

## 4.9 Greenhouse Gas Emissions

This section evaluates the potential for the Proposed Project to generate greenhouse gas (GHG) emissions, either directly or indirectly, within the Proposed Project area. Potential air quality impacts are discussed in Section 4.2, *Air Quality*. The section begins with a discussion of the scientific background on GHG emissions management, and the existing environmental setting related to GHG emissions. Following that discussion, the section identifies applicable significance thresholds, assesses potential impacts associated with GHG emissions from decommissioning activities and their significance, and recommends measures to avoid or substantially reduce any effects found to be potentially significant.

**Scoping Comments Received.** During the scoping comment period for the EIR, written and verbal comments were received from agencies, organizations, and the public. These comments identified various substantive issues and concerns relevant to the EIR analysis. Appendix B includes all comments received during the scoping comment period. The following list provides a summary of scoping comments applicable to this issue area and considered in preparing this section:

- Consider the Proposed Project’s effects on climate change including analysis of GHG emissions.
- Quantify GHG emissions from all Project sources (direct and indirect), present significance thresholds, and determine the significance of impacts.
- Design and operate the Project to minimize GHG emissions including use of high-efficiency equipment, reducing haul trips, using a truck fleet with the newest/cleanest possible vehicles including zero to near-zero emission vehicles, using locomotives and marine vessels with the cleanest available engine emissions technology including operational parameters to maximize fuel efficiency, and consider on-site renewable energy generation.

### 4.9.1 Environmental Setting

#### Introduction

GHGs are defined as any gas that absorbs infrared radiation in the atmosphere. GHGs include, but are not limited to, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>). These GHGs lead to the trapping and buildup of heat in the atmosphere near the Earth’s surface, commonly known as the greenhouse effect. There is overwhelming scientific consensus that human-related emissions of GHGs above natural levels have contributed significantly to global climate change by increasing the concentrations of the gases responsible for the greenhouse effect, which causes atmospheric warming above natural conditions.

Because GHG emissions are known to increase atmospheric concentrations of GHGs, and increased GHG concentrations in the atmosphere exacerbate global warming, a project that adds to the atmospheric load of GHGs adds to the problem. To avoid disruptive and potentially catastrophic climate change, annual GHG emissions must be substantially reduced. The impact to climate change due to the increase in ambient concentrations of GHGs differs from criteria pollutants (see Section 4.2, *Air Quality*), in that GHG emissions from a specific project do not cause direct adverse localized human health effects. Rather, the direct environmental effect of

GHG emissions is the cumulative effect of an overall increase in global temperatures, which in turn has numerous indirect effects on the environment and humans.

The Intergovernmental Panel on Climate Change (IPCC) completed a Fifth Assessment Report (AR5) in 2014 that contains information on the state of scientific, technical, and socio-economic knowledge about climate change. The AR5 includes working group reports on basics of the science, potential impacts and vulnerability, and mitigation strategies. Global climate change has caused physical, social, and economic impacts in California, such as land surface and ocean warming, decreasing snow and ice, rising sea levels, increased frequency and intensity of droughts, storms, and floods, and increased rates of coastal erosion. In its Climate Change 2014 Synthesis Report, which is part of the AR5, the IPCC (2014) notes:

*Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems...warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, and sea level has risen.*

The potential of a gas or aerosol to trap heat in the atmosphere is called global warming potential (GWP). The GWP of different GHGs varies because they absorb different amounts of heat. Carbon dioxide (CO<sub>2</sub>), the most abundant GHG, is used to relate the amount of heat absorbed to the amount of the gas emissions; this is referred to as CO<sub>2</sub> equivalent (CO<sub>2</sub>e). CO<sub>2</sub>e is the amount of GHG emitted multiplied by the GWP. The GWP of CO<sub>2</sub>, as the reference GHG, is 1. Methane has a GWP of 25; therefore, 1 pound of methane equates to 25 pounds of CO<sub>2</sub>e. Table 4.9-1 shows a range of gases with their associated GWP, their estimated lifetime in the atmosphere, and the GWP over a 100-year timeframe (per federal and state reporting requirements).

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**Table 4.9-1. Global Warming Potential (GWP) of Various Greenhouse Gases**

<b>Greenhouse Gas</b>	<b>Life in Atmosphere (years)</b>	<b>100-year GWP (average)</b>
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	120	298
Hydrofluorocarbons	1.5-264	12-14,800
Sulfur Hexafluoride	3,200	22,800

Source: US Environmental Protection Agency (USEPA), 2015.

In California, the California Air Resources Board (CARB) is the primary agency responsible for providing information on implementing the GHG reductions required by the State pursuant to Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, and its 2016 update, Senate Bill (SB) 32. Together, these laws require CARB to develop regulations that reduce GHG emissions to 1990 levels by 2020 and to 40 percent below 1990 levels by 2030. CARB developed and approved its first Scoping Plan in 2008 which described its approach to meeting the AB 32 goal.

After enactment of SB 32, CARB completed the 2017 Climate Change Scoping Plan Update (Scoping Plan) (CARB, 2017) to provide the strategy for achieving California's 2030 GHG emissions

target. In addition to the Scoping Plan, CARB maintains an online inventory of GHG emissions in California. This inventory is an important companion to the Scoping Plan because it documents the historical emission trends and progress toward meeting the 2020 and 2030 targets, which are 431 million metric tons (MMT) of CO<sub>2</sub>e and 260 MMTCO<sub>2</sub>e, respectively.

The 2017 Scoping Plan includes a modeled reference scenario, or “business as usual” projection to monitor the State’s emission reduction progress, which estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. To meet the 2030 target, the Scoping Plan recommends a range of actions (CARB, 2017), including:

- 50 percent Renewable Portfolio Standard (RPS).
- Doubling building energy efficiency.
- More clean, renewable fuels.
- Cleaner, zero or near-zero emissions cars, trucks, and buses.
- Walkable/bikeable communities with transit.
- Cleaner freight and goods movement.
- Reduced super-pollutants from dairies, landfills, and refrigerants.
- Continue Cap and Trade program for transportation, industry, natural gas, and electricity.
- Invest in communities to reduce emissions.

The CARB 2022 Scoping Plan Update assesses progress towards achieving the SB 32 2030 target, while laying out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update discusses the ways in which a CEQA analysis may support climate action and the role of local government action. Examples of GHG reduction mechanisms that may be recommended as mitigation appear in Section 4 of Appendix D of the CARB 2022 Scoping Plan Update (CARB, 2022b).

### **Federal**

In the most recent national GHG inventory, the USEPA estimated that in 2020, United States GHG emissions were 5,981.4 MMTCO<sub>2</sub>e. Within the United States, fossil fuel combustion accounted for 92.1 percent of CO<sub>2</sub> emissions in 2020; these emissions include the transportation use of fossil fuels and electric power generation. Other contributing types of sources include agriculture, waste, and industrial processes and product use (USEPA, 2022).

### **State**

Despite growing population and gross domestic product in California, gross GHG emissions continue to decrease. The most recent California GHG inventory was published in 2022 and contains data up to 2020 (CARB, 2022a). In the 2022 California GHG inventory, CARB estimated that GHG emissions from statewide activities totaled 369.2 MMTCO<sub>2</sub>e, or approximately 6 percent of the national total. The progress indicates that California achieved the 2020 GHG emission target of 431 MMTCO<sub>2</sub>e established by AB 32.

Even though California is aggressively moving to reduce its annual GHG emissions, it is already experiencing the effects of GHG-related climate change, which is a relevant aspect of the environmental setting. A 2018 report entitled *Indicators of Climate Change in California* (Office of

Environmental Health Hazard Assessment [OEHHA], 2018) concludes that the changes occurring in California are largely consistent with those observed globally. These climate change indicators show the following:

- Increasing daily annual average temperatures in the State
- More frequent extreme events, including wildfires and heat waves
- Declining runoff volumes due to a diminished snowpack
- Declining number of “winter chill hours” crucial for high-value fruit and nut crops
- Movement of flora and fauna at higher elevations and different times and locations

### **Local**

The County of San Luis Obispo (County) initially adopted the EnergyWise Plan in 2011, which included a community-wide inventory of GHG emissions from activities and sources in the unincorporated areas of the County. The inventory calculated municipal and community-wide emissions caused by activities in 2006, including transportation, waste, agriculture, energy, and aircraft-related activities for the unincorporated areas (San Luis Obispo, 2011). An update in 2016 indicated that overall GHG emissions from both government operations and community-wide sources in the unincorporated areas of the County decreased by approximately seven percent between 2006 and 2013, from 1,884,358 (2006) to 1,757,387 MTCO<sub>2</sub>e in 2013 (San Luis Obispo, 2016).

### **Existing Site Conditions**

The DCPD contributes to community GHG emissions as an active site of employment and by using conventional fossil fuels to operate equipment onsite. DCPD employs approximately 1,157 to 1,400 workers (see Section 2.2.3.1) that commute to the site. These mobile sources of GHG emissions are part of the baseline community-wide GHG emissions. Additionally, existing equipment at the DCPD site includes an auxiliary boiler, diesel-powered generators, and emergency pump engines that support baseline DCPD operations. Based on the activity of workers commuting to the site and records of fuel used by existing equipment at the DCPD site, the DCPD site creates current baseline GHG emissions of approximately 5,341 MTCO<sub>2</sub>e per year.

## **4.9.2 Regulatory Setting**

Appendix C summarizes relevant federal and state laws, regulations, and policies related to GHG emissions. Additional details on major state programs and local requirements related to the Project are discussed below.

### **Mandatory Reporting of Greenhouse Gas Emissions**

The CARB Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, or mandatory reporting rule (MRR), applies to electric power distribution companies and to fossil fuel electricity generating facilities with a nameplate capacity equal or greater than one megawatt capacity (17 CCR 95100 to 95163). As an Electric Power Entity and an owner of fossil fuel electric power generation sources, the MRR requires PG&E to separately report GHG emissions associated with the electricity delivered to its end-use customers (Section 95111) and emissions from PG&E’s owned electricity generation facilities (Section 95112). The MRR captures the GHG emissions of

the total electricity produced by PG&E's power plants and electricity imported by PG&E for end use by customers. The operations of DCPD are categorically excluded from the MRR reporting (Section 95101) because it is powered by nuclear energy and existing on-site stationary combustion emissions are under 10,000 MTCO<sub>2</sub>e per year.

### **Cap-and-Trade Program**

The California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (Cap-and-Trade Program) was initially approved by CARB in 2011 (17 CCR 95801 to 96022). The Cap-and-Trade Program applies to covered entities that fall within certain source categories, including first deliverers of electricity (such as fossil fuel power plants), natural gas suppliers, and electrical distribution utilities, such as PG&E.

Covered entities must hold compliance instruments sufficient to cover the entity's actual GHG emissions, as evidenced through the MRR requirements. This means that PG&E, as an owner of fossil fuel power plants and as a natural gas and electrical distribution utility, bears separate GHG compliance obligations for delivering electricity to the grid from its power plants and for making natural gas and electricity deliveries to end-users that are not otherwise covered entities in the Cap-and-Trade Program.

The compliance instruments that must be submitted by covered entities may be in the form of either an allowance or an offset for every ton of GHG emitted. The use of compliance offset credits is limited to a small percentage (4 or 6 percent) of each entity's total obligation, and at least one half of the compliance offsets submitted must also provide "direct environmental benefits" to California (defined in 17 CCR Sec 95989). Compliance offset credits are distinct and separate from voluntary-market registry offset credits that are excluded from use in the Cap-and-Trade Program.

The Cap-and-Trade Program allows CARB to approve third-party offset project registries and protocols to facilitate the listing, reporting, and verification of GHG-reductions achieved by offset projects. This helps to create a supply of registry offset credits. Registry offset credits must be converted by CARB into compliance offset credits before they can become eligible for use in the Cap-and-Trade Program.

### **County of San Luis Obispo**

The Conservation and Open Space Element of the San Luis Obispo County General Plan establishes goals focused on reducing community-wide GHG emissions by 2020 by reducing vehicle-miles traveled, increasing energy efficiency, and increasing renewable energy use in the County. To delineate the strategies, the Board of Supervisors adopted the EnergyWise Plan in 2011 (San Luis Obispo, 2011), which identified how the County would achieve a GHG reduction target of 15 percent below baseline by 2020. The EnergyWise Plan is the County's framework for climate action. An update in 2016 summarized progress towards implementing measures and illustrated that overall GHG emissions from both government operations and community-wide sources in the unincorporated areas of the County decreased by approximately seven percent between 2006 and 2013 (San Luis Obispo, 2016). The EnergyWise Plan is not a qualified Climate Action Plan under SB 32.

The goals of the EnergyWise Plan (San Luis Obispo, 2016) fall into categories for government operations and for community-wide action, as follows:

- G1. Reduce energy use in existing County facilities 20 percent by 2020.
- G2. Increase the use of renewable energy sources in County facilities to account for 10 percent of total energy used.
- G3. Reduce the amount of waste generated at County facilities and increase the County's waste diversion rate to 80 percent by 2020.
- G4. Reduce water use in County facilities 20 percent by 2020.
- G5. Reduce emissions from the County's vehicle fleet by using alternative fuels and decreasing vehicle miles traveled.
- G6. Provide additional opportunities for employees to utilize alternative transportation options and reduce commute lengths.
- C1. Address future energy needs through increased conservation and efficiency in all sectors.
- C2. Increase the production of renewable energy from small-scale and commercial-scale renewable energy installations to account for 10 percent of total local energy use by 2020.
- C3. Reduce methane emissions from disposed waste by achieving as close to zero waste as possible through increased diversion rates, methane capture and recovery, and other strategies.
- C4. Reduce emissions from potable water use by 20 percent from per capita baseline levels by 2020 by prioritizing water conservation before development of new water resources.
- C5. Reduce transportation emissions through improvements in vehicle fuel efficiency, expansion of non-auto modes of travel, and implementation of smart growth land use policies.
- C6. Reduce emissions in agricultural practices through water conservation, upgrade of equipment technology, and use of best management practices.

### **San Luis Obispo County Air Pollution Control District**

Many local air pollution control agencies in California have proposed numerical or other GHG significance criteria. The San Luis Obispo County Air Pollution Control District (SLOCAPCD), which has local regulatory authority over the air pollutant emissions, released the CEQA Air Quality Handbook (SLOCAPCD Handbook) originally in 1997, with updates in 2003, 2009, and 2012. The SLOCAPCD Handbook describes GHG emissions thresholds of significance for San Luis Obispo County (SLOCAPCD, 2012).

The SLOCAPCD staff identified a strategy for minimizing GHG emissions for marine vessels. Large vessels, 300 gross registered tons or larger, are encouraged to participate in the regional voluntary Vessel Speed Reduction program. Through the Vessel Speed Reduction program, agencies and partners can request that container and car carrier companies slow down their vessels to a speed of 10 knots or less from May 15 to November 15. The National Oceanic and Atmospheric Administration (NOAA), with support from the United States Coast Guard, oversees this program to reduce the risk of fatal ship strikes to endangered blue, fin, and humpback whales within and

near the region’s national marine sanctuaries (NOAA, 2022). The program also aims to reduce fuel use by marine vessels and regional greenhouse gas emissions and improve regional air quality and human health outcomes.

### **City of Pismo Beach**

The City of Pismo Beach Climate Action Plan (2014) includes a GHG emissions reduction target to reduce the community wide GHG emissions to 10 percent below 2005 levels by 2020 (Pismo Beach, 2014).

### **County of Santa Barbara**

Santa Barbara County developed the Santa Barbara Energy and Climate Action Plan in 2015 in response to AB32 – Global Warming Solutions Act, SB 375-Sustainable Communities and Climate Protection Act, and SB 97- California Environmental Quality Act, with a goal to reach 15 percent below 2007 levels by 2020 (Santa Barbara, 2015).

Santa Barbara County also prepared a Sustainability Action Plan in 2020, which provides baseline emissions inventory to be incorporated into the County of Santa Barbara’s Climate Action Strategy in the future (Santa Barbara, 2020).

As described in Section 1.3.3.2, *Surface Transportation Board*, railroads are under the jurisdiction of the federal government such that local agencies are preempted from exercising jurisdiction over railyards (e.g., SMVR-SB).

## **4.9.3 Significance Criteria**

The impacts caused by GHG emissions are, by their nature, cumulative impacts. Emissions from all GHG sources contribute to the total amount of GHG in the atmosphere, and the effects of GHG emissions are not limited to the localities where they are generated.

Per State CEQA Guidelines Appendix G, the Project would be found to cause a significant environmental impact if it would:

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

### **San Luis Obispo County Air Pollution Control District**

The SLOCAPCD CEQA Air Quality Handbook includes thresholds of significance for construction and operations GHG emissions. For construction projects, the GHG emissions must be quantified and amortized over the life of the project, then added to the operational emissions. The SLOCAPCD’s 2021 Interim CEQA GHG Guidance recommends use of 10,000 MTCO<sub>2e</sub> per year as a threshold for stationary sources (industrial projects) in San Luis Obispo County, when the project is required to obtain air quality permits from SLOCAPCD. For CEQA evaluations of other types of projects, such as residential and commercial projects, the SLOCAPCD recommends that lead agencies consider use of a threshold of “no net increase” relative to baseline conditions (SLOCAPCD, 2021).

Mitigation defined in the SLOCAPCD CEQA Air Quality Handbook and 2021 Interim CEQA GHG Guidance should be applied if the project causes potentially significant levels of GHG emissions (SLOCAPCD, 2012; SLOCAPCD, 2021). The SLOCAPCD Handbook includes site design methods and efficiency improvements for land use developments that influence long-term transportation demand and energy consumption by County residents and workers; however, the Proposed Project decommissioning activities do not involve developing land for residential and commercial projects. The 2021 interim guidance identifies a hierarchy of on-site and feasible off-site mitigation suggestions, including GHG offset projects, for lead agency consideration.

### **Santa Barbara County Air Pollution Control District**

The SBCAPCD recommends finding that a project will not have a significant impact on the climate, if the project will:

- Emit less than the screening significance level of 10,000 MTCO<sub>2</sub>e per year, or
- Show compliance with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions [sources subject to the AB 32 Cap-and-Trade requirements pursuant to Title 17, Article 5 (California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms) would meet the criteria], or
- Show consistency with the AB 32 Scoping Plan GHG emission reduction goals by reducing project emissions 15.3 percent below business as usual.

If a project's emissions exceed any of the above thresholds, the SBCAPCD recommends applying mitigation measures (SBCAPCD, 2015).

### **County of Santa Barbara**

The County of Santa Barbara subjects all industrial stationary-source projects to a numeric, mass-rate threshold of 1,000 MTCO<sub>2</sub>e per year to determine if GHG emissions from an individual project of stationary sources could constitute a significant cumulative impact. Annual GHG emissions that are equivalent to or exceed the threshold are determined to have a significant cumulative impact on global climate change unless mitigated (Santa Barbara, 2021).

## **4.9.4 Environmental Impact Analysis and Mitigation**

**Impact GHG-1: Generate GHG emissions that may have a significant impact on the environment (Class II: Less than Significant with Mitigation).**

The Proposed Project would generate GHG emissions during decommissioning and dismantlement activities. The sources of GHG emissions directly related to the Proposed Project include off-road equipment, on-road vehicles, rail locomotives, and marine vessels used in the process of dismantling, decontaminating, and removing the DCPP facility after final shutdown.

The baseline and environmental setting for this analysis includes the DCPP in an "operating" status. The basis for this EIR is that PG&E will retire DCPP and transition DCPP into a "decommissioning" status. The retirement plans approved by the California Public Utilities Commission in January 2018 include procuring replacement power supplies from cost-effective, GHG-free



portfolio of energy efficient renewables and energy storage projects, as described in EIR Section 1.2.1, *DCPP License Expiration and Retirement*.

Because decommissioning would be a result of expiration of existing licenses to operate and shutdown of the DCPD reactors, this analysis focuses on the GHG emissions of the decommissioning activities themselves and does not address the effects of procuring replacement power.

The Proposed Project's GHG emissions include direct and indirect emissions. Direct emissions include GHG emissions generated from equipment and vehicles during decommissioning. The Proposed Project includes decommissioning and remediation of the site after plant shutdown. Because of the uncertain future use of the site beyond PG&E's proposal to apply for a new or amended CSLC lease and sublet (or other arrangement) the Marina to a third party for permitting and reuse, the nature of long-term operation and operational-phase emissions associated with any other potential development of the site after completion of the Proposed Project (see Section 8.0, *Potential Site Reuse Concepts*) are not reasonably foreseeable.

Indirect GHG emissions sources can take many forms. Some of these forms include increase or decrease in electricity or water use, loss of natural CO<sub>2</sub> uptake from developing formerly vegetated areas, material recycling, etc.

### **Phase 1**

Phase 1 GHG emissions include those caused by construction equipment and transportation via truck, rail, and barge. For GHG emissions that by nature have a global impact, the emissions quantification includes activities within the Proposed Project area, including the railyards, and transportation along routes to access out-of-state disposal site destinations. Therefore, all foreseeable GHG emissions are totaled together regardless of where the emissions occurred.

Phase 1 activities together with Phase 2 comprise the total Proposed Project GHG emissions. Total GHG emissions would occur at variable annual rates over the eight years of Phase 1 activity (2024-2031), then would diminish during the eight years of Phase 2 activity (2032-2039).

Table 4.9-2 summarizes the GHG emissions that would be caused by Phase 1 activities, including on-site decommissioning activities at DCPD, site modifications at the railyard, and waste transportation via either of the SMVR railyard and along the anticipated haul routes to the different disposal destinations.

### **Phase 2**

Table 4.9-3 summarizes the GHG emissions that would be caused by Phase 2 remediation and restoration activities with those of long-term Marina operations (see Future Actions, below), including construction equipment related to site remediation and restoration, as well as waste transportation along haul routes.

Phase 2 emissions would occur at much lower annual rates than during Phase 1 because Phase 1 includes the bulk of demolition and transportation of waste from DCPD, and Phase 2 would be limited to the restoration and landscaping of the site following demolition, including Discharge Structure removal and restoration.

**Table 4.9-2. Phase 1 (2024-2031) GHG Emissions**

Proposed Project	Location of Emissions	GHG Emissions (MTCO <sub>2</sub> e)
DCPP Onsite Decommissioning	San Luis Obispo County Air Pollution Control District (SLOCAPCD)	65,770
Waste Transportation		3,868
SMVRR Activities	Santa Barbara County Air Pollution Control District (SBCAPCD)	7,904
Waste Transportation		116
Waste Transportation	San Joaquin Valley Air Pollution Control District (SJVAPCD)	296
Waste Transportation	South Coast Air Quality Management District (SCAQMD)	437
Waste Transportation	Ventura County Air Pollution Control District (VCAPCD)	51
Waste Transportation	Mojave Desert Air Quality Management District (MDAQMD)	563
Waste Transportation and Rock and Gravel Fill	International	12,740
<b>Total Phase 1 Emissions</b>	---	<b>91,744 MTCO<sub>2</sub>e</b>
Maximum Yearly Emissions Rate	---	10,402 MTCO <sub>2</sub> e per year

Source: EIR Appendix D, Phase 1 AQ/GHG Summary, Table 2.1.

**Table 4.9-3. Phase 2 (2032-2039) GHG Emissions Overall**

Proposed Project	GHG Emissions
Total Phase 2 Emissions	7,698 MTCO <sub>2</sub> e
Operational Emissions	316 MTCO <sub>2</sub> e per year
Maximum Yearly Emissions	1,586 MTCO <sub>2</sub> e per year

Source: EIR Appendix D, Phase 2 AQ/GHG Summary, based on PG&E, 2021.

### **Post-Decommissioning Operations**

**New Facility Operations.** Following Phase 2, operational activities at the DCPD site would include long-term management of the GTCC Waste Storage Facility, and operation of the Security Building, indoor Firing Range, and Storage Buildings. Emissions estimates for these operational activities are summarized in Table 4.9-3 (details appear in Appendix D, Phase 2 AQ/GHG Summary). These post-decommissioning activities would not generate emissions at levels that could exceed current baseline emissions of 5,341 MTCO<sub>2</sub>e per year. Relative to DCPD site baseline activities, post-decommissioning use of the DCPD site would cause no net increase in GHG emissions. The post-decommissioning activities would not generate GHG emissions at a level that would have a potentially significant impact on the environment (Class III).

**Future Actions.** Marina improvement and operations would be completed by a third party who would be required to obtain necessary land use and building permits from the County as well as a new or amended lease from CSLC. The Breakwaters would remain in place and the Marina would be used for small vessels to be launched into the Intake Cove. An estimate of GHG emissions associated with Marina improvements and operations is included in the results for

Phase 2 calculations. These activities would not generate emissions at levels that could exceed the current baseline emissions of 5,341 MTCO<sub>2</sub>e per year. As a result, these future actions would not generate GHG emissions at a level that would have a potentially significant impact on the environment (Class III).

### Overall Project GHG Emissions and Mitigation

Phase 1 and Phase 2 activities overall would result in Project GHG emissions rates ranging up to 10,402 MTCO<sub>2</sub>e per year. This level of GHG emissions would exceed the current GHG emissions of the DCPP site in the baseline conditions. This level would also exceed SLOCAPCD recommended threshold of 10,000 MTCO<sub>2</sub>e per year for stationary sources (industrial projects) in San Luis Obispo County and the Santa Barbara County threshold of 1,000 MTCO<sub>2</sub>e per year.

The impact to global climate change is, by definition, cumulative. Because an overall increase in GHG emissions would occur relative to baseline conditions, the Proposed Project would generate GHG emissions at a level that would have a potentially significant impact on the environment, before considering mitigation. Additionally, the Project GHG emissions prior to mitigation would result in a cumulatively considerable contribution to the cumulative impact of global climate change.

The GHG emissions estimates include the effects of Applicant Commitments (ACs) detailed in Table 2-12 which are part of the Proposed Project. However, to achieve “no net increase” of GHG emissions relative to baseline conditions and to demonstrate that Project GHG emissions would be fully (100 percent) offset at a 1-to-1 (1:1) ratio, mitigation would need to occur in amounts that would vary from year to year, up to 10,402 MTCO<sub>2</sub>e per year for the direct and indirect GHG emissions that make up the Proposed Project’s contribution to the cumulative climate change impact.

MM GHG-1 (*Reduce GHG Emissions or Surrender Offset Credits*) is recommended to reduce or offset Project-related GHG emissions to avoid a significant impact on the environment as follows:

- Avoid onsite GHG emissions created by improving the efficiency of operations or avoiding on-site use of diesel fuel, gasoline, and other fossil fuels; for example, by electrification of equipment; or
- Cause GHG reductions or carbon sequestration to occur off site, as represented by local GHG reduction or carbon sequestration projects or offset credits. Local GHG reduction or carbon sequestration projects in San Luis Obispo County and Santa Barbara County should be given first preference. The other four counties of California’s Central Coast air basins (Ventura, Monterey, San Benito, and Santa Cruz counties) should be given second preference. The remaining GHG emission reductions needed could be secured by purchasing and retiring offset credits from CARB-approved offset project registries, Climate Forward Forecast Mitigation Units, or similar GHG reduction/carbon sequestration supplies that are consistent with requirements specified in the State CEQA Guidelines, and case law. Examples of off-site GHG mitigation that appear in Section 4.1.2 of Appendix D of the CARB 2022 Scoping Plan Update (CARB, 2022b) include: local urban forestry; local building retrofit programs; offsite electric vehicle chargers; and public transit subsidies.

MM GHG-1 requires PG&E to reduce or offset GHG emissions annually and to annually report the steps taken and local GHG reductions achieved, credits surrendered, or any GHG offset project sponsored by PG&E. Successful implementation of the mitigation would need to be demonstrated in an initial GHG Reduction and Reporting Plan with subsequent annual reporting for continued agency oversight. With mitigation, the rates of GHG emissions during Phase 1 and Phase 2 of the Proposed Project could feasibly be reduced or offset to a level that would not result in a significant impact on the environment (Class II).

#### **Mitigation Measure for Impact GHG-1.**

**GHG-1 Reduce GHG Emissions or Surrender Offset Credits.** The Applicant or its designee shall reduce or offset annual incremental greenhouse gas (GHG) emissions from Project-related sources. The incremental GHG emissions are those GHG emissions resulting from decommissioning activities, including transportation, during Phase 1 and Phase 2 of the Project. These incremental emissions are estimated to be less than or equal to 10,402 MTCO<sub>2</sub>e per year.

The Applicant or its designee shall prepare and implement a GHG Reduction and Reporting Plan that describes how annual GHG emissions could be reduced with local projects and offsets. The Plan shall include provisions for and outline of an annual report to the County that summarizes the emission reduction measures implemented, quantifies the Project-related estimated GHGs emissions for the year, and demonstrates the quantity of metric tons of local GHG reductions/carbon sequestrations secured and voluntary-market registry offset credits surrendered. Each annual report shall reconcile the actual emissions of the previous year with the mitigation quantity, in terms of MTCO<sub>2</sub>e. The standard of performance for this mitigation is to reduce or offset GHG emissions at a quantity that equals or exceeds the emissions of Phase 1 and Phase 2 of the Project during any year. The Applicant or its designee may demonstrate that lower levels of GHG mitigation are needed during certain years of low activity.

Onsite GHG reductions and local GHG reduction/carbon sequestration projects should be exhausted to the extent feasible prior to surrendering credits from offsite projects. If local projects will provide offsite mitigation, first preference should be given to projects in San Luis Obispo and Santa Barbara Counties and second preference to projects in the other four counties of California's Central Coast air basins (Ventura, Monterey, San Benito, and Santa Cruz counties). Implementing the required amount of any of the following types of emission reductions shall be an acceptable means of mitigation:

- GHG reductions generated or carbon sequestrations within San Luis Obispo and Santa Barbara Counties first and then in the other four Central Coast counties by implementing a GHG reduction project consistent with a methodology or accounting protocol that is equal to or more rigorous than CARB protocol requirements under 17 CCR 95972. The protocol for achieving reductions must determine the extent to which GHG emission reductions and GHG removal enhancements are achieved by the GHG reduction project and must establish a GHG reduction project baseline and demonstrate that the reduction of GHG emissions is real, permanent,

quantifiable, verifiable, enforceable, and additional. For the purposes of this mitigation measure, the definitions of 17 CCR 95802(a) shall apply. Note that enforceable, as defined in 17 CCR 95802(a), is specific to CARB’s Cap-and-Trade regulatory program, where CARB holds enforcement authority. This mitigation measure would generate GHG reductions outside of CARB enforcement authority. Therefore, enforceable is modified to mean in this context that the GHG reduction project generating the GHG offset must be owned by a single entity and must be backed by a legal instrument or contract that defines exclusive ownership.

- GHG reductions from voluntary-market registry offset credits listed with and verified by: (1) one of the following CARB-approved Offset Project Registries: American Carbon Registry (ACR); Climate Action Reserve (CAR); or Verra, formerly Verified Carbon Standard. “Offset Project Registry” has the same definition as that set forth in Section 95802 of Title 17 of the California Code of Regulations (17 CCR 95802); (2) Climate Forward; or (3) GHG reduction/carbon sequestration supplies that are consistent with requirements specified in the State CEQA Guidelines and case law. Offset credits should be selected based on the preference hierarchy found in SLO County APCD’s 2021 Interim GHG Guidance or the 2022 CARB Scoping Plan Update Appendix D Section 4.1.

*Plan Requirements and Timing.* The GHG reductions achieved, credits surrendered, or any GHG offset project sponsored by the Applicant or its designee, must be supported by a demonstration to the County that any local projects are acceptable to San Luis Obispo County APCD and that any offsets are consistent with requirements specified in the State CEQA Guidelines and case law. The GHG Reduction and Reporting Plan shall be submitted to the County Department of Planning and Building for review and approval in consultation with the San Luis Obispo County Air Pollution Control District, upon the filing of any building, grading or construction permit applications related to decommissioning. The necessary annual quantity of local GHG reduction/carbon sequestration projects shall be committed to and any verified offset credits under this plan shall be surrendered prior to April 15 of each calendar year following the year of initiating construction.

*Monitoring.* The County Department of Planning and Building, in consultation with the San Luis Obispo County APCD, will review and approve the GHG Reduction and Reporting Plan and any proposed GHG reduction credits prior to their use as mitigation and prior to initiating decommissioning activities. Subsequent annual reporting of GHG emissions and reduction or offset measures implemented will be reviewed and approved by the County Department of Planning and Building in consultation with the San Luis Obispo County APCD.

**Impact GHG-2: Conflict with GHG emissions reduction plans, policies, or regulations (Class III: Less than Significant).**

The GHG emissions sources of the Proposed Project would not be directly regulated by any federal, state, or local GHG emission reduction programs. Decommissioning activities would either be exempt from direct regulation or would be indirectly controlled by the mandatory use

of fuels and equipment fleets that comply with CARB standards to reduce GHG emissions. Transportation fuels (diesel, gasoline, and fuels used by commercial harbor craft) used during the decommissioning activities would need to comply with California's Low Carbon Fuel Standard, which is a standard designed to decrease the carbon intensity of California's transportation fuel supply and provide an increasing range of low-carbon and renewable transportation fuel alternatives. Equipment and vehicles used during decommissioning (Phases 1 and 2) would also need to attain state and federal efficiency standards through the use of recent model-year engines (AC AQ-2), which would avoid unnecessary GHG emissions, and by minimizing use of conventional fossil fuels (AC AQ-6). Compliance with regulations and programs for energy efficiency would also help to reduce GHG emissions from vehicles (see Appendix C).

Decommissioning wastes including concrete and asphalt that can be recycled and reused. The Concrete Reuse Plan would increase the reuse of concrete on site and eliminate the need for off-site transportation and disposal. California's Climate Change Scoping Plan (CARB, 2017) identifies waste diversion and recycling as a policy goal to reduce GHG emissions, and the State has a policy goal that 75 percent of the solid waste generated by source reduced, recycled, or composted by 2020. The Conservation and Open Space Element of the San Luis Obispo County General Plan established goals to reduce community-wide GHG emissions by 2020. Although the County does not have a qualified Climate Action Plan under SB 32, the County's EnergyWise Plan (San Luis Obispo, 2016) identifies how government operations and community-wide action may be directed to achieve the GHG reduction goals of the County. The Proposed Project activities would not alter the efforts underway to reduce GHG emissions from government operations and community-wide sources in the County, although the proposed decommissioning activities include steps to recycle and reuse waste, which would be consistent with the County goals for reducing GHG emissions. The Proposed Project would not have any potential to conflict with the goals of the EnergyWise Plan.

There are no other federal, state, or local GHG emissions reduction regulations, policies, or plans that would directly apply to the Proposed Project's GHG emissions sources. Therefore, the Proposed Project would not conflict with any applicable plan, policy, or regulation related to reducing GHGs. Therefore, the potential to conflict with GHG emissions reduction plans, policies, or regulations would be less than significant (Class III).

**Mitigation Measures for Impact GHG-2.** No mitigation measures are required.

### ***Post-Decommissioning Operations***

**New Facility Operations.** Following Phase 2, operational activities at the DCPD site would include long-term management of the GTCC Waste Storage facility and operation of the Security Building, indoor Firing Range, and Storage Buildings. These activities would require use of equipment and vehicles that would cause GHG emissions at levels below those that would occur during decommissioning. The post-decommissioning operations would not be directly subject to any GHG emission reduction regulations and would either be exempt from or would be required to comply with CARB rules and regulations to reduce GHG emissions. These activities would cause no potential conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (Class III).

**Future Actions.** Marina improvement and operations would include GHG emissions caused by the use of small vessels for recreational, education, and/or commercial purposes. The third-party operator would be required to obtain the necessary land use and building permits from the County and a new or amended lease from CSLC. These future actions would cause no potential conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions (Class III).

#### 4.9.5 Cumulative Impact Analysis

##### Geographic Extent Context

This impact assessment describes impact of the Proposed Project of contributing towards global climate change through GHG emissions. Because the direct environmental effect of GHG emissions is to influence global climate change, GHG emissions are by their nature inherently a cumulative concern with a cumulatively global scope.

##### Cumulative Impact Analysis

No single project could, by itself, result in a substantial change in climate. As the project-specific analysis for this Proposed Project evaluates effects that are globally cumulative, there is no separate cumulative impacts analysis for global climate change.

Furthermore, the evaluation of GHG impacts evaluates the contribution of the Proposed Project to inherently address cumulative climate change effects and demonstrates that the Proposed Project with mitigation would not generate significant levels of GHG emissions and would not conflict with GHG reduction goals. The Project-specific incremental impact on GHG emissions would therefore not be cumulatively considerable.

#### 4.9.6 Summary of Significance Findings

Table 4.9-4 presents a summary of the environmental impacts, significance determinations, and mitigation measures for the Proposed Project.

**Table 4.9-4. Summary of Impacts and Mitigation Measures – Greenhouse Gas Emissions**

Impact Statement	Impact Significance Class				Mitigation Measures
	Phase 1		Phase 2		
	DCPP	PBR/SB	DCPP	Ops/ Marina	
<b>GHG-1:</b> Generate GHG emissions that may have a significant impact on the environment	II	II/II	II	III/III	<b>GHG 1:</b> Reduce GHG Emissions or Surrender Offset Credits
<b>GHG-2:</b> Conflict with GHG emissions reductions plans, policies, or regulations	III	III/III	III	III/III	None required
Cumulative Impact	Not cumulatively considerable		Not cumulatively considerable		None required

Acronyms: PBR = Pismo Beach Railyard, SB = Betteravia Industrial Park (Santa Barbara County), Post-Decom = Post-Decommissioning, Ops = Long-Term Operations, Class I = Significant and Unavoidable, Class II = Less than Significant with Mitigation, Class III = Less than Significant, Class IV = Beneficial, NI = No Impact.