4.6 GREENHOUSE GAS EMISSIONS

The analysis in this Subsection is based on a report prepared by Urban Crossroads, Inc. titled "Amendment No. 2 to Reclamation Plan 2006-01 Greenhouse Gas Analysis City of Lake Elsinore," dated October 14, 2015, and included as *Technical Appendix G* to this EIR (Urban Crossroads, 2015c). The technical report and analysis in this Subsection assess the proposed Project's potential to generate greenhouse gas emissions that could contribute to global climate change and its associated environmental effects.

4.6.1 SCOPE OF REVIEW

The Nichols Canyon Mine, as discussed in Section 2.0, Environmental Setting, is an existing, ongoing surface mining operation operating pursuant to vested mining rights and an approved reclamation plan (RP 2006-01A1), which was analyzed in a prior MND. Although the City has chosen to prepare an EIR for the Project here, the scope of review addresses those impacts resulting from the Project as described in Section 3.0, Project Description, and not impacts related to existing, approved operations, which form the environmental baseline, as discussed in Section 2.7, Existing Physical Site Conditions. Accordingly, this Subsection does not analyze greenhouse gas impacts related to existing, approved operations.

4.6.2 EXISTING CONDITIONS

A. Introduction to Global Climate Change

Global Climate Change (GCC) refers to change in average meteorological conditions on the Earth with respect to temperature, wind patterns, precipitation, and storms. Debate exists within the scientific community regarding the extent to which GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred naturally over the course of thousands or millions of years and that these historical changes to the Earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since approximately year 1900 is occurring at a faster rate and magnitude than in the past as a result of human activity and industrialization. (Urban Crossroads, 2015c, p. 5)

Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the Earth's atmosphere, but prevent radioactive heat from escaping, thus warming the Earth's atmosphere. These gases that trap heat in the atmosphere are referred to collectively in this EIR as greenhouse gases (GHGs), which are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural GHG effect, the Earth's average temperature would be approximately 61° Fahrenheit (F) cooler than current conditions. (Urban Crossroads, 2015c, pp. 6-7)

It is not possible for an individual project like the proposed Project to generate enough GHG emissions to make a discernible change in global climate. However, the proposed Project may participate in the potential for GCC through its incremental contribution of GHG emissions when considered in combination with all other sources of GHGs. (Urban Crossroads, 2015c, p. 5)

B. *Greenhouse Gases*

Carbon dioxide (CO_2), methane (CH_4), and Nitrous Oxide (N_2O) emissions are the focus of evaluation in this Subsection because these gases are the primary contributors to GCC from development projects. Although other substances such as fluorinated gases also contribute to GCC, sources of fluorinated gases are not well defined and no accepted emissions factors or methodology exist to accurately calculate these gases. (Urban Crossroads, 2015c, p. 7)

Greenhouse gases have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. CO_2 is used as the reference gas for GWP, and thus has a GWP of 1. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4.6-1, *GWP and Atmospheric Life of Select GHGs*. As shown in Table 4.6-1, GWP ranges from 1 for CO_2 to 23,900 for sulfur hexafluoride (SF_6). (Urban Crossroads, 2015c, p. 7)

Table 4.6-1 GWP and Atmospheric Life of Select GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	25
Nitrous Oxide	120	298
HFC-23	264	14,800
HFC-134a	14.6	1,430
HFC-152a	1.5	124
Sulfur Hexafluoride (SF6)	3,200	22,800

Source: Urban Crossroads 2015c, Table 2-2.

Provided below is a description of the various gases that contribute to GCC. This information is provided for context and background, not as a description of Project emissions. For more information about these gases and their associated human health effects, refer to Section 2.4 of *Technical Appendix G* and the reference sources cited therein.

- Water Vapor (H_2O) is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant in the atmosphere because it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The

extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation, thereby allowing less energy to reach the Earth's surface and heat it up. There are no human health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. (Urban Crossroads, 2015c, p. 8)

- Carbon Dioxide (CO_2) is an odorless and colorless GHG that is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Manmade sources include: the burning of coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases CO_2 emissions has increased dramatically. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. (Urban Crossroads, 2015c, p. 8)

- Methane (CH_4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years) compared to other GHGs. Methane has both natural and manmade sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other manmade sources include fossil-fuel combustion and biomass burning. No human health effects are known to occur from atmospheric exposure to methane. (Urban Crossroads, 2015c, pp. 8-9)

- Nitrous Oxide (N_2O) concentrations began to rise in the atmosphere at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). Nitrous oxide is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N_2O is used as an aerosol spray propellant, (e.g., in whipped cream bottles), in potato chip bags to keep chips fresh, and in rocket engines and race cars. N_2O can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction. Also known as laughing gas, N_2O is a colorless GHG that can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause brain damage. (Urban Crossroads, 2015c, p. 9)

- Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs were first synthesized in 1928 and have no natural source. CFCs were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now

remaining steady or declining. However, due to their long atmospheric lifetime, some of the CFCs will remain in the atmosphere for over 100 years. (Urban Crossroads, 2015c, p. 9)

- Hydrofluorocarbons (HFCs) are synthetic, anthropogenic (man-made) chemicals that are used as a substitute for CFCs. Out of all GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order largest to smallest), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23 emissions. HFC-134a emissions are increasing due to its use as a refrigerant. The United States Environmental Protection Agency (U.S. EPA) estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each; and that concentrations of HFC-152a are about 1 ppt. No human health effects are known to result from exposure to HFCs, which are manmade and used for applications such as automobile air conditioners and refrigerants. (Urban Crossroads, 2015c, p. 9)

- Perfluorocarbons (PFCs) are primarily produced for aluminum production and semiconductor manufacture. PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The U.S. EPA estimates that concentrations of CF_4 in the atmosphere are over 70 ppt. No human health effects are known to result from exposure to PFCs. (Urban Crossroads, 2015c, p. 10)

- Sulfur Hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The U.S. Environmental Protection Agency (EPA) indicates that concentrations in the 1990's were about 4 ppt. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. (Urban Crossroads, 2015c, p. 10)

C. Greenhouse Gas Emissions Inventories

1. Global

Worldwide man-made GHG emissions are tracked by the Intergovernmental Panel on Climate Change for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions data for Annex I nations is available through Year 2012. For the Year 2012, the sum of these emissions totaled approximately 28,865,994 gigagrams (Gg) of carbon dioxide equivalent (CO_2e), as shown in Table 4.6-2, *Top GHG Producer Countries and the European Union*. The GHG emissions in more recent years may differ from the inventories presented in Table 4.6-2; however, the data is representative of currently available inventory data. (Urban Crossroads, 2015c, p. 5)

2. United States

As noted in Table 4.6-2, the United States was the second-highest producer of GHG emissions in 2012. The primary GHGs emitted by human activities in the United States was CO_2, representing

approximately 83-percent of the total United States' GHG emissions. Approximately 78-percent of the Unites States' CO_2 emissions result from fossil fuel combustion. (Urban Crossroads, 2015c, p. 6)

3. State of California

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based upon the 2008 GHG inventory data (which is the most recent year for which data is available), California emitted 474 million metric tons (MMT) CO_2e including emissions resulting from imported electrical power. Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the United States (Texas is ranked first). (Urban Crossroads, 2015c, p. 6)

Table 4.6-2 Top GHG Producer Countries and the European Union

Emitting Countries	GHG Emissions (Gg CO2e)
China	10,975,500
United States	6,665,700
European Union (28 member countries)	4,544,224
Russian Federation	2,322,220
India	3,013,770
Japan	1,344,580
Total	**28,865,994**

Gg = gigagram
Urban Crossroads 2015c, Table 2-1

4. Project Site

Table 4.6-3, *Operational Equipment*, summarizes the equipment utilized at the Mine on a daily basis for the baseline operating period, Project operating characteristics, and net new equipment activity. As shown, mining activities during the baseline period result in approximately 20,316 horsepower hours per day. However, during most of the baseline operating period, the Mine was under different ownership, and the equipment utilized during that period is not reflective of the equipment utilized on-site since2014 (refer to EIR Table 3-2 and Table 3-3 for a summary of baseline operational equipment and equipment utilized on-site as of 2014). At the time the Project's Notice of Preparation (NOP) was distributed for public review in June 2015, existing mining operations onsite were estimated to be approximately 25,158 horsepower hours per day (hh/d), representing an approximate 23.8 percent increase as compared to the horsepower hours per day that was were associated with mining operations under previous ownership. Although the Project would not increase the amount of hh/d as compared to the existing operational conditions that existed onsite at the time the Project's NOP was distributed for public review, in an effort to be conservative, the analysis herein compares the Project's hh/d to the hh/d that were in use under previous ownership. Thus, for purposes of analysis herein, it is assumed that equipment used under the proposed Project would require approximately 25,158 horsepower hours per day, reflecting an approximate 23.8 percent increase in horsepower as compared to the baseline condition. (Urban Crossroads, 2015c, pp. 28-29)

Table 4.6-3 Operational Equipment

Baseline Operational Equipment Summary				
Hours/Day	Description	Quantity	Horsepower	Total Horsepower Hours Per Day
2	Skidsteer	1	51	102
6	769C Haul Truck	1	474	2,844
10	980K Wheel Loader	1	406	4,060
10	980H Wheel Loader	1	393	3,930
10	988G Wheel Loader	1	520	5,200
4	D8R Dozer	1	337	1,348
8	Water Truck 4000 Gal	1	354	2,832
Total Baseline Horsepower Hours				**20,316**
Proposed Project Equipment Summary				
Hours/Day	Description	Quantity	Horsepower	Total Horsepower Hours Per Day
4	Skidsteer	1	51	204
8	769C Haul Truck	2	474	7,584
10	980K Wheel Loader	1	406	4,060
10	980H Wheel Loader	1	393	3,930
10	988G Wheel Loader	1	520	5,200
4	D8R Dozer	1	337	1,348
8	Water Truck 4000 Gal	1	354	2,832
Total Project Horsepower Hours				**25,158**
Net New Project Equipment Summary				
Hours/Day	Description	Quantity	Horsepower	Total Horsepower Hours Per Day
2	Skidsteer	1	51	102
2	769C Haul Truck	1	474	948
8	769C Haul Truck	1	474	3,792
Total Net New Project Horsepower Hours				**4,842**

Source: Urban Crossroads 2015c, Table 3-1

D. Potential Effects of Climate Change in California

The California Environmental Protection Agency (CalEPA) published a report titled "Scenarios of Climate Change in California: An Overview" (herein called the "Climate Scenarios report") in February 2006, that is generally instructive about effects of climate change in California. The Climate Scenarios report used a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range (3.0-5.5°F); medium warming range (5.5-8.0°F); and higher warming range (8.0-10.5°F). (CCCC, 2006)

In addition, the California Natural Resources Agency adopted a "California Climate Adaptation Strategy" in 2009. This report details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts and precipitation changes, and responds to the Governor's Executive Order S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts (Cal. NRA, 2009). (CNRA, 2009)

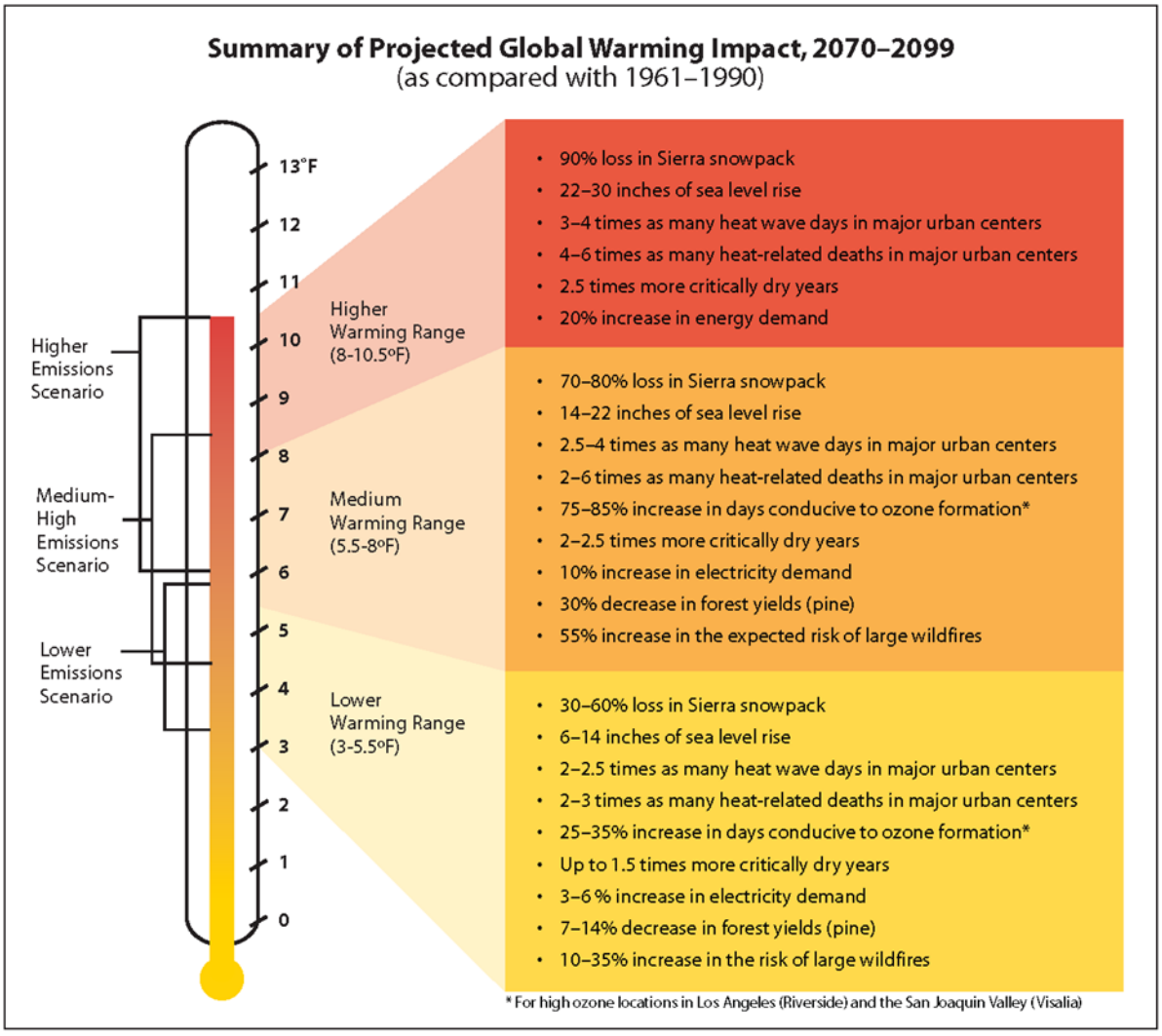
According to these reports, substantial temperature increases arising from increased GHG emissions worldwide could result in a variety of effects to the people, economy, and environment of California, with the severity of the effects depending upon actual future emissions of GHGs and associated degree of warming. Table 4.6-4, *Summary of Projected Global Warming Impact, 2070-2099 (as compared with 1961-1990)*, below presents potential impacts of global warming within California. Climate change impacts in California have the potential to include, but are not limited to, the areas discussed below. For more information, refer to Sections 2.5 and 2.6 of *Technical Appendix G*.

- Human Health Effects. The potential human health effects related directly to GHG emissions (including CO_2, N_2O, and CH_4) from development projects are still being debated in the scientific community. The contribution that these GHGs make to GCC have the potential to cause adverse effects to human health in various ways. Increases in the Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists estimate that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change could cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas. (Urban Crossroads, 2015c, p. 12)

- Water Resources. A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers, and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages. Additionally, if temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 percent to 90 percent. The loss of snowpack could pose challenges to water managers, hamper hydropower generation, and adversely affect winter tourism. The State's water supplies are also at risk from rising sea levels. An influx of salt water could degrade California's estuaries, wetlands, and groundwater aquifers and be a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply. (Urban Crossroads, 2015c, pp. 10-11).

- Agriculture Effects. Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. California farmers could face water shortages. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Faster plant growth could worsen the quantity and quality of yield for some crops such as wine grapes, fruit, and nuts.

Table 4.6-4 Summary of Projected Global Warming Impact, 2070-2099 (as compared with 1961-1990)



Source: Urban Crossroads 2015c, Exhibit 2-A.

Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, there may still be a water shortage for the agricultural industry. In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. (Urban Crossroads, 2015c, p. 11)

- Forest and Landscape Effects. GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the

state. Continued GCC also has the potential to alter natural ecosystems and biological diversity, including a decrease in forest productivity, as a result of increasing temperatures. (Urban Crossroads, 2015c, p. 12)

- Sea Level Effects. Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12 to 14 inches by the year 2100. (Urban Crossroads, 2015c, p. 12)

E. Applicable Regulatory Requirements

Below is an account of the regulatory programs, policies, laws, and regulations that are applicable to GHG emissions and GCC in California. For more information, refer to Section 2.7 of *Technical Appendix G*.

1. International Regulation and the Kyoto Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail GCC. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan currently consists of more than 50 voluntary programs for member nations to adopt. (Urban Crossroads, 2015c, p. 14).

The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced an estimated 5 percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto. (Urban Crossroads, 2015c, p. 15).

2. Federal Regulation and the Clean Air Act

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under § 202(a) of the Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them. (Urban Crossroads, 2015c, p. 15)

Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438

[2007]), however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress. (Urban Crossroads, 2015c, p. 15).

Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the incidental reduction of greenhouse gas emissions. To manage the state's energy needs and promote energy efficiency, Assembly Bill (AB) 1575 created the California Energy Commission (CEC) in 1975. (Urban Crossroads, 2015c, p. 15)

3. Title 24 Energy Standards

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions (2013 Building Energy Efficiency Standards) were adopted in 2012 and became effective on July 1, 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than the previous Building Energy Efficiency Standards for residential construction and 30 percent more efficient than the previous Standards for nonresidential construction. (Urban Crossroads, 2015c, pp. 15-16).

Part 11 of Title 24 is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code. (Urban Crossroads, 2015c, p. 16).

4. California Assembly Bill No. 1493 (AB 1493)

AB 1493 requires CARB to develop and adopt the nation's first greenhouse gas emission standards for automobiles. The Legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in California. Further, the legislature stated that technological solutions to reduce GHG emissions would stimulate the California economy and provide jobs. (Urban Crossroads, 2015c, p. 17).

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 §§ 1900 and 1961 and adoption of § 1961.1 require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016. (Urban Crossroads, 2015c, p. 17).

In December 2004 a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against CARB to prevent enforcement of CCR Title 13 §§ 1900 and 1961 as amended by AB 1493 and CCR Title 13 § 1961.1 (*Central Valley Chrysler-Jeep et al. v. Catherine E. Witherspoon, in her official capacity as Executive Director of the California Air Resources Board, et al.*). The suit, heard in the U.S. District Court for the Eastern District of California, contended that California's implementation of regulations that in effect regulate vehicle fuel economy violates various federal laws, regulations, and policies. In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court Case, *Massachusetts vs. EPA*, the primary issue in question is whether the federal CAA provides authority for U.S. EPA to regulate CO_2 emissions. In April 2007, the U.S. Supreme Court ruled in Massachusetts' favor, holding that GHGs are air pollutants under the CAA. On December 11, 2007, the judge in the Central Valley Chrysler-Jeep case rejected each plaintiff's arguments and ruled in California's favor. On December 19, 2007, the U.S. EPA denied California's waiver request. California filed a petition with the Ninth Circuit Court of Appeals challenging U.S. EPA's denial on January 2, 2008. (Urban Crossroads, 2015c, p. 17).

The Obama administration subsequently directed the U.S. EPA to re-examine their decision. On May 19, 2009, challenging parties, automakers, the State of California, and the federal government reached an agreement on a series of actions that would resolve these current and potential future disputes over the standards through model year 2016. In summary, the U.S. EPA and the U.S. Department of Transportation agreed to adopt a federal program to reduce GHGs and improve fuel economy, respectively, from passenger vehicles in order to achieve equivalent or greater greenhouse gas benefits as the AB 1493 regulations for the 2012–2016 model years. Manufacturers agreed to ultimately drop current and forego similar future legal challenges, including challenging a waiver grant, which occurred on June 30, 2009. The State of California committed to (1) revise its standards to allow manufacturers to demonstrate compliance with the fleet-average GHG emission standard by "pooling" California and specified State vehicle sales; (2) revise its standards for 2012-2016 model year vehicles so that compliance with U.S. EPA-adopted GHG standards would also comply with California's standards; and (3) revise its standards, as necessary, to allow manufacturers to use emissions data from the federal Corporate Average Fuel Economy (CAFE) program to demonstrate compliance with the AB 1493 regulations. Both of these programs are aimed at light-duty auto and light-duty trucks. (Urban Crossroads, 2015c, pp. 17-18).

5. Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snow pack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, Executive Order S-3-05 established

total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 1990 level by 2020, and to 80-percent below the 1990 level by 2050. The Executive Order directed the Secretary of the California Environmental Protection Agency to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary also is required to submit biannual reports to the Governor and state Legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California's resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with Executive Order S-3-05, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs. (Urban Crossroads, 2015c, p. 18)

6. California Assembly Bill 32 (AB 32)

In September 2006, Governor Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction is to be accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32. (Urban Crossroads, 2015c, p. 18).

AB 32 required that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also included guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions. (Urban Crossroads, 2015c, pp. 18-19).

In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 million metric tons (MMTs) (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent). Accordingly, 427 MMTs of CO_2 equivalent was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 MMT for 2000 and 532 MMT for 2010. "Business as usual" conditions (without the reductions to be implemented by CARB regulations) for 2020 were projected to be 596 MMTs. (Urban Crossroads, 2015c, p. 19).

In December 2007, CARB approved a regulation for mandatory reporting and verification of GHG emissions for major sources. This regulation covered major stationary sources such as cement plans, oil refineries, electric generating facilities/providers, and co-generation facilities, which comprise 94 percent of the point source CO_2 emissions in the State. (Urban Crossroads, 2015c, p. 19).

On December 11, 2008, CARB adopted a scoping plan to reduce GHG emissions to 1990 levels. Table 4.6-5, *Scoping Plan GHG Reduction Measures Towards 2020 Target*, shows the proposed

reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the Year 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 million metric tons of carbon dioxide equivalent ($MMTCO_2e$), which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 $MMTCO_2e$ (or approximately 1.2 percent of the GHG reduction target). (Urban Crossroads, 2015c, p. 19)

On May 22, 2014, CARB approved the first update to the Scoping Plan. The update recalculates 1990 GHG emissions using new global warming potentials (GWPs) identified in the Intergovernmental Panel on Climate Change Fourth Assessment Report released in 2007. Using the new GWPs, the 1990 emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan was adjusted to 431 metric tons of carbon dioxide equivalent ($MTCO_2e$). Based on the revised 2020 emissions, achieving the 1990 emissions level in 2020 would require a reduction of 78 MTCO2e. (Urban Crossroads, 2015c, p. 21)

7. California Senate Bill No. 1368 (SB 1368)

In 2006, the State Legislature adopted Senate Bill (SB) 1368 (SB 1368), which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission (CPUC) to adopt a greenhouse gas emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Due to the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. (Urban Crossroads, 2015c, p. 21). Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out of state producers that cannot satisfy the EPS standard required by SB 1368. (Urban Crossroads, 2015c, p. 21).

8. Senate Bill 97 (SB 97)

Pursuant to the direction of SB 97, the Governor's Office of Planning and Research released preliminary draft CEQA Guideline amendments for GHG emissions on January 8, 2009, and the Natural Resources Agency adopted the Guideline amendments and they became effective on March 18, 2010. Of note, the CEQA Guidelines state that a CEQA lead agency shall have discretion to determine whether to use a quantitative model or methodology, or in the alternative, rely on a qualitative analysis or performance based standards. (Urban Crossroads, 2015c, p. 22).

Table 4.6-5 Scoping Plan GHG Reduction Measures Towards 2020 Target

Recommended Reduction Measures	Reductions Counted toward 2020 Target of 169 MMT CO_2e	Percentage of Statewide 2020 Target
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets[1]	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
Total Cap and Trade Program Reductions	146.7	87%
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
Total Uncapped Sources/Sectors Reductions	27.3	16%
Total Reductions Counted toward 2020 Target	174	100%
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined[2]	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
Total Other Recommended Measures – Not Counted toward 2020 Target	42.8	NA

MMTons CO_2e: million metric tons of CO_2e

1 Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

2 According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO_2e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

Urban Crossroads 2015c, Table 2-3

CEQA emphasizes that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines § 15130[f]). Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions. The CEQA Guideline amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate, or estimate the amount of GHG emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. (Urban Crossroads, 2015c, pp. 22-23).

9. Executive Order S-01-07

On January 18, 2007, California Governor Schwarzenegger, through Executive Order S-01-07, mandated a statewide goal to reduce the carbon intensity of California's transportation fuel by at least 10 percent by 2020. The order also requires that a California specific Low Carbon Fuel Standard be established for transportation fuels. (Urban Crossroads, 2015c, p. 23).

10. Senate Bills 1078 and 107 and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33 percent renewable power by 2020. (Urban Crossroads, 2015c, p. 23).

11. Senate Bill 375 (SB 375)

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs did not meet the GHG reduction targets, transportation projects are not eligible for funding programmed after January 1, 2012. (Urban Crossroads, 2015c, pp. 23-24).

12. Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued Executive Order B-30-15, which sets a goal to reduce GHG emissions in California to 40 percent below 1990 levels by 2030. The BEO sets an ambitious new Statewide GHG emissions reduction target of 40 percent below 1990 levels by 2030 as a "mid-term" benchmark needed to achieve the 80 percent below 1990 levels by 2020. It

should be noted however that this target has not been formally enacted by the Legislature or even CARB. As such, the BEO does not appear to constitute a new regulation or requirement adopted to implement a statewide, regional, or local plan for the reduction of GHG emissions within the context of CEQA. Furthermore, the City of Lake Elsinore has an adopted CAP that governs specific GHG reduction targets for new development within the City. At this time, no further analysis is necessary or required by CEQA as it pertains to Executive Order B-30-15. (Urban Crossroads, 2015c, p. 24).

13. South Coast Air Quality Management District Recommendations for Significance Thresholds

In April 2008, the South Coast Air Quality Management District (SCAQMD) convened a "GHG CEQA Significance Threshold Working Group," to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents. The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA. (Urban Crossroads, 2015c, p. 25)

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects—residential; non-residential; industrial; etc. In December 2008, staff presented the SCAQMD Governing Board with a significance threshold for industrial projects where it is the lead agency. This threshold uses a tiered approach to determine a project's significance, with 10,000 $MTCO_2e$ as a screening numerical threshold for industrial projects. (Urban Crossroads, 2015c, p. 25)

14. City of Lake Elsinore General Plan Sustainable Element

The City of Lake Elsinore has created additional strategies within its General Plan to counter the adverse impacts of global warming and climate change. The following measures would reduce greenhouse gas emissions from all activities within the City boundaries to support the State's efforts under AB-32 and to mitigate the impacts of climate change. (Urban Crossroads, 2015c, pp. 24-25)

- 14.1 By 2020, the City will reduce greenhouse gas emissions from within its boundaries to 1990 levels consistent with AB 32.

- 14.2 Measures shall be established that aim to reduce emissions generated from City uses, community uses (community actions) and new development (City discretionary actions).

- 14.3 The City shall strive to increase public awareness of climate change and climate protection challenges.

- 14.4 The City will participate in the Sustainable Communities Strategy/Regional Blueprint Planning effort to ensure that local plans are consistent with the Regional Plan.

Additionally, the City has prepared and adopted a Climate Action Plan (discussed below) that provides a baseline greenhouse gas emissions inventory for municipal facilities and operations and community-wide activities and establishes measures to meet State-wide reduction goals.

15. City of Lake Elsinore Climate Action Plan

The City of Lake Elsinore Climate Action Plan (CAP) is a comprehensive document to ensure that the City reduces community-wide GHG emissions consistent with AB 32 and Executive Order S- 3-05. The CAP was prepared concurrently with the City's General Plan and EIR to serve as the City's primary information and policy document for GHG emissions reductions in order to analyze and reduce potentially significant GHG emissions resulting from development under the City of Lake Elsinore General Plan. (Urban Crossroads, 2015c, p. 25)

The CAP includes a "Project-Level CAP Consistency Worksheet" to determine if further analysis is required. It should be noted that the "Project-Level CAP Consistency Worksheet" is generally applicable to traditional land use development projects and does not apply to projects such as mining projects. As such, pursuant to the CAP documentation, further analysis is required to determine if a less-than-significant impact would occur. To that end, this analysis makes use of available numeric significance thresholds adopted by other agencies (i.e. SCAQMD's threshold of 10,000 $MTCO_2e$ per year for industrial projects, as described below) in determining significance of GHG emissions. (Urban Crossroads, 2015c, p. 25)

4.6.3 METHODOLOGY FOR ESTIMATING GREENHOUSE GAS EMISSIONS

CEQA Guidelines §15064.4(b)(1) states that a CEQA lead agency may use a model or methodology to quantify GHG emissions associated with a project. On October 2, 2013, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version (v2013.2.2.) of the California Emissions Estimator Model (CalEEMod). The purpose of this model is to estimate air quality and GHG emissions from direct and indirect sources and quantify applicable air quality and GHG reductions achieved from mitigation measures. As such, the October 2013 (v2013.2.2.) CalEEMod was used to estimate Project-related emissions to determine construction and operational air quality impacts (Urban Crossroads, 2015c, pp. 27-28). Output from the model runs for both Project-related construction and operational activity are provided in Appendix 3.1 of *Technical Appendix G*.

A full life-cycle analysis (LCA) is not included in this analysis due to the lack of available guidance on LCA methodology at this time. Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the Project development, infrastructure, and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time a LCA would be extremely speculative and is not legally required by CEQA. (Urban Crossroads, 2015c, p. 28).

Operational activities associated with the proposed Project would result in emissions of CO_2, CH_4, and N_2O from the following primary sources: On-Site Equipment and Mobile Source (Passenger Cars and Truck Traffic) Emissions. The Project would not result in an increase in the amount of natural gas or electricity usage on-site. It should be noted that natural gas is utilized in conjunction with the asphalt batch plant operations; however, asphalt batch operations would not increase under the proposed Project on a daily or annual basis, as compared to existing conditions. Although under long-term operating conditions the Project would result in a net increase in the total duration of asphalt batch operations on-site due to the increased amount of aggregate reserves that would be made available by the Project and the proposed expiration date of the Project's Reclamation Plan,

there would be no net change in the daily or annual emissions from the site associated with natural gas or electricity usage. (Urban Crossroads, 2015c, p. 28)

4.6.4 BASIS FOR DETERMINING SIGNIFICANCE

The CEQA Guidelines indicate that a Project would result in a significant impact on climate change if a Project were to:

a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

b. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The above-listed thresholds are derived directly from Section VII of Appendix G to the CEQA Guidelines and address typical adverse effects associated with greenhouse gas emissions. (OPR, 2009)

A numerical threshold for determining the significance of greenhouse gas emissions in the South Coast Air Basin (Basin) has not been established by the SCAQMD for projects where it is not the lead agency. As an interim threshold based on guidance provided in the CAPCOA CEQA and Climate Change handbook, the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD using this method is 10,000 $MTCO_2e$ per year for industrial projects (which is the development category that is most applicable to Project operations). This threshold is based on the review of 711 CEQA projects. This threshold has also been adopted by the SCAQMD for industrial projects where it is the lead agency. This threshold is utilized herein to determine if emissions of greenhouse gases from this project would be significant. Use of the industrial threshold is most appropriate since the majority of emissions associated with the Project are a result of on-site stationary source equipment and operating activity, which is consistent with the intent in development of the SCAQMD's industrial threshold. (Urban Crossroads, 2015c, p. 27; CAPCOA, 2008, pp. 46-47)

4.6.5 IMPACT ANALYSIS

Threshold a. Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

A. Mobile Source Emissions

As shown in the Project's traffic study (*Technical Appendix J* to this EIR) the Project would generate 140 net new daily truck trips above the historical baseline and 4 net new employee trips above the historical baseline. (Urban Crossroads, 2015c, p. 30)

To determine annual metric tons per year, the daily emissions calculated by CalEEMod were multiplied by 171 days which is the number of days at 5,000 TPD processing that it would take to hit the maximum annual tonnage limit of 856,560. The total amount of net new Project related GHG emissions, which comprise approximately 35 percent of the total operational emissions that would be

generated under the Project, would total 1,222.47 $MMTCO_2e$ as shown on Table 4.6-6, *Net New Project Greenhouse Gas Emissions*. The net new Project-related GHG emissions would not exceed the SCAQMD's interim threshold of 10,000 $MTCO_2e$ per year. It should be noted that even when the GHGs from baseline operations and proposed Project operations, the Mine would produce less than 10,000 $MTCO_2e$/yr. Therefore, impacts associated with GHG emissions would be less than significant. (Urban Crossroads, 2015c, p. 31)

Table 4.6-6 Net New Project Greenhouse Gas Emissions

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	Total CO_2E
Operational Equipment	207.64	0.06	--	208.95
Mobile Sources	1,008.71	0.01	--	1,013.52
Total CO_2E (All Sources)	1,222.47			
SCAQMD Threshold	**10,000**			
Threshold Exceeded?	**NO**			

Urban Crossroads 2015c, Table 3-2

Threshold b. Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As noted above in Subsection 4.6.1.E.15, the "Project-Level CAP Consistency Worksheet" included in the City's CAP is generally applicable to traditional land use development projects and does not apply to projects such as mining projects. As such, pursuant to the CAP documentation, further analysis is required to determine if a less-than-significant impact would occur. As indicated above in Table 4.6-6, the Project's GHG emissions would total 1,222.47 $MMTCO_2e$. The net new Project-related GHG emissions would not exceed the SCAQMD's interim threshold of 10,000 $MTCO_2e$ per year. Accordingly, because the Project's GHG emissions would not be significant, the Project would not result in a conflict with the City's CAP.

Additionally, CARB's Scoping Plan identifies strategies to reduce California's greenhouse gas emissions in support of AB32. Many of the strategies identified in the Scoping Plan are not applicable at the Project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the Project, such as energy efficiency. Finally, while some measures are not directly applicable, the Project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows (Urban Crossroads, 2015c, pp. 31-32):

1) **California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions**. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.

2) **California Light-Duty Vehicle Greenhouse Gas Standards.** Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.

3) **Energy Efficiency.** Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).

4) **Renewables Portfolio Standards.** Achieve 332 percent renewable energy mix statewide.

5) **Low Carbon Fuel Standard.** Develop and adopt the Low Carbon Fuel Standard.

6) **Regional Transportation-Related Greenhouse Gas Targets.** Develop regional greenhouse gas emissions reduction targets for passenger vehicles.

7) **Vehicle Efficiency Measures.** Implement light-duty vehicle efficiency measures.

8) **Goods Movement.** Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.

9) **Million Solar Roofs Program.** Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.

10) **Medium- and Heavy-Duty Vehicles.** Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010.5 Future, yet to be determined improvements, includes hybridization of MD and HD trucks.

11) **Industrial Emissions.** Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.

12) **High Speed Rail.** Support implementation of a high speed rail system.

13) **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.

14) **High Global Warming Potential Gases.** Adopt measures to reduce high warming global potential gases.

15) **Recycling and Waste.** Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.

16) **Sustainable Forests**. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/year.

17) **Water.** Continue efficiency programs and use cleaner energy sources to move and treat water.

18) **Agriculture**. In the near-term, encourage investment in manure digesters and at the five-year. Scoping Plan update determine if the program should be made mandatory by the year 2020.

Table 4.6-7, *Scoping Plan Consistency Summary*, summarizes the Project's consistency with the State Scoping Plan. As shown in Table 4.6-7, the Project would not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories through energy efficiency, water conservation, recycling, and landscaping. Thus, the Project would have a less-than-significant impact regarding conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

4.6.6 CUMULATIVE IMPACT ANALYSIS

GCC occurs as the result of global emissions of GHGs. An individual project such as the proposed Project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. The CEQA Guidelines also emphasize that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines §15130[f]).

The Project's net new greenhouse gas emissions of 1,222.47 would not exceed the SCAQMD's threshold of 10,000 $MTCO_2e$ per year. As discussed above under the analysis of Thresholds a. and b., the Project would not result in a cumulatively considerable emission of GHGs or a cumulatively considerable conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

4.6.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold 1: Less-than-Significant Impact. As shown on Table 4.6-6, the Project would result in approximately 1,222.47 $MTCO_2e$ per year; the proposed Project would not exceed the SCAQMD's interim threshold of 10,000 $MTCO_2e$ per year. Therefore, a less-than-significant impact would occur. (Urban Crossroads, 2015c, p. 31)

Threshold 2: Less-than-Significant Impact. Project GHG emissions would not result in or cause a potentially significant impact on the environment. To this end, the analysis demonstrates that the Project is consistent with, or otherwise not in conflict with, recommended measures and actions in the CARB December 2008 Scoping Plan (CARB Scoping Plan). The CARB Scoping Plan establishes strategies and measures to implement in order to achieve the GHG reductions goals set forth in the Global Warming Solutions Act of 2006 (AB 32). (Urban Crossroads, 2015c, p. 1)

4.6.8 MITIGATION

Impacts would be less than significant; therefore, no mitigation is required.

Table 4.6-7 Scoping Plan Consistency Summary

Action	Supporting Measures[6]	Consistency
Cap-and-Trade Program	--	Not Applicable. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect light industrial projects.
Light-Duty Vehicle Standards	T-1	Not Applicable. This is a statewide measure establishing vehicle emissions standards.
Energy Efficiency	E-1	Not Applicable. The project is not proposing the construction of any new building structures.
	E-2	
	CR-1	
	CR-2	
Renewables Portfolio Standard	E-3	Not Applicable. Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	Not Applicable. Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related Greenhouse Gas Targets	T-3	Not Applicable. This is a statewide measure and is not within the purview of this Project.
Vehicle Efficiency Measures	T-4	Not Applicable. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5	Not applicable. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are yet to be implemented and will be voluntary, the proposed Project would not interfere with their implementation.
	T-6	
Million Solar Roofs (MSR) Program	E-4	Not applicable. The Project is not changing any of the existing energy demand requirements and is not constructing any physical structures.

Table 4.6-7 Scoping Plan Consistency Summary (Continued)

Action	Supporting Measures[6]	Consistency
Medium- & Heavy-Duty Vehicles	T-7	Consistent. MD and HD trucks and trailers working from the proposed Project will be subject to aerodynamic and hybridization requirements as established by ARB; no feature of the project would interfere with implementation of these requirements and programs.
	T-8	
Industrial Emissions	I-1	Not Applicable. These measures are applicable to large industrial facilities (> 500,000 MTCOE2/YR) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not Applicable. Supports increased mobility choice.
Green Building Strategy	GB-1	Not Applicable. The project is not proposing the construction of any new building structures.
High Global Warming Potential Gases	H-1	Not Applicable. The proposed warehouses are not substantial sources of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Not Applicable. The project is not proposing the construction of any new building structures.
	RW-2	
	RW-3	
Sustainable Forests	F-1	Not Applicable. The project is not proposing the construction of any new building structures.
Water	W-1	Not Applicable. The project is not proposing the construction of any new building structures.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not Applicable. The project is not an agricultural use.

Source: Urban Crossroads 2015c, Table 3-3