3.6 Greenhouse Gases and Climate Change

3.6.1 Introduction

This section describes existing conditions for climate change impacts related to greenhouse gas (GHG) emissions from the Project, and maximum anticipated GHG impacts from the Proposed Action and alternatives. This section summarizes the analysis presented in the *Air Quality Study for Proposed South Quarry Project in Lucerne Valley, California* (Yorke Engineering 2016), which is included in this EIS/EIR as Appendix B.

3.6.2 Applicable Laws, Regulations, and Standards

3.6.2.1 Federal

GHGs are regulated under the federal Clean Air Act. The EPA has issued the following findings and rules with regard to GHGs that allow their regulation.

Clean Air Act Findings
On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **"Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)--in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare."

These findings do not themselves impose any requirements on industry or other entities. They have served as a prerequisite to finalizing the EPA's proposed greenhouse gas emission standards for light-duty vehicles.

Mandatory GHG Reporting Rule
In 2099, in response to the fiscal year 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110–161), EPA signed a rule that requires mandatory reporting of GHG emissions from large sources in the United States effective December 29, 2009. This rule requires that suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons (MT) or more per year of GHG emissions submit annual reports to EPA. The gases covered by the proposed rule are CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and other fluorinated gases including nitrogen trifluoride (NF_3) and hydrofluorinated ethers (HFE).

Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the United States. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020. In May 2009, President Obama announced plans to increase CAFE standards to require light-duty vehicles to meet an average fuel economy of 35.5 miles per gallon by 2016. On April 1, 2010, the U.S. Department of Transportation and the EPA established historic new federal rules that set the first-ever national greenhouse gas emissions standards and will significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. The standards set a requirement to meet an average fuel economy of 34.1 miles per gallon by 2016.

3.6.2.2 State

Assembly Bill 32

In September 2006, Governor Schwarzenegger signed California Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, into law. AB 32 directs the California Air Resources Board (CARB) to do the following:

- Make publicly available a list of discrete early action GHG emission reduction measures that can be implemented prior to the adoption of the statewide GHG limit and the measures required to achieve compliance with the statewide limit.
- Make publicly available a GHG inventory for the year 1990 and determine target levels for 2020.
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures.
- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020, to become operative on January 1, 2012, at the latest. The emission reduction measures may include direct emission reduction measures, alternative compliance mechanisms, and potential monetary and non-monetary incentives that reduce GHG emissions from any sources or categories of sources that CARB finds necessary to achieve the statewide GHG emissions limit.
- Monitor compliance with and enforce any emission reduction measure adopted pursuant to AB 32.

AB 32 provides for the regulation of GHGs within California. CARB has adopted regulations applicable to GHGs, including additional regulations that would require statewide reporting and a cap and trade program for GHG emissions.

AB 1493

AB 1493 (Pavley) enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHG emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB apply to 2009 and later model year vehicles. CARB estimated that the regulation would reduce climate change emissions from light duty passenger vehicle fleet by an estimated 18

percent in 2020 and by 27 percent in 2030. In 2005, the CARB requested a waiver from EPA to enforce the regulation, as required under the Clean Air Act. The waiver was granted on June 30, 2009, and the State of California is implementing regulations for GHG emission standards for vehicles. It is expected that the AB 1493 regulations will reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs.

Executive Order S-01-07

Executive Order S-01-07 was enacted by the Governor on January 18, 2007. Essentially, the order mandates the following: 1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and 2) that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California. It is assumed that the effects of the LCFS would be a 10 percent reduction in GHG emissions from fuel use by 2020. On April 23, 2009, CARB adopted regulations to implement the LCFS.

On December 29, 2011, the United States District Court for the Eastern District of California issued an injunction preliminarily enjoining the CARB from enforcing the LCFS adopted for the state of California. On April 23, 2012, the United States Ninth Circuit Court of Appeals granted a motion to stay the injunction issued by the lower court. As a result, CARB is continuing to enforce the existing LCFS. Therefore, reliance on the LCFS for the purpose of determining the Project's GHG emissions with state reduction measures is appropriate.

3.6.2.3 Local

The County of San Bernardino adopted a *Greenhouse Gas Emissions Reduction Plan* in 2011 that presents a comprehensive set of actions to reduce the County's internal and external GHG emissions to 15 percent below current levels by 2020. In that plan, the County identified cement production plants as the primary source of stationary GHG emissions within the County's jurisdiction. The County also identified mining operations as a source of GHG emissions.

3.6.3 Affected Environment

3.6.3.1 General Principles and Existing Conditions

Global climate change (GCC) refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, CO_2, CH_4 and N_2O, which are known as GHGs. These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. Gases that trap heat in the atmosphere are often called greenhouse gases, analogous to a greenhouse. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Without these natural GHGs, the Earth's temperature would be about 61º Fahrenheit cooler. Emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere.

GHGs have been at the center of a widely contested political, economic, and scientific debate surrounding GCC. Although the conceptual existence of GCC is generally accepted, the extent

to which GHGs contribute to it remains a source of debate. The State of California has been at the forefront of developing solutions to address GCC. GCC refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. GCC may result from natural factors, natural processes, and/or human activities that change the composition of the atmosphere and alter the surface and features of land.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The IPCC concluded that a stabilization of GHGs at 400 to 450 ppm CO_2 equivalent concentration is required to keep global mean warming below 3.6º Fahrenheit (2º Celsius), which is assumed to be necessary to avoid dangerous climate change.

State law defines greenhouse gases as any of the following compounds: CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 (California Health and Safety Code Section 38505(g).) CO_2, followed by CH_4 and N_2O, are the most common GHGs that result from human activity.

Sources and Global Warming Potentials of GHGs

The State of California GHG Inventory performed by CARB, compiled statewide human-caused GHG emissions and sinks. It includes estimates for CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs. The current inventory covers the years 2000-2014, and is summarized in Table 3.6-1.

Table 3.6-1
State of California GHG Emissions by Sector

Sector	Total 2000 Emissions (MMT CO_2e)[1]	Percent of Total 2000 Emissions	Total 2014 Emissions (MMT CO_2e)[2]	Percent of Total 2014 Emissions
Electricity Generation (in state)	59.19	12.7%	51.81	4.9%
Electricity Generation (imports)	45.99	9.9%	36.56	8.3%
Transportation	178.50	38.3%	163.02	36.9%
Industrial	104.40	22.4%	104.22	23.1%
Commercial	14.07	3.0%	21.63	4.9%
Residential	30.76	6.6%	27.40	6.2%
Agriculture & Forestry	31.80	6.8%	36.11	8.2%
Not Specified	1.20	<1%	0.79	<1%
Total	465.9	100%	441.5	100%

Notes: CO_2e = carbon monoxide equivalent; MMT = million metric tons. Totals may not add due to rounding.
Source: CARB 2016b

Data sources used to calculate this GHG inventory include California and federal agencies, international organizations, and industry associations. The calculation methodologies are consistent with guidance from the Intergovernmental Panel on Climate Change (IPCC). The 1990 emissions level is the sum total of sources and sinks from all sectors and categories in the inventory. The inventory is divided into seven broad sectors and categories in the inventory. These sectors include: Agriculture; Commercial; Electricity Generation; Forestry; Industrial; Residential; and Transportation. When accounting for GHGs, all types of GHG emissions are expressed in terms of CO_2 equivalents (CO_2e) and are typically quantified in MT or millions of metric tons (MMT).

GHGs have varying global warming potential (GWP). According to the EPA, the GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas". The reference gas for GWP is CO_2; therefore, CO_2 has a GWP of 1. The other main greenhouse gases that have been attributed to human activity include CH_4, which has a GWP of 25, and N_2O, which has a GWP of 298. Table 3.6-2 presents the GWP and atmospheric lifetimes of common GHGs.

Table 3.6-2
Global Warming Potentials and Atmospheric Lifetime of Common GHGs

GHG	Formula	100-Year Global Warming Potential	Atmospheric Lifetime (Years)
Carbon Dioxide	CO_2	1	Variable
Methane	CH_4	25	12
Nitrous Oxide	N_2O	298	114
Sulfur Hexafluoride	SF_6	22,800	3,200

Source: CARB 2016

Human-caused sources of CO_2 include combustion of fossil fuels (coal, oil, natural gas, gasoline and wood). Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. Concentrations of CO_2 have increased in the atmosphere since the industrial revolution.

CH_4 is the main component of natural gas and also arises naturally from anaerobic decay of organic matter. Human-caused sources of natural gas include landfills, fermentation of manure and cattle farming. Human-caused sources of N_2O include combustion of fossil fuels and industrial processes such as nylon production and production of nitric acid. Other GHGs are present in trace amounts in the atmosphere and are generated from various industrial or other uses.

3.6.4 Environmental Consequence

3.6.4.1 Impact Analysis Approach

CEQA Significance Criteria

Appendix G of the State CEQA Guidelines suggests that lead agencies evaluate the potential

significance of impacts on GCC by considering whether the project would:

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

The MDAQMD has adopted CEQA significance thresholds, which can be found in its CEQA and Federal Conformity Guidelines, dated August 2016. MDAQMD's CEQA GHG significance threshold is 100,000 metric tons/year (MT/year) of CO_2e (Yorke 2016). The more conservative GHG emissions threshold of 10,000 MT/year of CO_2e from the SCAQMD will be applied to the project.

NEPA Analysis Approach

There is no adopted, quantitative threshold for determining significance of climate change impacts under NEPA. On August 1, 2016, the Council of Environmental Quality (CEQ) issued final guidance to assist federal agencies in their consideration of the effects of GHG emissions and climate change [Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (the Final Guidance)]. The Final Guidance recognizes that the totality of climate change impacts is not attributable to single action, but is exacerbated by a series of actions, including actions and decisions by federal agencies. As such, a NEPA document should do more than state that the emissions from the proposed federal action represent only a small fraction of global GHG emissions. The Final Guidance recommends that agencies quantify the direct and indirect GHG emissions of a project using available data and quantification tools. The Final Guidance "does not establish any particular quantity of GHG emissions as 'significantly' affecting the quality of the human environment," but agencies should "focus on significant potential effects and conduct an analysis that is proportionate to the environmental consequences of the proposed action." The CEQ's guidance confirms that federal agencies should continue to apply basic NEPA principles as set forth in CEQ Regulations (40 CFR §1502.16). NEPA regulations require that the federal agency consider both context and intensity, in addition to setting out ten factors that should be taken into account to determine whether impacts are significant (40 CFR §1508.27).

USFS guidance regarding NEPA and climate change encourages quantitative or qualitative analysis where there is a cause-and-effect relationship between the proposed project and GHG emissions or the carbon cycle. Such analysis would be meaningful to a reasoned choice among alternatives (Climate Change Considerations in Project Level NEPA Analysis, January 13, 2009). The USFS guidance reviews the ten intensity factors that, together with context, are used to determine the significance of impacts under NEPA. When applying these factors to federal action involving a site-specific project, the USFS guidance explains that significance usually depends on the effects in the locale, rather than the world as a whole. For this reason, actions potentially having effects on climate change that are not discernable at the global scale are unlikely to be determined significant for climate change impacts. The guidance states that "[b]ecause the context of individual projects and their effects cannot be meaningfully evaluated globally to inform individual project decisions, it is not possible and it is not expected that climate change effects can be found to be 'significant' under NEPA and therefore require EIS preparation." However, in cases where a state has adopted a GHG threshold by law or regulation,

the USFS guidance states that the environmental analysis needs to address the project's relationship to that threshold.

The Proposed Action would not ordinarily trigger detailed NEPA review of climate change impacts under the USFS climate change guidance alone. However, because local agencies have adopted local significance thresholds and the GHG emissions were quantified for the purposes of CEQA, the USFS climate change guidance states that the emissions quantification and analysis is also relevant to its review of the project. Therefore, if the project's climate change impact is determined to be less than significant under CEQA, it will be considered less than significant under NEPA as well.

3.6.4.2 Alternative 1 – Proposed Action

Direct and Indirect Impacts

Alternative 1 – Proposed Action is defined as the shifting of a portion of the production from the West Pit to the South Quarry. No increase in overall mine throughput (sum of throughputs from the West Pit and South Quarry) is proposed. Because the impacts of construction and operation of the West Pit were fully analyzed in the EIR certified in 2004 (County of San Bernardino 2004), the Air Quality Study (Yorke 2016) compares the impacts of Alternative 1 – Proposed Action to the impacts previously evaluated for the West Pit in the 2004 EIR. Alternative 1 – Proposed Action would consist of a construction phase (2017 and 2018), followed by an operational phase (2019 and beyond). The only GHGs emissions associated with Alternative 1 – Proposed Action would come from the trucks used in the construction and operational phases. As previously discussed, Alternative 1 – Proposed Action would have a significant impact on climate change if it would generate more than 10,000 MT/year of CO_2e. Table 3.6-3 presents GHG emission calculations for the truck activity during the construction and operational phases.

Construction

The construction phase baseline consists of operation in the East and West pits, while the with-Project condition consists of the ongoing operation of the East and West pits, which remain unchanged, and the construction associated with the South Quarry. Alternative 1 – Proposed Action's GHG emissions (difference between baseline and with-Project) for the construction phase consist of the construction GHG emissions associated with the South Quarry project elements. To evaluate the contribution from construction on the annualized emissions for the lifetime of Alternative 1 – Proposed Action, construction emissions were amortized over a 30-year period. GHG emissions for the truck activity during the construction phase would be below the 10,000 MT/year of CO_2e threshold; therefore, impacts would be less than significant (Table 3.6-3).

Operations

For the operational phase, calculations for baseline and post-project emissions for each of the years 2019 through 2022 are shown, with 2022 being the worst-case year. Comparing the sum of the amortized construction GHG emissions and the operational GHG emissions to the significance threshold of 10,000 MT CO2e/yr for industrial projects shows that for the worst-case year (2022), the sum is below the significance threshold. Operational impacts would be less than significant.

Table 3.6-3
Proposed Action GHG Emissions Increase, Construction, and Operations

Parameter	2017	2018	2019	2020	2021	2022
	Construction Post-Proposed Action					
Off-road diesel vehicles for construction Y1-Y2 (HP-hr/yr)	1,426,600	1,429,600	-	-	-	-
GHG emissions for construction Y1-Y2 (MT/yr)	721	709	-	-	-	-
	Amortized GHG Emissions Increase					
GHG emissions, amortized based on total for 2 years (MT/yr)	47.7	47.7	47.7	47.7	47.7	47.7
			Operational Baseline			
Haul and water truck usage (HP-hr/yr)	-	-	4,656,161	4,656,161	4,591,642	4,591,642
Other trucks (HP-hr/yr)	-	-	3,236,250	3,236,250	3,236,250	3,236,250
Total HP-hr/yr	-	-	7,892,411	7,892,411	7,827,892	7,827,892
Total GHG emissions (MT/yr)	-	-	4,969	4,969	4,928	4,928
			Operational Post-Proposed Action			
Haul and water truck usage (HP-hr/yr)	-	-	6,351,007	6,440,553	6,528,270	8,314,258
Other trucks, operational (HP-hr/yr)	-	-	3,236,250	3,236,250	3,236,250	3,236,250
Off-road diesel vehicles, operational (HP-hr/yr)	-	-	9,587,257	9,676,803	9,764,520	11,550,508
GHG emissions (MT/yr)			6,036	6,092	6,148	7,272
			Operational Proposed Action GHG Increase			
GHG emissions (MT/yr)	-	-	1,067	1,123	1,219	2,344
	Amortized Construction and Operational Proposed Action GHG Emissions Increase					
GHG emissions (MT/yr)	47.7	47.7	1,115	1,171	1,267	2,391
Significance Threshold (MT/yr)	10,000	10,000	10,000	10,000	10,000	10,000
Above Significance Threshold	No	No	No	No	No	No

Source: Yorke 2016

The County of San Bernardino has adopted a *Greenhouse Gas Reduction Plan* that is designed to reduce emissions of GHGs by 15 percent by 2020 to meet the requirements of AB 32. However, specific requirements for mining projects to reduce emissions of GHGs have not been adopted and so Alternative 1 – Proposed Action would not conflict with the County's *Greenhouse Gas Reduction Plan*. As noted above, Alternative 1 – Proposed Action's emissions would be below the quantitative significance threshold of 10,000 MT of CO_2e. Impacts would be less than significant.

Cumulative Impacts

GCC is inherently a cumulative issue, because no single project would be expected to result in a measureable change in global climate. The cumulative nature of GCC is considered by agencies in adopting significance thresholds, and adopted significance thresholds represents levels at which a project is considered cumulatively significant. As discussed above, Alternative 1 – Proposed Action's GHG emissions for both construction and operations would be below the GHG significance threshold, resulting in a less than significant impact. Therefore, Alternative 1 – Proposed Action would not significantly contribute to cumulative GHG impacts.

Mitigation Measures

Impacts would be less than significant therefore no mitigation measures are required.

Residual Impacts after Mitigation

Impacts would be less than significant.

3.6.4.3 Alternative 2 – Partial Implementation

Direct and Indirect Impacts

Alternative 2 – Partial Implementation would only implement Phases 1A, 1B, and 2. The sequence of mining in these phases would be the same as described in Alternative 1 – Proposed Action. Alternative 2 – Partial Implementation would result in a smaller quarry footprint (approximately 20 acres smaller) compared to Alternative 1 – Proposed Action because mining of the north slope, which is proposed in Phases 3 and 4, would not occur. Mining in the South Quarry would last 40 years rather than 120 years. As a result, reclamation and revegetation at the South Quarry site would be completed nearly 80 years sooner.

Due to the a smaller footprint and shorter operating time period, direct and indirect GHG emissions from construction and operation of Alternative 2 – Partial Implementation would be less than Alternative 1 – Proposed Action's GHG emissions. As discussed in Section 3.6.4.2, construction and operation emissions from Alternative 1 – Proposed Action were found to be below the 10,000 MT/year of CO_2e emissions threshold. Therefore, Alternative 2 – Partial Implementation GHG emissions would also be below the 10,000 MT/year of CO_2e emissions threshold and would not conflict with the County's *Greenhouse Gas Reduction Plan*. Impacts would be less than significant.

With this alternative, the existing Cushenbury Cement Plant would continue to operate after year 40. The ore reserves in the West Pit, when blended with high grade ore, are sufficient to feed the cement plant for approximately 120 years. Therefore, it is assumed that higher grade limestone would be trucked to the plant from elsewhere in the region from year 41 to year 120. Approximately 52,000 on-road truck trips per year (150 truck trips per day) would be required. Such transport would increase vehicle trips on public roadways; thereby resulting in GHG emissions related to truck traffic that would be greater than Alternative 1 – Proposed Action. Depending on the location of the off-site quarry, impacts could be significant.

Cumulative Impacts

GCC is inherently a cumulative issue, because no single project would be expected to result in a measureable change in global climate. The cumulative nature of GCC is considered by agencies in adopting significance thresholds, and adopted significance thresholds represents levels at which a project is considered cumulatively significant. As discussed above, GHG emissions that would result from Alternative 2 – Partial Implementation through year 40 would be below GHG significance thresholds resulting in a less than significant impact. Therefore, Alternative 2 – Partial Implementation would not significantly contribute to cumulative GHG impacts.

Emissions from transporting higher grade ore from offsite to the Cushenbury Cement Plant after year 40 are unknown, but are likely to be greater than with Alternative 1 – Proposed Action. Depending on the location selected, cumulative impacts may occur after year 40.

Mitigation Measures

Impacts would be less than significant; therefore no mitigation measures are required.

Residual Impacts after Mitigation

Less than significant impacts would occur and no mitigation is required. However, the existing Cushenbury Cement Plant would continue to operate after year 40. Therefore, it is assumed that higher grade limestone would be trucked to the plant from elsewhere in the region from year 41 to year 120. Such transport would increase vehicle trips on public roadways by 52,000 on-road truck trips per year (150 truck trips per day); thereby increasing GHG emissions. The severity of these residual impacts is unknown.

3.6.4.4 Alternative 3 – No Action/No Project

Direct and Indirect Impacts

With Alternative 3 – No Action/No Project, MCC would not develop the limestone deposit in the South Quarry under the current Plan of Operations. With this alternative GHG emissions associated with South Quarry operations described for Alternative 1 – Proposed Action or Alternative 2 – Partial Implementation would not occur because the construction and operation components of the Project would not occur. However, the existing Cushenbury Cement Plant would continue to operate. The ore reserves in the West Pit, when blended with high grade ore, are sufficient to feed the cement plant for approximately 120 years. Therefore, it is assumed that higher grade limestone would be trucked to the plant from elsewhere in the region during that 120-year period. Approximately 52,000 on-road truck trips per year (150 truck trips per day) would be required. Such transport would increase vehicle trips on public roadways; thereby resulting in traffic and air quality impacts related to truck traffic that would be greater than Alternative 1 – Proposed Action or Alternative 2 – Partial Implementation. Depending on the location of the off-site quarry, impacts could be significant.

Cumulative Impacts

No direct or indirect impacts from mining on the South Quarry site would occur therefore there would be no cumulative impacts. Emissions from transporting higher grade ore from offsite to the Cushenbury Cement Plant are unknown, but are likely to be greater than with Alternative 1 –

Proposed Action or Alternative 2 – Partial Implementation. Depending on the location selected, cumulative impacts may occur.

Mitigation Measures

No impacts would occur therefore mitigation measures are not required.

Residual Impacts after Mitigation

With Alternative 3 – No Action/No Project, MCC would not develop the limestone deposit in the South Quarry under the current Plan of Operations. However, the existing Cushenbury Cement Plant would continue to operate. The ore reserve in the East and West Pits, when blended with high grade ore – are sufficient to feed the cement plant for approximately 120 years. Therefore, it is assumed that higher grade limestone would be trucked to the plant from elsewhere in the region during that 120-year period. Such transport would increase vehicle trips on public roadways by approximately 150 on-road truck trips per day; thereby increasing GHG emissions impacts. The severity of these residual impacts is unknown.

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