full Expansion Project - Chronic Analysis - POLB MCC Project**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	278.0
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco 1 Cement Unloader	360.6
13	Kovaco 2 Cement Unloader	360.6
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	1,541.8
16	New Storage Silos Dust Collector	1,690.7
17	Truck Loading Dust Collector DC-02	350.4
18	Truck Loading Dust Collector DC-03	350.4
19	Truck Loading Dust Collector DC-21	350.4
20	Truck Loading - Dust	855.1
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
26	Harbor Plaza: Pier F Ave - Pier G Ave	
27	Pier F Ave: MCC Gate - Harbor Plaza	
28	Pico Ave: Pier E St to Harbor Scenic Connector	
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
31	Ocean Blvd: West of D St. On-ramp	
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
34	**Total**	**6,138.0**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-61 Annual PM Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**						
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV Hoteling + SCR Duct Burner = DOCCS Stack*											
20		H	NA	NA	1	NA	1.00	278.0451	-	1.47364	0.13902	-
21	**Subtotals**			**-**	**1**	**-**	**-**	**278.0451**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	360.6120				
30	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**				
31	*Kovaco 2 Cement Unloader*											
32			10	100	1	100	1.00	360.6120				
33	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco 1 Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	360.6120				
39	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**				
40	*Kovaco 2 Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	360.6120				
42	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	1,541.7600				
45	**Subtotals**			**-**	**1**	**-**	**-**	**1,541.7600**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1										
2		*Volume Source Lb/Year*								
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	0.07646	0.13902	1.52925	0.13902	-	1.52925	0.13902	122.67349	1.52925	
21										
22										
23										
24										
25										
26										
27										
28										
29										79.335
30										
31										
32										79.335
33										
34										
35										
36										
37										
38										79.335
39										
40										
41										79.335
42										
43										
44										339.187
45										

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-61 Annual PM Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*New Storage Silos Dust Collector*											
47			NA	NA	1	NA	1.00	1,690.6800				
48	**Subtotals**			**-**	**1**	**-**	**-**	**1,690.6800**				
49	*Truck Loading Dust Collector DC-02*											
50			NA	NA	1	NA	1.00	350.4000				
51	**Subtotals**			**-**	**1**	**-**	**-**	**350.4000**				
52	*Truck Loading Dust Collector DC-03*											
53			NA	NA	1	NA	1.00	350.4000				
54	**Subtotals**			**-**	**1**	**-**	**-**	**350.4000**				
55	*Truck Loading Dust Collector DC-21*											
56			NA	NA	1	NA	1.00	350.4000				
57	**Subtotals**			**-**	**1**	**-**	**-**	**350.4000**				
58	*Truck Loading - Dust*											
59			20	400	1	400	1.00	855.0833				
60	**Subtotals**			**-**	**1**	**400**	**-**	**855.0833**				
61	*Trucks - On-Terminal Idling (1)*											
62			20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Truck Loading Dust + On-Terminal Idling*											
65		1646X	20	400	1	400	1.00	513.05				
66	**Subtotals**			**-**	**1**	**400**	**-**	**513.05**				
67	*Truck Loading Dust + On-Terminal Idling*											
68		1655X	20	400	1	400	1.00	171.02				
69	**Subtotals**			**-**	**1**	**400**	**-**	**171.02**				
70	*Truck Loading Dust + On-Terminal Idling*											
71		1656X	20	400	1	400	1.00	171.02				
72	**Subtotals**			**-**	**1**	**400**	**-**	**171.02**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1										
2		*Volume Source Lb/Year*								
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
46										
47										371.950
48										
49										
50										77.088
51										
52										
53										77.088
54										
55										
56										77.088
57										
58										
59										188.118
60										
61										
62										
63										
64										
65										112.871
66										
67										
68										37.624
69										
70										
71										37.624
72										

	A	B
1	**Table A.3.1-62 Annual Tire Dust Emissions for the Full Expansion Project - Chronic Analysis - POLB MCC Proje**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco 1 Cement Unloader	
13	Kovaco 2 Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	2.7
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	28.1
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	2.1
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	9.0
26	Harbor Plaza: Pier F Ave - Pier G Ave	1.9
27	Pier F Ave: MCC Gate - Harbor Plaza	14.6
28	Pico Ave: Pier E St to Harbor Scenic Connector	1.0
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.3
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.2
31	Ocean Blvd: West of D St. On-ramp	0.8
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.2
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.4
34	**Total**	**61.325**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-63 Annual Tire Dust Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*Kovaco 2 Cement Unloader*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco 1 Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*Kovaco 2 Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-63 Annual Tire Dust Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*New Storage Silos Dust Collector*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-02*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-03*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading Dust Collector DC-21*											
56			NA	NA	1	NA	1.00	-				
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
58	*Truck Loading - Dust*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Trucks - On-Terminal Idling (1)*											
62			20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Truck Loading Dust + On-Terminal Idling*											
65		6	20	400	1	400	1.00	-				
66	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
67	*Trucks - On-Terminal Driving*											
68			20	400	13	5,200	0.08	0.2074	0.00	-	-	0.00
69	**Subtotals**			**-**	**13**	**5,200**	**-**	**2.6963**				
70	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
71			31	961	43	41,323	0.02	0.6533	0.00	-	-	0.01
72	**Subtotals**			**-**	**43**	**41,323**	**-**	**28.0899**				
73	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
74			36	1,296	4	5,184	0.25	0.5305	0.00	-	-	0.00
75	**Subtotals**			**-**	**4**	**5,184**	**-**	**2.1221**				
76	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
77			27	400	14	5,600	0.07	0.6397	0.00	-	-	0.00
78	**Subtotals**			**-**	**14**	**5,600**	**-**	**8.9560**				
79	*Harbor Plaza: Pier F Ave - Pier G Ave*											
80			24	400	4	5,600	0.25	0.4786	0.00	-	-	0.00
81	**Subtotals**			**-**	**4**	**5,600**	**-**	**1.9145**				
82	*Pier F Ave: MCC Gate - Harbor Plaza*											
83			24	400	25	5,600	0.04	0.5856	0.00	-	-	0.00
84	**Subtotals**			**-**	**25**	**5,600**	**-**	**14.6402**				
85	*Pico Ave: Pier E St to Harbor Scenic Connector*											
86			27	729	8	10,206	0.13	0.1199	0.00	-	-	0.00
87	**Subtotals**			**-**	**8**	**10,206**	**-**	**0.9595**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-63 Annual Tire Dust Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
89			27	729	6	2,916	0.17	0.0582	0.00	-	-	0.00
90	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.3489**				
91	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
92			25	625	4	15,625	0.25	0.0460	0.00	-	-	0.00
93	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.1841**				
94	*Ocean Blvd: West of D St. On-ramp*											
95			28	784	6	6,272	0.17	0.1387	0.00	-	-	0.00
96	**Subtotals**			**-**	**6**	**6,272**	**-**	**0.8319**				
97	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
98			28	784	4	4,704	0.25	0.0536	0.00	-	-	0.00
99	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.2145**				
100	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
101			14	196	11	784	0.09	0.0333	0.00	-	-	0.00
102	**Subtotals**			**-**	**11**	**784**	**-**	**0.3667**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									
100									
101	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
102									

	A	B
1	**Table A.3.1-64 Annual Brake Dust Emissions for the Full Expansion Project - Chronic Analysis - POLB MCC Pr**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco 1 Cement Unloader	
13	Kovaco 2 Cement Unloader	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	6.2
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	64.5
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	4.9
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	20.6
26	Harbor Plaza: Pier F Ave - Pier G Ave	4.4
27	Pier F Ave: MCC Gate - Harbor Plaza	33.6
28	Pico Ave: Pier E St to Harbor Scenic Connector	2.2
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.8
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.4
31	Ocean Blvd: West of D St. On-ramp	1.9
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.5
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.8
34	**Total**	**140.797**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-65 Annual Brake Dust Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*Kovaco 2 Cement Unloader*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco 1 Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*Kovaco 2 Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-65 Annual Brake Dust Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*New Storage Silos Dust Collector*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-02*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-03*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading Dust Collector DC-21*											
56			NA	NA	1	NA	1.00	-				
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
58	*Truck Loading - Dust*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Trucks - On-Terminal Idling (1)*											
62			20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Truck Loading Dust + On-Terminal Idling*											
65		6	20	400	1	400	1.00	-				
66	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
67	*Trucks - On-Terminal Driving*											
68			20	400	13	5,200	0.08	0.4762	0.00	-	-	0.00
69	**Subtotals**			**-**	**13**	**5,200**	**-**	**6.1905**				
70	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
71			31	961	43	41,323	0.02	1.4998	0.00	-	-	0.01
72	**Subtotals**			**-**	**43**	**41,323**	**-**	**64.4922**				
73	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
74			36	1,296	4	5,184	0.25	1.2181	0.00	-	-	0.01
75	**Subtotals**			**-**	**4**	**5,184**	**-**	**4.8723**				
76	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
77			27	400	14	5,600	0.07	1.4687	0.00	-	-	0.01
78	**Subtotals**			**-**	**14**	**5,600**	**-**	**20.5623**				
79	*Harbor Plaza: Pier F Ave - Pier G Ave*											
80			24	400	4	5,600	0.25	1.0989	0.00	-	-	0.01
81	**Subtotals**			**-**	**4**	**5,600**	**-**	**4.3956**				
82	*Pier F Ave: MCC Gate - Harbor Plaza*											
83			24	400	25	5,600	0.04	1.3445	0.00	-	-	0.01
84	**Subtotals**			**-**	**25**	**5,600**	**-**	**33.6128**				
85	*Pico Ave: Pier E St to Harbor Scenic Connector*											
86			27	729	8	10,206	0.13	0.2754	0.00	-	-	0.00
87	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.2029**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-65 Annual Brake Dust Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
89			27	729	6	2,916	0.17	0.1335	0.00	-	-	0.00
90	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.8011**				
91	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
92			25	625	4	15,625	0.25	0.1057	0.00	-	-	0.00
93	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.4226**				
94	*Ocean Blvd: West of D St. On-ramp*											
95			28	784	6	6,272	0.17	0.3183	0.00	-	-	0.00
96	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.9100**				
97	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
98			28	784	4	4,704	0.25	0.1231	0.00	-	-	0.00
99	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.4924**				
100	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
101			14	196	11	784	0.09	0.0765	0.00	-	-	0.00
102	**Subtotals**			**-**	**11**	**784**	**-**	**0.8420**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									
100									
101	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
102									

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-66. Total Annual PPY Chronic TAC Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*						CAS #	9901	106990	75070	71432
5			40	1,600	5	8,000	0.20	-			
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	48.45			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**2,083.46**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	8.81			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**290.65**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	4.80			
15	**Subtotals**			**-**	**20**	**-**	**-**	**95.98**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	59.74			
18	**Subtotals**			**-**	**1**	**-**	**-**	**59.74**			
19	*OGV Hoteling + SCR Duct Burner = DOCCS Stack*										
20		H	NA	NA	1	NA	1.00	259.66	-	-	3.17114
21	**Subtotals**			**-**	**1**	**-**	**-**	**259.66**			
22	*Tugs - Harbor Transit*										
23			100	10,000	20	200,000	0.05	4.20			
24	**Subtotals**			**-**	**20**	**-**	**-**	**84.08**			
25	*Tugs - Docking*										
26			100	40,000	1	40,000	1.00	28.03			
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**28.03**			
28	*Kovaco 1 Cement Unloader*										
29			10	100	1	100	1.00	-	-	-	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
31	*Kovaco 2 Cement Unloader*										
32			10	100	1	100	1.00	-	-	-	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
34	*Payloaders*										
35			10	100	2	200	0.50	1.33			
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.66**			
37	*Kovaco 1 Cement Unloader+50%Payloaders*										
38		E	10	100	1	100	1.00	1.33	-	-	-
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.33**			
40	*Kovaco 2 Cement Unloader+50%Payloaders*										
41		F	10	100	1	100	1.00	1.33	-	-	-
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.33**			
43	*Storage Warehouse Dust Collector DC-01*										
44			NA	NA	1	NA	1.00	-	-	-	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4	108907	100414	50000	1210	67561	78933	108383	91203	110543	95476	115071	106423	100425	108883
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.07341	0.10277	0.14681	0.49916	-	-	0.66065	0.10277	2.33431	0.45512	6.69462	-	-	3.15646
21														
22														
23														
24														
25														
26														
27														
28														
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30														
31														
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33														
34														
35														
36														
37														
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39														
40														
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42														
43														
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1														
2														
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
4	7664417	7440382	7440439	7782505	18540299	7440508	7439921	7439965	7439976	7440020	7782492	9960	7440622	1175
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	127.2	1.47364	0.13902	-	0.07646	0.13902	1.52925	0.13902	-	1.52925	0.13902	122.67349	1.52925	
21														
22														
23														
24														
25														
26														
27														
28														
29	-	-	-	-	-	-	-	-	-	-	-	-	-	79.33
30														
31														
32	-	-	-	-	-	-	-	-	-	-	-	-	-	79.33
33														
34														
35														
36														
37														
38	-	-	-	-	-	-	-	-	-	-	-	-	-	79.33
39														
40														
41	-	-	-	-	-	-	-	-	-	-	-	-	-	79.33
42														
43														
44	-	-	-	-	-	-	-	-	-	-	-	-	-	339.19
45														

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-66. Total Annual PPY Chronic TAC Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
46	*New Storage Silos Dust Collector*										
47			NA	NA	1	NA	1.00	-	-	-	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
49	*Truck Loading Dust Collector DC-02*										
50			NA	NA	1	NA	1.00	-	-	-	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
52	*Truck Loading Dust Collector DC-03*										
53			NA	NA	1	NA	1.00	-	-	-	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
55	*Truck Loading Dust Collector DC-21*										
56			NA	NA	1	NA	1.00	-	-	-	-
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
58	*Truck Loading - Dust*										
59			20	400	1	400	1.00	-	-	-	-
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**			
61	*Trucks - On-Terminal Idling (1)*										
62			20	400	1	400	1.00	3.30			
63	**Subtotals**			**-**	**1**	**400**	**-**	**3.30**			
64	*Truck Loading Dust + On-Terminal Idling*										
65		1646X	20	400	1	400	1.00	1.98	-	-	-
66	**Subtotals**			**-**	**1**	**400**	**-**	**1.98**			
67	*Truck Loading Dust + On-Terminal Idling*										
68		1655X	20	400	1	400	1.00	0.66	-	-	-
69	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**			
70	*Truck Loading Dust + On-Terminal Idling*										
71		1656X	20	400	1	400	1.00	0.66	-	-	-
72	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**			
73	*Trucks - On-Terminal Driving*										
74			20	400	13	5,200	0.08	1.02	-	-	-
75	**Subtotals**			**-**	**13**	**5,200**	**-**	**13.22**			
76	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*										
77			31	961	43	41,323	0.02	2.07	-	-	-
78	**Subtotals**			**-**	**43**	**41,323**	**-**	**89.00**			
79	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*										
80			36	1,296	4	5,184	0.25	1.86	-	-	-
81	**Subtotals**			**-**	**4**	**5,184**	**-**	**7.43**			
82	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*										
83			27	400	14	5,600	0.07	1.83	-	-	-
84	**Subtotals**			**-**	**14**	**5,600**	**-**	**25.58**			
85	*Harbor Plaza: Pier F Ave - Pier G Ave*										
86			24	400	4	5,600	0.25	1.38	-	-	-
87	**Subtotals**			**-**	**4**	**5,600**	**-**	**5.51**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
46														
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48														
49														
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51														
52														
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54														
55														
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57														
58														
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60														
61														
62														
63														
64														
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66														
67														
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69														
70														
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72														
73														
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75														
76														
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78														
79														
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81														
82														
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84														
85														
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1														
2														
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
46														
47	-	-	-	-	-	-	-	-	-	-	-	-	-	371.95
48														
49														
50	-	-	-	-	-	-	-	-	-	-	-	-	-	77.09
51														
52														
53	-	-	-	-	-	-	-	-	-	-	-	-	-	77.09
54														
55														
56	-	-	-	-	-	-	-	-	-	-	-	-	-	77.09
57														
58														
59	-	-	-	-	-	-	-	-	-	-	-	-	-	188.118
60														
61														
62														
63														
64														
65	-	-	-	-	-	-	-	-	-	-	-	-	-	112.87
66														
67														
68	-	-	-	-	-	-	-	-	-	-	-	-	-	37.62
69														
70														
71	-	-	-	-	-	-	-	-	-	-	-	-	-	37.62
72														
73														
74	0.00012988	-	-	0.00533206	0.00000103	0.00033496	0.00010938	0.00006836	-	0.00003418	0.00001367	0.00170899	-	
75														
76														
77	0.00040908	-	-	0.01679396	0.00000323	0.00105501	0.00034449	0.00021531	-	0.00010765	0.00004306	0.00538268	-	
78														
79														
80	0.00033224	-	-	0.01363913	0.00000262	0.00085682	0.00027978	0.00017486	-	0.00008743	0.00003497	0.00437152	-	
81														
82														
83	0.00040061	-	-	0.01644594	0.00000316	0.00103314	0.00033735	0.00021085	-	0.00010542	0.00004217	0.00527114	-	
84														
85														
86	0.00029973	-	-	0.01230467	0.00000237	0.00077299	0.00025240	0.00015775	-	0.00007888	0.00003155	0.00394381	-	
87														

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-66. Total Annual PPY Chronic TAC Emission Simulations for the Full Expansion Project - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
88	*Pier F Ave: MCC Gate - Harbor Plaza*										
89			24	400	25	5,600	0.04	1.67	-	-	-
90	**Subtotals**			**-**	**25**	**5,600**	**-**	**41.82**			
91	*Pico Ave: Pier E St to Harbor Scenic Connector*										
92			27	729	8	10,206	0.13	0.34	-	-	-
93	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.74**			
94	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*										
95			27	729	6	2,916	0.17	0.17	-	-	-
96	**Subtotals**			**-**	**6**	**2,916**	**-**	**1.00**			
97	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*										
98			25	625	4	15,625	0.25	0.13	-	-	-
99	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.53**			
100	*Ocean Blvd: West of D St. On-ramp*										
101			28	784	6	6,272	0.17	0.40	-	-	-
102	**Subtotals**			**-**	**6**	**6,272**	**-**	**2.38**			
103	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*										
104			28	784	4	4,704	0.25	0.15	-	-	-
105	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.61**			
106	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*										
107			14	196	11	784	0.09	0.10	-	-	-
108	**Subtotals**			**-**	**11**	**784**	**-**	**1.05**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
88														
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90														
91														
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93														
94														
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96														
97														
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99														
100														
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102														
103														
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105														
106														
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1														
2														
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
88														
89	0.00036672	-	-	0.01505495	0.00000290	0.00094576	0.00030882	0.00019301	-	0.00009651	0.00003860	0.00482530	-	
90														
91														
92	0.00007511	-	-	0.00308328	0.00000059	0.00019369	0.00006325	0.00003953	-	0.00001976	0.00000791	0.00098823	-	
93														
94														
95	0.00003642	-	-	0.00149499	0.00000029	0.00009392	0.00003067	0.00001917	-	0.00000958	0.00000383	0.00047916	-	
96														
97														
98	0.00002882	-	-	0.00118301	0.00000023	0.00007432	0.00002427	0.00001517	-	0.00000758	0.00000303	0.00037917	-	
99														
100														
101	0.00008683	-	-	0.00356455	0.00000069	0.00022393	0.00007312	0.00004570	-	0.00002285	0.00000914	0.00114248	-	
102														
103														
104	0.00003358	-	-	0.00137853	0.00000027	0.00008660	0.00002828	0.00001767	-	0.00000884	0.00000353	0.00044184	-	
105														
106														
107	0.00002088	-	-	0.00085708	0.00000016	0.00005384	0.00001758	0.00001099	-	0.00000549	0.00000220	0.00027471	-	
108														

	A	B
1	**Table A.3.1-67. Annual DPM Emissions for the Reduced Expansion Alternative - Chronic Analysis - PO**	
2	*Source Activity*	*Pounds per Year*
3		*DPM*
4	Construction	
5	OGV - Fairway Transit	1,666.8
6	OGV - Precautionary Area Transit	232.5
7	OGV - Harbor Transit	76.8
8	OGV - Docking	47.8
9	OGV - Hoteling - Auxiliary Generators	207.7
10	Tugs - Harbor Transit	67.3
11	Tugs - Docking	22.4
12	Kovaco Cement Unloader1	
13	Kovaco Cement Unloader2	
14	Payloaders	2.1
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	2.6
22	Trucks - On-Terminal Driving	10.6
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	71.2
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	5.9
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	20.5
26	Harbor Plaza: Pier F Ave - Pier G Ave	4.4
27	Pier F Ave: MCC Gate - Harbor Plaza	33.5
28	Pico Ave: Pier E St to Harbor Scenic Connector	2.2
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.8
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.4
31	Ocean Blvd: West of D St. On-ramp	1.9
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.5
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.8
34	**Total**	**2,478.74**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K
1	**Table A.3.1-68 Annual DPM Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
4	*Construction*							
5			40	1,600	5	8,000	0.20	-
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**-**
7	*OGV - Fairway Transit*							
8			200	40,000	43	1,720,000	0.02	38.76
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**1,666.76**
10	*OGV - Precautionary Area Transit*							
11			200	40,000	33	1,320,000	0.03	7.05
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**232.52**
13	*OGV - Harbor Transit*							
14			100	10,000	20	200,000	0.05	3.84
15	**Subtotals**			**-**	**20**	**-**	**-**	**76.79**
16	*OGV - Docking*							
17			100	10,000	1	10,000	1.00	47.79
18	**Subtotals**			**-**	**1**	**-**	**-**	**47.79**
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*							
20		H	NA	NA	1	NA	1.00	207.73
21	**Subtotals**			**-**	**1**	**-**	**-**	**207.73**
22	*Tugs - Harbor Transit*							
23			100	10,000	20	200,000	0.05	3.36
24	**Subtotals**			**-**	**20**	**-**	**-**	**67.27**
25	*Tugs - Docking*							
26			100	40,000	1	40,000	1.00	22.42
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**22.42**
28	*Kovaco Cement Unloader1*							
29			10	100	1	100	1.00	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**
31	*Kovaco Cement Unloader2*							
32			10	100	1	100	1.00	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**
34	*Payloaders*							
35			10	100	2	200	0.50	1.07
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.13**
37	*Kovaco Cement Unloader+50%Payloaders*							
38		E	10	100	1	100	1.00	1.07
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.07**
40	*vanAalst Cement Unloader+50%Payloaders*							
41		F	10	100	1	100	1.00	1.07
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.07**
43	*Storage Warehouse Dust Collector DC-01*							
44			NA	NA	1	NA	1.00	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**
46	*New Storage Silos Dust Collector*							
47			NA	NA	1	NA	1.00	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**
49	*Truck Loading Dust Collector DC-02*							
50			NA	NA	1	NA	1.00	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**
52	*Truck Loading Dust Collector DC-03*							
53			NA	NA	1	NA	1.00	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**
55	*Truck Loading Dust Collector DC-21*							
56			NA	NA	1	NA	1.00	-
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**
58	*Truck Loading - Dust*							
59			20	400	1	400	1.00	-
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**

	D	E	F	G	H	I	J	K
1	**Table A.3.1-68 Annual DPM Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**							
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*	*Volume Source Lb/Yr*
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*
61	*Trucks - On-Terminal Idling (1)*							
62			20	400	1	400	1.00	2.64
63	**Subtotals**			**-**	**1**	**400**	**-**	**2.64**
64	*Truck Loading Dust + On-Terminal Idling*							
65		1646X	20	400	1	400	1.00	1.98
66	**Subtotals**			**-**	**1**	**400**	**-**	**1.98**
67	*Truck Loading Dust + On-Terminal Idling*							
68		1655X	20	400	1	400	1.00	0.66
69	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**
70	*Trucks - On-Terminal Driving*							
71			20	400	13	5,200	0.08	0.81
72	**Subtotals**			**-**	**13**	**5,200**	**-**	**10.58**
73	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*							
74			31	961	43	41,323	0.02	1.66
75	**Subtotals**			**-**	**43**	**41,323**	**-**	**71.20**
76	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*							
77			36	1,296	4	5,184	0.25	1.49
78	**Subtotals**			**-**	**4**	**5,184**	**-**	**5.94**
79	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*							
80			27	400	14	5,600	0.07	1.46
81	**Subtotals**			**-**	**14**	**5,600**	**-**	**20.47**
82	*Harbor Plaza: Pier F Ave - Pier G Ave*							
83			24	400	4	5,600	0.25	1.10
84	**Subtotals**			**-**	**4**	**5,600**	**-**	**4.41**
85	*Pier F Ave: MCC Gate - Harbor Plaza*							
86			24	400	25	5,600	0.04	1.34
87	**Subtotals**			**-**	**25**	**5,600**	**-**	**33.46**
88	*Pico Ave: Pier E St to Harbor Scenic Connector*							
89			27	729	8	10,206	0.13	0.27
90	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.19**
91	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*							
92			27	729	6	2,916	0.17	0.13
93	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.80**
94	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*							
95			25	625	4	15,625	0.25	0.11
96	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.42**
97	*Ocean Blvd: West of D St. On-ramp*							
98			28	784	6	6,272	0.17	0.32
99	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.90**
100	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*							
101			28	784	4	4,704	0.25	0.12
102	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.49**
103	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*							
104			14	196	11	784	0.09	0.08
105	**Subtotals**			**-**	**11**	**784**	**-**	**0.84**

	A	B
1	**Table A.3.1-69 Annual TOG Emissions for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC P**	
2	*Source Activity*	*Pounds per Year*
3		*TOG*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	117.4
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader1	
13	Kovaco Cement Unloader2	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
26	Harbor Plaza: Pier F Ave - Pier G Ave	
27	Pier F Ave: MCC Gate - Harbor Plaza	
28	Pico Ave: Pier E St to Harbor Scenic Connector	
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
31	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
34	**Total**	**117.4**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-70 Annual TOG Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*TOG*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*										
5			40	1,600		-					
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	-			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	-			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	-			
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	-			
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*										
20		H	NA	NA	1	NA	1.00	117.4495	-	-	2.53691
21	**Subtotals**			**-**	**1**	**-**	**-**	**117.4495**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2	*Volume Source Lb/Year*													
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.05872	0.08221	0.11745	0.39933	-	-	0.52852	0.08221	1.86745	0.36409	5.35570	-	-	2.52516
21														

	A	B
1	**Table A.3.1-71 Annual PM Emissions for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC P**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	222.4
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader1	360.6
13	Kovaco Cement Unloader2	360.6
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	1,541.8
16	New Storage Silos Dust Collector	1,352.5
17	Truck Loading Dust Collector DC-02	350.4
18	Truck Loading Dust Collector DC-03	350.4
19	Truck Loading Dust Collector DC-21	350.4
20	Truck Loading - Dust	684.1
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	
26	Harbor Plaza: Pier F Ave - Pier G Ave	
27	Pier F Ave: MCC Gate - Harbor Plaza	
28	Pico Ave: Pier E St to Harbor Scenic Connector	
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	
31	Ocean Blvd: Seaside Blvd On-ramp to D St. On-ramp	
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	
34	**Total**	**5,573.2**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE
1	**Table A.3.1-72 Annual PM Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM
4	*Construction*										
5			40	1,600		-					
6	**Subtotals**			**-**	**-**	**-**					
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	-			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	-			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	-			
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	-			
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
19	*OGV Hoteling + SCR Duct Burner = DoCCS Stack*										
20		H	NA	NA	1	NA	1.00	222.4361	-	1.17891	0.11122
21	**Subtotals**			**-**	**1**	**-**	**-**	**222.4361**			
22	*Tugs - Harbor Transit*										
23			100	10,000	20	200,000	0.05	-			
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**			
25	*Tugs - Docking*										
26			100	40,000	1	40,000	1.00	-			
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**			
28	*Kovaco Cement Unloader1*										
29			10	100	1	100	1.00	360.6120			
30	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**			
31	*Kovaco Cement Unloader2*										
32			10	100	1	100	1.00	360.6120			
33	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**			
34	*Payloaders*										
35			10	100	2	200	0.50	-			
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**			
37	*Kovaco Cement Unloader+50%Payloaders*										
38		E	10	100	1	100	1.00	360.6120			
39	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**			
40	*vanAalst Cement Unloader+50%Payloaders*										
41		F	10	100	1	100	1.00	360.6120			
42	**Subtotals**			**-**	**1**	**100**	**-**	**360.6120**			

	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1											
2				*Volume Source Lb/Year*							
3	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20	-	0.06117	0.11122	1.22340	0.11122	-	1.22340	0.11122	98.13879	1.22340	
21											
22											
23											
24											
25											
26											
27											
28											
29											79.335
30											
31											
32											79.335
33											
34											
35											
36											
37											
38											79.335
39											
40											
41											79.335
42											

	D	E	F	G	H	I	J	K	AC	AD	AE
1	**Table A.3.1-72 Annual PM Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM
43	*Storage Warehouse Dust Collector DC-01*										
44			NA	NA	1	NA	1.00	1,541.7600			
45	**Subtotals**			**-**	**1**	**-**	**-**	**1,541.7600**			
46	*New Storage Silos Dust Collector*										
47			NA	NA	1	NA	1.00	1,352.5440			
48	**Subtotals**			**-**	**1**	**-**	**-**	**1,352.5440**			
49	*Truck Loading Dust Collector DC-02*										
50			NA	NA	1	NA	1.00	350.4000			
51	**Subtotals**			**-**	**1**	**-**	**-**	**350.4000**			
52	*Truck Loading Dust Collector DC-03*										
53			NA	NA	1	NA	1.00	350.4000			
54	**Subtotals**			**-**	**1**	**-**	**-**	**350.4000**			
55	*Truck Loading Dust Collector DC-21*										
56			NA	NA	1	NA	1.00	350.4000			
57	**Subtotals**			**-**	**1**	**-**	**-**	**350.4000**			
58	*Truck Loading - Dust*										
59			20	400	1	400	1.00	684.0666			
60	**Subtotals**			**-**	**1**	**400**	**-**	**684.0666**			
61	*Trucks - On-Terminal Idling (1)*										
62			20	400	1	400	1.00	-			
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**			
64	*Truck Loading Dust + On-Terminal Idling*										
65		1646X	20	400	1	400	1.00	513.05			
66	**Subtotals**			**-**	**1**	**400**	**-**	**513.0500**			
67	*Truck Loading Dust + On-Terminal Idling*										
68		1655X	20	400	1	400	1.00	171.02			
69	**Subtotals**			**-**	**1**	**400**	**-**	**171.0167**			

	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP
1											
2				*Volume Source Lb/Year*							
3	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM	Silica
43											
44											339.187
45											
46											
47											297.560
48											
49											
50											77.088
51											
52											
53											77.088
54											
55											
56											77.088
57											
58											
59											150.495
60											
61											
62											
63											
64											
65											112.871
66											
67											
68											37.624
69											

	A	B
1	**Table A.3.1-73 Annual Tire Dust Emissions for the Reduced Expansion Alternative - Chronic Analysis - POLB M**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader1	
13	Kovaco Cement Unloader2	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	2.2
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	22.5
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	1.7
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	7.2
26	Harbor Plaza: Pier F Ave - Pier G Ave	1.5
27	Pier F Ave: MCC Gate - Harbor Plaza	11.7
28	Pico Ave: Pier E St to Harbor Scenic Connector	0.8
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.3
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.1
31	Ocean Blvd: West of D St. On-ramp	0.7
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.2
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.3
34	**Total**	**49.060**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-74 Annual Tire Dust Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader1*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*Kovaco Cement Unloader2*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*vanAalst Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-74 Annual Tire Dust Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*New Storage Silos Dust Collector*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-02*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-03*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading Dust Collector DC-21*											
56			NA	NA	1	NA	1.00	-				
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
58	*Truck Loading - Dust*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Trucks - On-Terminal Idling (1)*											
62			20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Truck Loading Dust + On-Terminal Idling*											
65		6	20	400	1	400	1.00	-				
66	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
67	*Trucks - On-Terminal Driving*											
68			20	400	13	5,200	0.08	0.1659	0.00	-	-	0.00
69	**Subtotals**			**-**	**13**	**5,200**	**-**	**2.1570**				
70	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
71			31	961	43	41,323	0.02	0.5226	0.00	-	-	0.00
72	**Subtotals**			**-**	**43**	**41,323**	**-**	**22.4719**				
73	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
74			36	1,296	4	5,184	0.25	0.4244	0.00	-	-	0.00
75	**Subtotals**			**-**	**4**	**5,184**	**-**	**1.6977**				
76	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
77			27	400	14	5,600	0.07	0.5118	0.00	-	-	0.00
78	**Subtotals**			**-**	**14**	**5,600**	**-**	**7.1648**				
79	*Harbor Plaza: Pier F Ave - Pier G Ave*											
80			24	400	4	5,600	0.25	0.3829	0.00	-	-	0.00
81	**Subtotals**			**-**	**4**	**5,600**	**-**	**1.5316**				
82	*Pier F Ave: MCC Gate - Harbor Plaza*											
83			24	400	25	5,600	0.04	0.4685	0.00	-	-	0.00
84	**Subtotals**			**-**	**25**	**5,600**	**-**	**11.7122**				
85	*Pico Ave: Pier E St to Harbor Scenic Connector*											
86			27	729	8	10,206	0.13	0.0959	0.00	-	-	0.00
87	**Subtotals**			**-**	**8**	**10,206**	**-**	**0.7676**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-74 Annual Tire Dust Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
89			27	729	6	2,916	0.17	0.0465	0.00	-	-	0.00
90	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.2791**				
91	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
92			25	625	4	15,625	0.25	0.0368	0.00	-	-	0.00
93	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.1473**				
94	*Ocean Blvd: West of D St. On-ramp*											
95			28	784	6	6,272	0.17	0.1109	0.00	-	-	0.00
96	**Subtotals**			**-**	**6**	**6,272**	**-**	**0.6655**				
97	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
98			28	784	4	4,704	0.25	0.0429	0.00	-	-	0.00
99	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.1716**				
100	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
101			14	196	11	784	0.09	0.0267	0.00	-	-	0.00
102	**Subtotals**			**-**	**11**	**784**	**-**	**0.2934**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									
100									
101	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
102									

	A	B
1	**Table A.3.1-75 Annual Brake Dust Emissions for the Reduced Expansion Alternative - Chronic Analysis - POLB**	
2	*Source Activity*	*Pounds per Year*
3		*PM*
4	Construction	
5	OGV - Fairway Transit	
6	OGV - Precautionary Area Transit	
7	OGV - Harbor Transit	
8	OGV - Docking	
9	OGV - Hoteling - Boilers	
10	Tugs - Harbor Transit	
11	Tugs - Docking	
12	Kovaco Cement Unloader1	
13	Kovaco Cement Unloader2	
14	Payloaders	
15	Storage Warehouse Dust Collector DC-01	
16	New Storage Silos Dust Collector	
17	Truck Loading Dust Collector DC-02	
18	Truck Loading Dust Collector DC-03	
19	Truck Loading Dust Collector DC-21	
20	Truck Loading - Dust	
21	Trucks - On-Terminal Idling (1)	
22	Trucks - On-Terminal Driving	5.0
23	I-710/HSD: PCH to Pico Ave. Connector (NB/SB)	51.6
24	Pico Ave. Connector: HSD to Pico Ave. (NB/SB)	3.9
25	Pico Ave: Harbor Scenic Connector - Harbor Plaza	16.4
26	Harbor Plaza: Pier F Ave - Pier G Ave	3.5
27	Pier F Ave: MCC Gate - Harbor Plaza	26.9
28	Pico Ave: Pier E St to Harbor Scenic Connector	1.8
29	Pico Ave: Pier E St. to Ocean Blvd. On-ramp	0.6
30	Ocean Blvd. On-ramp: Pier D St. to OB (WB)	0.3
31	Ocean Blvd: West of D St. On-ramp	1.5
32	Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp	0.4
33	Pier E St Off Ramp : Pico Ave - Ocean Blvd	0.7
34	**Total**	**112.637**
35	Notes: (1) Assigned to the Truck Loading Source	

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-76 Annual Brake Dust Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
4	*Construction*											
5			40	1,600		-						
6	**Subtotals**			**-**	**-**	**-**	**-**	**-**				
7	*OGV - Fairway Transit*											
8			200	40,000	43	1,720,000	0.02	-				
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**-**				
10	*OGV - Precautionary Area Transit*											
11			200	40,000	33	1,320,000	0.03	-				
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**-**				
13	*OGV - Harbor Transit*											
14			100	10,000	20	200,000	0.05	-				
15	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
16	*OGV - Docking*											
17			100	10,000	1	10,000	1.00	-				
18	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
19	*OGV - Hoteling - Boilers*											
20			NA	NA	1	NA	1.00	-				
21	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
22	*Tugs - Harbor Transit*											
23			100	10,000	20	200,000	0.05	-				
24	**Subtotals**			**-**	**20**	**-**	**-**	**-**				
25	*Tugs - Docking*											
26			100	40,000	1	40,000	1.00	-				
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**-**				
28	*Kovaco Cement Unloader1*											
29			10	100	1	100	1.00	-				
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
31	*Kovaco Cement Unloader2*											
32			10	100	1	100	1.00	-				
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
34	*Payloaders*											
35			10	100	2	200	0.50	-				
36	**Subtotals**			**-**	**2**	**200**	**-**	**-**				
37	*Kovaco Cement Unloader+50%Payloaders*											
38		E	10	100	1	100	1.00	-				
39	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
40	*vanAalst Cement Unloader+50%Payloaders*											
41		F	10	100	1	100	1.00	-				
42	**Subtotals**			**-**	**1**	**100**	**-**	**-**				
43	*Storage Warehouse Dust Collector DC-01*											
44			NA	NA	1	NA	1.00	-				
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-76 Annual Brake Dust Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
46	*New Storage Silos Dust Collector*											
47			NA	NA	1	NA	1.00	-				
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
49	*Truck Loading Dust Collector DC-02*											
50			NA	NA	1	NA	1.00	-				
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
52	*Truck Loading Dust Collector DC-03*											
53			NA	NA	1	NA	1.00	-				
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
55	*Truck Loading Dust Collector DC-21*											
56			NA	NA	1	NA	1.00	-				
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**				
58	*Truck Loading - Dust*											
59			20	400	1	400	1.00	-				
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
61	*Trucks - On-Terminal Idling (1)*											
62			20	400	1	400	1.00	-				
63	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
64	*Truck Loading Dust + On-Terminal Idling*											
65		6	20	400	1	400	1.00	-				
66	**Subtotals**			**-**	**1**	**400**	**-**	**-**				
67	*Trucks - On-Terminal Driving*											
68			20	400	13	5,200	0.08	0.3810	0.00	-	-	0.00
69	**Subtotals**			**-**	**13**	**5,200**	**-**	**4.9524**				
70	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*											
71			31	961	43	41,323	0.02	1.1999	0.00	-	-	0.01
72	**Subtotals**			**-**	**43**	**41,323**	**-**	**51.5937**				
73	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*											
74			36	1,296	4	5,184	0.25	0.9745	0.00	-	-	0.01
75	**Subtotals**			**-**	**4**	**5,184**	**-**	**3.8978**				
76	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*											
77			27	400	14	5,600	0.07	1.1750	0.00	-	-	0.01
78	**Subtotals**			**-**	**14**	**5,600**	**-**	**16.4499**				
79	*Harbor Plaza: Pier F Ave - Pier G Ave*											
80			24	400	4	5,600	0.25	0.8791	0.00	-	-	0.01
81	**Subtotals**			**-**	**4**	**5,600**	**-**	**3.5165**				
82	*Pier F Ave: MCC Gate - Harbor Plaza*											
83			24	400	25	5,600	0.04	1.0756	0.00	-	-	0.01
84	**Subtotals**			**-**	**25**	**5,600**	**-**	**26.8902**				
85	*Pico Ave: Pier E St to Harbor Scenic Connector*											
86			27	729	8	10,206	0.13	0.2203	0.00	-	-	0.00
87	**Subtotals**			**-**	**8**	**10,206**	**-**	**1.7623**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									
65									
66									
67									
68	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
69									
70									
71	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
72									
73									
74	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
75									
76									
77	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
78									
79									
80	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
81									
82									
83	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
84									
85									
86	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
87									

	D	E	F	G	H	I	J	K	AC	AD	AE	AF
1	**Table A.3.1-76 Annual Brake Dust Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project**											
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*					
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*PM*	AMMONIA	ARSENIC	CADMIUM	CHLORINE
88	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*											
89			27	729	6	2,916	0.17	0.1068	0.00	-	-	0.00
90	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.6409**				
91	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*											
92			25	625	4	15,625	0.25	0.0845	0.00	-	-	0.00
93	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.3381**				
94	*Ocean Blvd: West of D St. On-ramp*											
95			28	784	6	6,272	0.17	0.2547	0.00	-	-	0.00
96	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.5280**				
97	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*											
98			28	784	4	4,704	0.25	0.0985	0.00	-	-	0.00
99	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.3940**				
100	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*											
101			14	196	11	784	0.09	0.0612	0.00	-	-	0.00
102	**Subtotals**			**-**	**11**	**784**	**-**	**0.6736**				

	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1									
2		*Volume Source Lb/Year*							
3	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88									
89	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
90									
91									
92	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
93									
94									
95	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
96									
97									
98	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
99									
100									
101	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-
102									

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-77. Total Annual PPY Chronic TAC Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
4	*Construction*						*CAS #*	9901	106990	75070	71432
5			40	1,600	5	8,000	0.20	-			
6	**Subtotals**			**-**	**5**	**8,000**	**-**	**-**			
7	*OGV - Fairway Transit*										
8			200	40,000	43	1,720,000	0.02	38.76			
9	**Subtotals**			**-**	**43**	**1,720,000**	**-**	**1,666.76**			
10	*OGV - Precautionary Area Transit*										
11			200	40,000	33	1,320,000	0.03	7.05			
12	**Subtotals**			**-**	**33**	**1,320,000**	**-**	**232.52**			
13	*OGV - Harbor Transit*										
14			100	10,000	20	200,000	0.05	3.84			
15	**Subtotals**			**-**	**20**	**-**	**-**	**76.79**			
16	*OGV - Docking*										
17			100	10,000	1	10,000	1.00	47.79			
18	**Subtotals**			**-**	**1**	**-**	**-**	**47.79**			
19	*OGV Hoteling = AGs+SCR Duct Burner+Boilers = DoCCS Stack*										
20		H	NA	NA	1	NA	1.00	207.73	-	-	2.53691
21	**Subtotals**			**-**	**1**	**-**	**-**	**207.73**			
22	*Tugs - Harbor Transit*										
23			100	10,000	20	200,000	0.05	3.36			
24	**Subtotals**			**-**	**20**	**-**	**-**	**67.27**			
25	*Tugs - Docking*										
26			100	40,000	1	40,000	1.00	22.42			
27	**Subtotals**			**-**	**1**	**40,000**	**-**	**22.42**			
28	*Kovaco Cement Unloader1*										
29			10	100	1	100	1.00	-	-	-	-
30	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
31	*Kovaco Cement Unloader2*										
32			10	100	1	100	1.00	-	-	-	-
33	**Subtotals**			**-**	**1**	**100**	**-**	**-**			
34	*Payloaders*										
35			10	100	2	200	0.50	1.07			
36	**Subtotals**			**-**	**2**	**200**	**-**	**2.13**			
37	*Kovaco Cement Unloader+50%Payloaders*										
38		E	10	100	1	100	1.00	1.07	-	-	-
39	**Subtotals**			**-**	**1**	**100**	**-**	**1.07**			
40	*vanAalst Cement Unloader+50%Payloaders*										
41		F	10	100	1	100	1.00	1.07	-	-	-
42	**Subtotals**			**-**	**1**	**100**	**-**	**1.07**			
43	*Storage Warehouse Dust Collector DC-01*										
44			NA	NA	1	NA	1.00	-	-	-	-
45	**Subtotals**			**-**	**1**	**-**	**-**	**-**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
4	108907	100414	50000	1210	67561	78933	108383	91203	110543	95476	115071	106423	100425	108883
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	0.05872	0.08221	0.11745	0.39933	-	-	0.52852	0.08221	1.86745	0.36409	5.35570	-	-	2.52516
21														
22														
23														
24														
25														
26														
27														
28														
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30														
31														
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33														
34														
35														
36														
37														
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39														
40														
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42														
43														
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
4	7664417	7440382	7440439	7782505	18540299	7440508	7439921	7439965	7439976	7440020	7782492	9960	7440622
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20	101.5	1.17891	0.11122	-	0.06117	0.11122	1.22340	0.11122	-	1.22340	0.11122	98.13879	1.22340
21													
22													
23													
24													
25													
26													
27													
28													
29	-	-	-	-	-	-	-	-	-	-	-	-	-
30													
31													
32	-	-	-	-	-	-	-	-	-	-	-	-	-
33													
34													
35													
36													
37													
38	-	-	-	-	-	-	-	-	-	-	-	-	-
39													
40													
41	-	-	-	-	-	-	-	-	-	-	-	-	-
42													
43													
44	-	-	-	-	-	-	-	-	-	-	-	-	-
45													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-77. Total Annual PPY Chronic TAC Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
46	*New Storage Silos Dust Collector*										
47			NA	NA	1	NA	1.00	-	-	-	-
48	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
49	*Truck Loading Dust Collector DC-02*										
50			NA	NA	1	NA	1.00	-	-	-	-
51	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
52	*Truck Loading Dust Collector DC-03*										
53			NA	NA	1	NA	1.00	-	-	-	-
54	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
55	*Truck Loading Dust Collector DC-21*										
56			NA	NA	1	NA	1.00	-	-	-	-
57	**Subtotals**			**-**	**1**	**-**	**-**	**-**			
58	*Truck Loading - Dust*										
59			20	400	1	400	1.00	-	-	-	-
60	**Subtotals**			**-**	**1**	**400**	**-**	**-**			
61	*Trucks - On-Terminal Idling (1)*										
62			20	400	1	400	1.00	2.64			
63	**Subtotals**			**-**	**1**	**400**	**-**	**2.64**			
64	*Truck Loading Dust + On-Terminal Idling*										
65		1646X	20	400	1	400	1.00	1.98	-	-	-
66	**Subtotals**			**-**	**1**	**400**	**-**	**1.98**			
67	*Truck Loading Dust + On-Terminal Idling*										
68		1655X	20	400	1	400	1.00	0.66	-	-	-
69	**Subtotals**			**-**	**1**	**400**	**-**	**0.66**			
70	*Trucks - On-Terminal Driving*										
71			20	400	13	5,200	0.08	0.81	-	-	-
72	**Subtotals**			**-**	**13**	**5,200**	**-**	**10.58**			
73	*I-710/HSD: PCH to Pico Ave. Connector (NB/SB)*										
74			31	961	43	41,323	0.02	1.66	-	-	-
75	**Subtotals**			**-**	**43**	**41,323**	**-**	**71.20**			
76	*Pico Ave. Connector: HSD to Pico Ave. (NB/SB)*										
77			36	1,296	4	5,184	0.25	1.49	-	-	-
78	**Subtotals**			**-**	**4**	**5,184**	**-**	**5.94**			
79	*Pico Ave: Harbor Scenic Connector - Harbor Plaza*										
80			27	400	14	5,600	0.07	1.46	-	-	-
81	**Subtotals**			**-**	**14**	**5,600**	**-**	**20.47**			
82	*Harbor Plaza: Pier F Ave - Pier G Ave*										
83			24	400	4	5,600	0.25	1.10	-	-	-
84	**Subtotals**			**-**	**4**	**5,600**	**-**	**4.41**			
85	*Pier F Ave: MCC Gate - Harbor Plaza*										
86			24	400	25	5,600	0.04	1.34	-	-	-
87	**Subtotals**			**-**	**25**	**5,600**	**-**	**33.46**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
46														
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48														
49														
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51														
52														
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54														
55														
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57														
58														
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60														
61														
62														
63														
64														
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66														
67														
68	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69														
70														
71	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72														
73														
74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75														
76														
77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78														
79														
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
81														
82														
83	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84														
85														
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
46													
47	-	-	-	-	-	-	-	-	-	-	-	-	-
48													
49													
50	-	-	-	-	-	-	-	-	-	-	-	-	-
51													
52													
53	-	-	-	-	-	-	-	-	-	-	-	-	-
54													
55													
56	-	-	-	-	-	-	-	-	-	-	-	-	-
57													
58													
59	-	-	-	-	-	-	-	-	-	-	-	-	-
60													
61													
62													
63													
64													
65	-	-	-	-	-	-	-	-	-	-	-	-	-
66													
67													
68	-	-	-	-	-	-	-	-	-	-	-	-	-
69													
70													
71	0.00010391	-	-	0.00426565	0.00000082	0.00026797	0.00008750	0.00005469	-	0.00002734	0.00001094	0.00136720	-
72													
73													
74	0.00032727	-	-	0.01343517	0.00000258	0.00084400	0.00027559	0.00017225	-	0.00008612	0.00003445	0.00430614	-
75													
76													
77	0.00026579	-	-	0.01091130	0.00000210	0.00068545	0.00022382	0.00013989	-	0.00006994	0.00002798	0.00349721	-
78													
79													
80	0.00032049	-	-	0.01315676	0.00000253	0.00082651	0.00026988	0.00016868	-	0.00008434	0.00003374	0.00421691	-
81													
82													
83	0.00023978	-	-	0.00984374	0.00000189	0.00061839	0.00020192	0.00012620	-	0.00006310	0.00002524	0.00315504	-
84													
85													
86	0.00029338	-	-	0.01204396	0.00000232	0.00075661	0.00024706	0.00015441	-	0.00007720	0.00003088	0.00386024	-
87													

	D	E	F	G	H	I	J	K	L	M	N
1	**Table A.3.1-77. Total Annual PPY Chronic TAC Emission Simulations for the Reduced Expansion Alternative - Chronic Analysis - POLB MCC Project.**										
2		*Source*	*Width*	*Area*	*# of*	*Total Source*	*Source Area/*				
3	*Activity/Source ID*	*Number(s)*	*(meters)*	*(m2)*	*Sources*	*Area (m2)*	*Total Source Area*	*DPM*	1,3-butadiene	acetaldehyde	benzene
88	*Pico Ave: Pier E St to Harbor Scenic Connector*										
89			27	729	8	10,206	0.13	0.27	-	-	-
90	**Subtotals**			**-**	**8**	**10,206**	**-**	**2.19**			
91	*Pico Ave: Pier E St. to Ocean Blvd. On-ramp*										
92			27	729	6	2,916	0.17	0.13	-	-	-
93	**Subtotals**			**-**	**6**	**2,916**	**-**	**0.80**			
94	*Ocean Blvd. On-ramp: Pier D St. to OB (WB)*										
95			25	625	4	15,625	0.25	0.11	-	-	-
96	**Subtotals**			**-**	**4**	**15,625**	**-**	**0.42**			
97	*Ocean Blvd: West of D St. On-ramp*										
98			28	784	6	6,272	0.17	0.32	-	-	-
99	**Subtotals**			**-**	**6**	**6,272**	**-**	**1.90**			
100	*Ocean Blvd: Pico Ave. On-ramp to Pier E St. Off-ramp*										
101			28	784	4	4,704	0.25	0.12	-	-	-
102	**Subtotals**			**-**	**4**	**4,704**	**-**	**0.49**			
103	*Pier E St Off Ramp : Pico Ave - Ocean Blvd*										
104			14	196	11	784	0.09	0.08	-	-	-
105	**Subtotals**			**-**	**11**	**784**	**-**	**0.84**			

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1														
2												*Volume Source Lb/Year*		
3	chlorobenzene	ethylbenzene	formaldehyde	isomers of xylene	methanol	MEK	m-xylene	naphthalene	n-Hexane	o-xylene	propene	p-xylene	styrene	toluene
88														
89	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90														
91														
92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93														
94														
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96														
97														
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99														
100														
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102														
103														
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105														

	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1													
2													
3	AMMONIA	ARSENIC	CADMIUM	CHLORINE	CHROMIUM	COPPER	LEAD	MANGANESE	MERCURY	NICKEL	SELENIUM	SULFATES	VANADIUM
88													
89	0.00006008	-	-	0.00246662	0.00000047	0.00015495	0.00005060	0.00003162	-	0.00001581	0.00000632	0.00079058	-
90													
91													
92	0.00002913	-	-	0.00119599	0.00000023	0.00007513	0.00002453	0.00001533	-	0.00000767	0.00000307	0.00038333	-
93													
94													
95	0.00002305	-	-	0.00094641	0.00000018	0.00005945	0.00001941	0.00001213	-	0.00000607	0.00000243	0.00030334	-
96													
97													
98	0.00006946	-	-	0.00285164	0.00000055	0.00017914	0.00005850	0.00003656	-	0.00001828	0.00000731	0.00091399	-
99													
100													
101	0.00002686	-	-	0.00110282	0.00000021	0.00006928	0.00002262	0.00001414	-	0.00000707	0.00000283	0.00035347	-
102													
103													
104	0.00001670	-	-	0.00068567	0.00000013	0.00004307	0.00001406	0.00000879	-	0.00000440	0.00000176	0.00021977	-
105													