

3.3 Greenhouse Gas Emissions

This section discusses potential impacts to greenhouse gas (GHG) emissions resulting from implementation of the proposed project. The analysis is based on a review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as a Greenhouse Gas Emissions Technical Report that was prepared for the proposed project (ESA 2018). The following section summarizes this report, which can be found in Appendix M of this EIR.

3.3.1 Existing Conditions

Gases that trap heat in the atmosphere are called GHGs. The major concern with GHGs is that increases in their concentrations are causing global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. The overwhelming majority of the scientific community agree that there is a direct link between increased emissions of GHGs and long-term global temperature increases.

Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change. Although the emissions of one single project would not cause global climate change, GHG emissions from multiple projects and activities throughout the world could result in a cumulative impact with respect to global climate change. In turn, global climate change has the potential to result in rising sea levels, which can inundate low-lying areas; to affect rainfall and snowfall, leading to changes in water supply; to affect habitat, leading to adverse effects on biological resources; and to result in other effects.

The principal GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). Because different types of GHGs have different warming potentials and CO₂ is the most common reference gas for climate change, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e). Methane, while comprising a small fraction of the total GHGs emitted annually worldwide, is an extremely potent GHG with 25 times the global warming potential of CO₂. Therefore, the emission of 1 metric ton (MT) of Methane could be reported as an emission of 25 MT of CO₂e. Large emissions are reported in million metric tons (MMT) of CO₂e.¹

Some of the potential effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more forest fires, and more drought years (CARB 2009). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and

¹ A metric ton is 1,000 kilograms; it is equal to approximately 1.1 U.S. tons and 2,204.6 pounds.

precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

California produced 459 MMTCO₂e emissions in 2012 (CARB 2014a). Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2012, accounting for 36 percent of total GHG emissions in the state (CARB, 2014a). This sector was followed by the electric power sector (including both in-state and out-of-state sources) (21 percent) and the industrial sector (19 percent) (CARB 2014a).

The County of San Diego's (County) GHG emissions were approximately 34 MMTCO₂e in 2005 (San Diego County 2013). Transportation is the largest GHG emissions source at 58 percent. The energy sector accounted for approximately 24 percent of total GHG emissions with the remaining 18 percent from agriculture, solid waste, wastewater and other sources (GHG Report, Appendix M).

3.3.1.1 Regulatory Framework

Federal

Clean Air Act

The principal air quality regulatory mechanism at the federal level is the CAA and in particular, the 1990 amendments to the CAA and the NAAQS that it establishes. The federal CAA does not specifically regulate GHG emissions; however, the U.S. Supreme Court has determined that GHGs are pollutants that can be regulated under the federal CAA. There are currently no federal regulations that set ambient air quality standards for GHGs.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by the United States Environmental Protection Agency (USEPA) and the National Highway Traffic Safety Administration (NHTSA). Phase 1 of the Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. The USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.

State

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

California Global Warming Solutions Act

California Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, codified into law in Health and Safety Code (HSC) Division 25.5, requires CARB to establish a statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt and enforce programs and regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions. In December 2007 CARB adopted 427 MMTCO_{2e} as the statewide GHG emissions limit equivalent to the statewide levels for 1990. This is approximately 28 percent below forecasted 2020 "business-as-usual" emissions of 596 MMTCO_{2e}, and about 10 percent below average annual GHG emissions estimated during the period of 2002 through 2004 (CARB 2009).

CARB published the Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration in September 2007 (CARB 2007). CARB adopted nine Early Action Measures for implementation, including Ship Electrification at Ports, Reduction of High Global-Warming-Potential Gases in Consumer Products, Heavy-Duty Vehicle Greenhouse Gas Emission Reduction (Aerodynamic Efficiency), Reduction of

Perfluorocarbons from Semiconductor Manufacturing, Improved Landfill Gas Capture, Reduction of Hydrofluorocarbon-134a from Do-It-Yourself Motor Vehicle Servicing, Sulfur Hexafluoride Reductions from the Non-Electric Sector, a Tire Inflation Program, and a Low Carbon Fuel Standard.

By January 1, 2011, CARB was required to adopt rules and regulations (which were to become operative January 1, 2012), to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 permitted the use of market-based compliance mechanisms to achieve those reductions. AB 32 also required CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it had adopted.

As of January 1, 2012, the GHG emissions limits and reduction measures adopted in 2011 by CARB became enforceable. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state's efforts to improve air quality.

In 2016, Senate Bill (SB) 32 and its companion bill AB 197 were signed into law by the Governor. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

Climate Change Scoping Plan

In December 2008, CARB approved the AB 32 Scoping Plan outlining the state's strategy to achieve the 2020 GHG emissions limit (CARB 2009). This Scoping Plan, developed by CARB in coordination with the Climate Action Team (CAT), proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health.

As required by AB 32, the Scoping Plan must be updated at least every five years to evaluate the mix of AB 32 policies to ensure that California is on track to meet the targets set out in the legislation. In October 2013, a draft Update to the initial Scoping Plan was developed by CARB in collaboration with the California Climate Action Team (CCAT). The draft Update builds upon the initial Scoping Plan with new strategies and expanded measures, and identifies opportunities to leverage existing and new funds to drive GHG emission reductions through strategic planning and targeted program investments. The draft Update to the initial Scoping Plan was presented to CARB's Board for discussion at its

February 20, 2014 meeting. Subsequently, the first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB.

As part of the proposed update to the Scoping Plan, the emissions reductions required to meet the 2020 statewide GHG emissions limit were further adjusted. The primary reason for adjusting the 2020 statewide emissions limit was based on the fact that the original Scoping Plan relied on the Intergovernmental Panel on Climate Change's (IPCC) 1996 Second Assessment Report (SAR) to assign the global warming potentials (GWPs) of greenhouse gases. Recently, in accordance the United Nations Framework Convention on Climate Change (UNFCCC), international climate agencies have agreed to begin using the scientifically updated GWP values in the IPCC's Fourth Assessment Report (AR4) that was released in 2007. Because CARB has begun to transition to the use of the AR4 100-year GWPs in its climate change programs, CARB recalculated the Scoping Plan's 1990 GHG emissions level with the AR4 GWPs. As the recalculation resulted in 431 MMTCO_{2e}, the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 MMTCO_{2e} in the initial Scoping Plan. Considering that the proposed update also adjusted the 2020 BAU forecast of GHG emissions to 509 MMTCO_{2e}, a 15 percent reduction below the estimated BAU levels was determined to be necessary to return to 1990 levels by 2020 (CARB 2014b).

Pursuant to SB 32 and AB 197, CARB is in the process of preparing the second update to the Climate Change Scoping Plan to reflect the 2030 target established in SB 32 and AB 197. The 2017 Scoping Plan Update discusses a Proposed Scenario and four alternatives. CARB states that the Proposed Scenario "is the clear choice to achieve the State's climate and clean air goals" (CARB 2017). Under the Proposed Scenario, the majority of the reductions would result from continuation of the Cap-and-Trade regulation. Additional reductions are achieved from requiring 20 percent reduction of GHG emissions from the refinery sector, electricity sector standards (i.e., utility providers to supply 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the Low Carbon Fuel Standard (LCFS), implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. The alternatives are designed to consider various combinations of these programs as well as consideration of a carbon tax in the event the Cap-and-Trade regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030.

Executive Order S-1-07

Executive Order S-1-07, which was signed by Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020. As a result

of this order, CARB approved a proposed regulation to implement the low carbon fuel standard (LCFS) on April 23, 2009, which will reduce GHG emissions from the transportation sector in California by about 16 MMT in 2020. The LCFS is designed to reduce California's dependence on petroleum, create a lasting market for clean transportation technology, and stimulate the production and use of alternative, low-carbon fuels in California. The LCFS is designed to provide a durable framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011.

Senate Bill 375

SB 375, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the state on September 30, 2008. On September 23, 2010, CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the metropolitan planning organizations (MPOs); the targets require a 7 to 8 percent reduction by 2020 and between 13 to 16 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs, such as the San Diego Association of Governments (SANDAG) will work with local jurisdictions in the development of sustainable communities strategies (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. SANDAG's reduction target for per capita vehicular emissions is 7 percent by 2020 and 13 percent by 2035 from a base year of 2005 (CARB 2010). The MPOs prepared their first SCS according to their respective regional transportation plan (RTP) update schedule with the SCAG RTP/SCS adopted on April 4, 2012.

Senate Bill 97

Senate Bill (SB) 97, enacted in August 2007, required the Office of Planning and Research (OPR) to develop guidelines for the mitigation of GHG emissions, or the effects related to releases of GHG emissions. On April 13, 2009, the OPR submitted proposed amendments to the Natural Resources Agency in accordance with SB 97 regarding analysis and mitigation of GHG emissions. As directed by SB 97, the Natural Resources Agency adopted Amendments to the CEQA Guidelines for greenhouse gas emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

California Green Building Standard Code

In January 2010, the State of California adopted the 2010 California Green Building Standards Code (CALGreen), which became effective in January 2011. Building off of the initial 2008 California Green Building Code, the 2010 CALGreen Code represents a more stringent building code that requires, at a minimum, that new buildings and renovations in California meet certain sustainability and ecological standards. The 2010 CALGreen Code has mandatory Green Building provisions for all new residential buildings that are three stories or fewer (including hotels and motels) and all new non-residential buildings of any size that are not additions to existing buildings.

In early 2013 the California Building Standards Commission adopted the 2013 California Building Standards Code that also included the latest 2013 CALGreen Code, which became effective on January 1, 2014. The mandatory provisions of the code are anticipated to reduce 3 MMT of GHG emissions by 2020, reduce water use by 20 percent or more, and divert 50 percent of construction waste from landfills. The 2013 California Energy Code (Title 24, Part 6), which is also part of the CALGreen Code (Title 24, Part 11, Chapter 5.2), became effective on July 1, 2014.

Local

Sustainable Communities Strategies

SANDAG adopted the 2015 SCS in October 2015, which builds on the previous 2011 SCS and directs investments within existing urbanized areas in order to encourage growth within existing higher density urban boundaries and discourage urban and suburban sprawl. Elements of the 2011 SCS that have been implemented include the completion of bike and pedestrian projects and the expansion of transit with new rapid bus service. The goals of the 2015 SCS include increasing the number of homes and jobs near transit, reducing transit travel time, and achieve economic benefits due to reduced congestion and the construction of transportation infrastructure. Implementation of the 2015 SCS is projected to reduce roadway congestion during peak travel times by nearly half, from 9.1 percent in the No Build alternative to 5.1 percent under the Plan. Key measures to achieve these reductions include development of Managed Lane networks that will serve many modes of transportation and that could help smooth the flow of traffic between passenger vehicles and freight trucks and other vehicles that transport goods throughout the region. SANDAG's quantification of GHG emissions reductions from the 2015 SCS indicates that the plan would result in per capita emissions reductions of 15 percent by 2020 and 21 percent by 2035 from a base year of 2005. CARB prepared a technical evaluation of SANDAG's adopted 2015 SCS, which affirms that the SCS, if implemented, would meet the CARB-adopted per capita GHG emissions

reduction targets for SANDAG of 7 percent reduction in 2020 and 13 percent reduction in 2035 from a base year of 2005 (CARB 2015).

San Diego County Strategic Energy Plan

The County has adopted a Strategic Energy Plan to provide a comprehensive roadmap for achieving the County's sustainability goals in the areas of energy conservation, energy efficiency, renewable energy, sustainability programs, water conservation and reduced emissions. Through the Strategic Energy Plan, Board of Supervisor Policies, County Administrative Manual and General Plan, San Diego has adopted numerous environmental goals and policies, including:

- Green Energy
- Water Efficiency
- Waste Reduction
- Green Building
- Clean Vehicles

San Diego County General Plan

The County's General Plan (March 2011) contains numerous policies in the Land Use, Mobility, Conservation and Open Space, and Housing Elements to address climate change. Suggested policies address the following major strategies in the General Plan:

- Reduce vehicle trips generated, gasoline/energy consumption, and GHGs.
- Reduce non-renewable electrical and natural gas energy consumption and generation (energy efficiency).
- Increase generation and use of renewable energy sources.
- Reduce water consumption.
- Reduce and maximize reuse of solid wastes.
- Maximize preservation of open spaces, natural areas, and agricultural lands.
- Reduce risk from wildfire, flooding, and other hazards resulting from climate change.
- Conserve and improve water supply due to shortage from climate change.
- Promote agricultural lands for local food production.

San Diego County Climate Action Plan

San Diego County recently adopted (February 14, 2018) a Climate Action Plan (CAP) that includes strategies and measures to reduce GHG emissions, consistent with the State legislative requirements. The CAP includes projected future emissions for the County based on anticipated growth and land use development. In addition, the CAP quantified potential emissions reductions associated with implementation of included measures that new development could incorporate. Thus, new development that incorporates these measures and can demonstrate consistency with the CAP, would not conflict with the County's or State's long-term GHG reduction targets.

In accordance with CEQA Guidelines Section 15183.5 and the County's Guidelines for Determining Significance for Climate Change, projects that can demonstrate consistency with the adopted CAP, by completing the CAP Consistency Review Checklist, would have a less than significant impact to climate change. However, due to the unique land use type of the proposed project, the CAP checklist is not applicable. The CAP projections and CAP Consistency Checklist focus primarily on typical land use development and do not capture emissions sources such as the project.

3.3.2 Analysis of Project Effects and Determination as to Significance

For the purpose of this EIR, the identified significance thresholds are based on the criteria provided in Appendix G of the CEQA Guidelines. Implementation of the proposed project would result in a significant GHG-related impact if it would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

3.3.2.1 Issue 1: Greenhouse Gas Emission Generation

Guidelines for the Determination of Significance

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SDAPCD does not have quantitative thresholds for determining significance of construction or operational impacts. Because the SDAPCD does not have adopted thresholds and the CAP Consistency Review Checklist is not applicable to the project, the County has utilized the industrial source threshold developed by the South Coast Air Quality Management District (SCAQMD) for the proposed project.

The SCAQMD has adopted an annual screening level threshold of 10,000 MT CO_{2e} for industrial projects for which the SCAQMD is the Lead Agency or has discretionary approval (SCAQMD 2008). The SCAQMD, in accordance with CEQA Guidelines Section 15064.7, adopted its annual threshold for industrial sources under a public review process as part of stakeholder working group meetings that were open to the public and based on substantial evidence. The intent of the threshold is to capture 90 percent of total emissions from all new or modified industrial and stationary source sector projects subject to a CEQA analysis where the SCAQMD is the lead agency. Data collected by the SCAQMD from its Annual Emissions Reporting (AER) Program indicates that a 90 percent capture rate would cover a substantial portion of future project emissions and would exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions (SCAQMD 2008). The SCAQMD estimates that these small projects will in aggregate contribute less than 1 percent of the future 2050 statewide GHG emissions target.

The SCAQMD's 10,000 MT CO_{2e} per year threshold applies to a project's annual long-term GHG emissions. The proposed project would generate the majority of its GHG emissions over a 12-year period during the mining process. As discussed previously, the disturbed areas previously mined would be progressively reclaimed. Reclamation is anticipated to extend four years past the end of mining; however, GHG emissions associated with reclamation activities would be much less than during active mining. GHG emissions would cease after mining and reclamation activities are complete. In contrast, typical land use development projects or stationary source facilities would continue to emit GHG emissions well beyond the time frame of the proposed project. Therefore, the SCAQMD's 10,000 MT CO_{2e} per year threshold is considered to be an appropriate threshold for the proposed project, but also conservative and environmentally protective given that the lifetime of the proposed project is limited to 12 years of mining with reclamation extending an additional four years.

As the SCAQMD's adopted mass emission threshold is appropriate for the project type, the 10,000 MT CO_{2e} threshold will be used with respect to determining project significance under Guideline 1.

For Guideline 2 a project is determined to be less than significant if it does not conflict with existing plans or policies implemented for the reduction of GHG emissions.

Analysis

Construction Impacts

Phase 1 would include the construction of the drop structure, access road, processing area pad, and screening berms. However, this construction activity would occur at the same time as the initial mining operations commence. Because the construction activities would not require additional equipment, and would occur simultaneously with the operational emissions, construction emissions are embedded in the operational emissions and are not considered separately in this analysis.

Operational Impacts

Long-term (i.e., operational) emissions of GHGs associated with the proposed project, including mobile- and area-source emissions, were quantified using the CalEEMod computer model. For onsite equipment, emissions were calculated based on anticipated electrical consumption of that equipment. Area-source emissions, which are widely distributed and made of many small emissions sources (e.g., building heating and cooling units, landscaping equipment, consumer products, painting operations, etc.) are considered where appropriate. As heating and air conditioning would be electrically operated, these emissions are included in electrical consumption emissions. The project would have landscaping of the earthen berm near the entrance and in areas along El Monte Road; however, routine use of fossil-fueled landscaping equipment is not expected. There would be no painting activities associated with the operation of the proposed project. Mass mobile-source emissions were modeled based on the daily vehicle trips that would result from the proposed project. The long-term operational emissions were then compared with the applicable County thresholds for determination of significance. A summary of modeling assumptions are provided below, detailed modeling assumptions and output files are provided in Appendices A and B of the GHG Report (Appendix M of the Draft EIR).

1. Table 4, in Section 1 of the GHG Report (Appendix M), details the daily project trip counts provided by the proponent for aggregate transport, vendor trips, and employee commute and visitors. VMT length for vendor trips, employee and visitor commutes are based on CalEEMod default values. Trip lengths for aggregate transport were increased from the CalEEMod default of 20 to 30 miles per trip to approximate the average one way trip length within the County for the delivery of aggregate to project sites. Vehicle fleet composition is based on the CalEEMod fleet mixes for San Diego County. Pavley and the LCFS are included in the CalEEMod modeling.
2. Landscaping emissions are not calculated since the proposed project includes landscaping of the earthen berm near the entrance and along El

Monte Road, but no routine use of fossil-fueled landscaping equipment is anticipated.

3. Natural gas emissions are not calculated since the proposed project includes no natural gas use.
4. Electrical use assumes 1,504,102 KWh (4,801 KWh daily) per year as provided by the project applicant. The intensity factors for CO₂, CH₄, and N₂O are the default CalEEMod factors provided for San Diego Gas & Electric. The electrical use is for the operation of the office, truck scales, and plant equipment.
5. Waste for the eight full-time workers is anticipated to be from lunches and minor office debris. There is no processing waste. Waste for the proposed project would be a maximum of 2 tons per year. All other components of calculating emissions from waste generation/disposal used CalEEMod defaults for San Diego County.
6. Wastewater generation was not calculated as the onsite restrooms are portable and there is no connection to the sewer system with the proposed project.
7. Water use includes process water, dust control, and occasional irrigation for the landscaping and reclamation activities only. All water would be outdoors as there are no restroom facilities or onsite potable water sources. All drinking water would be provided by a private vendor.

The proposed project would generate GHG emissions from a variety of sources during construction and operation of the proposed project. Site preparation would include the construction of the drop structure (channel erosion barrier), access road, processing area pad, and screening berms. The drop structure would be located approximately 300 feet west of Dairy Road, and would consist of grouted rip rap approximately 2.7 feet thick. Cut slopes would be mined at a constant 3H:1V (horizontal:vertical) slope. Site preparation activity would also include the establishment of a sub-grade processing plant pad 10 feet below the existing ground surface (bgs) at the southwest processing plant location, and a sub-grade haul road approximately 10 to 12 feet bgs. Earthen berms would be constructed around the top sides of the plant pad area and along both sides and parallel to the road to screen the equipment and operation from public view. This construction activity would occur at the same time as the initial mining operations would begin. Specifically, a set amount of equipment that would be operated onsite on any given day. The number of pieces of equipment would not change and equipment would be assigned to either “construction” activities or “operational” activities as the needs of the project required. Because the construction activities would not require the daily operation of additional pieces of equipment and the GHG emissions they would occur simultaneously with the operational GHG emissions, construction GHG emissions are conservatively

embedded within the operational GHG emissions analysis and are not considered as a separate distinct phase in this analysis.

Construction and operational emissions are based on mining equipment and plant operations including the operation of the onsite modular building and scales as well as vehicle travel. Indirect source emissions generated by the proposed project include electrical consumption and solid waste disposal. Mobile (direct) sources of air pollutants associated with the proposed project would consist of motor vehicle trips generated by employees and patrons of the proposed aggregate mine.

The implementation of the proposed project would make locally mined aggregate available to customers for projects in the County, replacing the more costly import of sand and aggregate from facilities as far away as Irwindale, California; Thermal, California; and Ensenada, Mexico (CalCIMA 2015). According to a 2012 report by the California Geologic Survey (CGS), "In the last decade, the highest prices [sic] aggregate in the state have been in the San Diego area, where PCC-grade sand is in short supply" (CGS 2012). Therefore VMT to supply aggregate to development and infrastructure projects within the County would likely be reduced, compared to current practice and would reduce GHG emissions from haul trucks. Mineral extraction is undertaken to meet the variable demands of the building industry and the approval of a new source of raw material does not increase demand; nonetheless, the approval of the proposed project is considered additive to the County's and region's mineral extraction operations, and the proposed project's GHG analysis did not quantitatively consider the reduction in VMT in the analysis of GHG emissions. Therefore, the haul truck mobile source GHG emissions are considered a conservative high-end estimate of the emissions. However, with respect to the proposed project's support of applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions, qualitative consideration of the reduction in VMT is appropriate.

The estimated GHG emissions resulting from project operations are shown in Table 3.3-1. The operation of the mining activities, including the plant operation, water consumption, and off-road mining equipment, as well as the area source emissions, mobile source emissions (employee, vender, and haul truck), and waste emissions were estimated to provide total project emissions. Total project emissions are compared to the annual industrial project screening threshold of 10,000 MT CO_{2e}.

With the implementation of the proposed project, the total emissions from mining, inclusive of stationary sources, off-road sources, and on-road vehicles would be approximately 6,614 MT CO_{2e} annually, as shown in Table 3.3-1. The total emissions would not exceed the annual stationary source threshold of 10,000 MT

CO₂e. Therefore, impacts would be **less than significant** and no mitigation is required. If consideration of VMT reductions were quantified, the net emissions would be lower.

3.3.2.2 Issue 2: Conflict with Greenhouse Gas Emission Reduction Regulations

Analysis

The proposed project is not a typical development project and therefore does not comply directly with the CARB Scoping Plan. However, inherent in the plan is the overall goal of reducing GHG emissions within the State and within individual regions. One of the goals of the proposed project is to reduce the import of sand and aggregate from outside the County. This would reduce GHG emissions by reducing vehicle miles traveled with respect to not implementing the proposed project and continuing to import from other areas outside the County. Haul truck emissions make up approximately 75 percent of overall emissions. Currently, sand and aggregate is being transported into San Diego County from as far as way as Irwindale, California; Thermal, California; and Ensenada, Mexico (CalCIMA 2015) resulting in an average haul distance of up to 90 miles. According to a 2012 report, the CGS has confirmed that the San Diego area is in short supply of PCC-grade sand (CGS 2012). By implementing the proposed project, average haul distance would be reduced to approximately 30 miles.² This reduction in vehicle miles traveled from haul trucks would result in a substantial (56 to 67 percent) reduction in haul truck emissions (See Appendix A in the Greenhouse Gas Emissions Technical Report (Appendix M of this Draft EIR)). Therefore, the overall reduction in emissions achieved from reducing vehicle miles traveled would be consistent with CARB Scoping Plan goals of reducing emissions within the County.

According to the 2017 Scoping Plan Update (not yet adopted by CARB as of August 2017), reductions needed to achieve the 2030 target are expected to be achieved by targeting specific emission sectors, including those sectors that are not directly controlled or influenced by the project, but nonetheless contribute to project-related GHG emissions. For instance, the project itself is not subject to the Cap-and-Trade regulation; however, project-related emissions would decline pursuant to the regulation as transportation fuel producers are themselves subject to Cap-and-Trade regulation and the LCFS (emissions reductions from the LCFS are from the fuel production side and not from end-user combustion). The project would not interfere with implementation of the 2017 Scoping Plan

² Reduction in haul truck emissions was determined based on the difference in vehicle miles traveled currently to get aggregate from the current aggregate mines and the vehicle miles traveled anticipated from the location of the project within the central portion of San Diego County. The determination of reduction in vehicle miles traveled is detailed in Appendix M, Greenhouse Gas Emissions Technical Report.

Update or strategies that would be implemented under the Scoping Plan to achieve the State's 2030 GHG reduction target.

Furthermore, the proposed project would not conflict with the SCS. The key goal of the SCS is to achieve per capita GHG emissions reduction targets through integrated land use and transportation strategies. The focus of these reductions is on transportation and land use strategies that influence vehicle travel. As discussed above, the project is estimated to reduce vehicle miles traveled from haul trucks supplying sand and aggregate within the County by a substantial (approximately 56 to 67 percent) amount, which exceeds the SB 375 requirement for SANDAG (7 percent by 2020 and 13 percent by 2035). Therefore, the project would not conflict with the achievement of SB 375 goals and impacts would be **less than significant**.

3.3.3 Cumulative Impact Analysis

Issue 1: Greenhouse Gas Emission Generation

Although the proposed project will result in GHG emissions, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change. The resultant consequences of that climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change. The CEQA Guidelines amendments clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see Section 15130(f)).³ Furthermore, the California Air Pollution Control Officers Association (CAPCOA) has indicated that "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective" (CAPCOA 2008). Since the proposed project would have less than significant impacts with respect to the generation of GHG emissions, impacts associated with GHG emissions would be **less than cumulatively considerable**.

Issue 2: Conflict with Greenhouse Gas Emission Reduction Regulations

As discussed previously, implementation of the proposed project would bring locally mined aggregate into the County and therefore reduce vehicle miles traveled to new development projects within the County. This in turn would reduce GHG emissions from haul trucks. The proposed project would be

³ See generally California Natural Resources Agency, Final Statement of Reasons for Regulatory Action, December 2009, pages 11-13, 14, 16; see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, April 13, 2009, https://www.opr.ca.gov/docs/Transmittal_Letter.pdf. Accessed May 1, 2017.

consistent with the approach outlined in the CARB's Climate Change Scoping Plan, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and reducing VMT. The project would also not interfere with implementation of the 2017 Scoping Plan Update or strategies that would be implemented under the Scoping Plan to achieve the State's 2030 GHG reduction target. It would also not conflict with the vehicle miles traveled reduction goals of the SCS, as required by SB 375. Therefore, as the proposed project would reduce mobile source emissions within the County, it would not conflict with applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions and no mitigation is required. Since the proposed project would have less than significant impacts with respect to consistency with applicable plans and policies for the reduction of GHGs, impacts would be **less than cumulatively considerable**.

3.3.4 Significance of Impacts Prior to Mitigation

As discussed above, no significant impacts related to GHG emissions would result from the proposed project. Thus, no mitigation is required.

3.3.5 Conclusion

The proposed project would result in emissions of GHGs throughout the life of the project. As specifically designed, the proposed project would not exceed the thresholds for GHG emissions and would result in a less than significant impact with respect to the generation of GHGs. Implementation of the proposed project would make locally mined sand and aggregate available to customers for projects in the County, replacing the more costly import of sand and aggregate from non-local sources. Therefore, VMT to supply sand and aggregate to development and infrastructure projects within the County would be reduced compared to current practices, and the haul truck mobile source GHG emissions shown in Table 3.3-1 are considered a conservative high-end estimate of the emissions. As discussed previously, the total trip distance for transporting sand and aggregate would be reduced from between an average distance of 90 miles to an average distance of 30 miles. As discussed, the proposed project would be consistent with the overarching goals of the CARB Scoping Plan. Therefore, the proposed project would have less than significant impacts with respect to consistency with applicable plans and policies for the reduction of GHGs. Additionally, as summarized in Section 3.3-4, cumulative impacts would be less than cumulatively considerable and no mitigation is required.

Table 3.3-1: Estimated Operations-Related GHG Emissions

Emission Source	Estimated Emissions CO₂e (MT/yr)
Area Source ^a :	0
Electricity:	987
Mobile (Vendor):	11
Mobile (Worker)	23
Waste:	1
Water:	220
Process Emissions:	1,223
Mobile (Haul Trucks)	4,149
Total Project Emissions	6,614
Threshold	10,000

CO₂e= carbon dioxide equivalent; MT/yr = metric tons per year. Columns may not add directly due to rounding.

^a Sources represent consumer products that would be associated with the everyday operation of the mine, specifically the mining, reclamation, and scale.

SOURCE: ESA Modeling 2018

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