3.3.3 Air Quality and Greenhouse Gas (GHG) Emissions

III. AIR QUALITY: **Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:**	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or Projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐

This section discusses the existing air quality conditions that occur within the Project area. This section also identifies significance criteria, and assesses potential Project-related impacts to existing air quality conditions. A discussion and analysis of GHG emissions in relation to global climate change (GCC) is also included.

3.3.3.1 Environmental Setting

Ambient air quality is influenced by the climate, meteorology, and topography of an area along with the quantity and type of pollutants released into the air.

Climate and Meteorology. The Project is located in San Luis Obispo County (on the central coast of California) within the South Central Coast Air Basin (SCCAB). Summers are typically mild and characterized by early morning and afternoon fog. Winters are generally cool and wet with the rainy season extending from late November to early April.

Airflow plays an important role in the movement and dispersion of air pollutants in the San Luis Obispo region. The speed and direction of local winds are controlled by: (1)

the location and strength of the Pacific High and other global patterns; (2) topographical factors; and (3) circulation patterns resulting from temperature differences between land and sea. During the spring and summer when the Pacific High attains its greatest strength, onshore winds from the northwest generally prevail during the day. As evening approaches, onshore winds are reduced, and the wind direction reverses with winds flowing down the coastal mountain and valleys to form light easterly breezes. In the fall, onshore surface winds decline and the marine layer becomes shallow, allowing for an occasional flow reversal to a weak offshore flow. This, along with the diurnal alteration of land-sea breeze circulation, can sometimes produce a "sloshing" effect. Under such conditions, pollutants may accumulate over the Pacific Ocean and subsequently be carried back onshore with the return of sea breezes.

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this temperature gradient can occur. Such a condition, called an inversion, is simply a warm layer of air over a layer of cooler air. Inversions can have the effect of limiting the vertical dispersion of air pollutants, trapping them near the earth's surface.

Several types of inversions are common to the San Luis Obispo area. Weak surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys and low-lying areas, this condition is intensified by the addition of cold air flowing down from hills and pooling in valleys. Surface inversions are common throughout San Luis Obispo County during winter months, particularly on cold mornings. As the morning sun warms the surface of the earth and air near the ground, the inversion layer lifts, gradually dissipating throughout the day. During the summer, subsidence inversions can occur when the Pacific High causes the air mass aloft to sink. As the air descends, compression heating warms the air to a higher temperature than the air below. This highly stable atmospheric conditioning can act as a nearly impenetrable lid to the vertical mixing of pollutants. Subsidence inversions can persist for one or more days, causing air stagnation and the buildup of pollutants.

Air Quality Measurement. Air quality is determined by measuring ambient concentrations of air pollutants that are known to cause adverse health effects. For regulatory purposes, air pollutants are generally recognized as “criteria pollutants” or as “toxic air pollutants” (or hazardous air pollutants). For most criteria pollutants, regulations and standards have been in effect for more than 20 years, and control strategies are designed to ensure that the ambient concentrations do not exceed certain thresholds. For toxic air emissions, however, the regulatory process usually assesses the potential impacts to public health in terms of “risk” (such as the Air Toxics “Hot Spots” Program in California), and emissions are usually controlled by prescribed technologies.

Criteria Pollutants. Criteria pollutants that are considered to be inert (those that do not react chemically, but preserve the same chemical composition from point of emission to point of impact), include carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2),

sulfur dioxide (SO_2), coarse particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), lead (Pb), sulfates (SO_4), and hydrogen sulfide (H_2S).

CO is primarily formed through the incomplete combustion of organic fuels. Higher CO values are generally measured during winter when dispersion is limited by morning surface inversions. Seasonal and diurnal variations in meteorological conditions lead to lower values in summer and in the afternoon.

Ozone is formed in the atmosphere through a series of complex photochemical reactions involving oxides of nitrogen (NO_x), reactive organic gases (ROG), and sunlight occurring over several hours. Since ozone is not emitted directly into the atmosphere, but is formed as a result of photochemical reactions, it is classified as a secondary or regional pollutant. Because these ozone-forming reactions take time, peak ozone levels are often found downwind of major source areas.

Ambient air quality standards have been set for two classes of particulate matter: PM_{10} and $PM_{2.5}$. Both consist of different types of particles such as metal, soot, smoke, dust and fine mineral particles that are suspended in the air. Depending on the source of particulates, toxicity and chemical activity can vary. Particulate matter is a health concern, because when inhaled it can cause permanent damage to the lungs. The primary source of PM_{10} emissions appears to be soil via roads, construction, agriculture, quarries, and natural windblown dust. Other sources of PM_{10} include particulate matter released during combustion processes (such as those in gasoline or diesel vehicles), wood burning, and sea salt. Fugitive emissions from construction sites, wood stoves, fireplaces and diesel truck exhaust are primary sources of $PM_{2.5}$. Both sizes of particulates can be dangerous when inhaled; however, $PM_{2.5}$ tends to be more damaging because it remains in the lungs once it is inhaled.

Nitric oxide (NO) is a colorless gas formed during combustion processes which rapidly oxidize to form NO_2, a brownish gas. The highest NO values are generally measured in urbanized areas with heavy traffic.

Existing Air Quality. The United States Environmental Protection Agency (EPA) has designated all areas of the U.S. as having either air quality better than (attainment) or worse than (non-attainment) the National Ambient Air Quality Standards (NAAQS). The NAAQS are federal air quality standards established under the Clean Air Act (CAA). The CAA also mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

"Non-attainment" areas are further categorized as either marginal, moderate, serious, severe or extreme, depending upon the numerical exceedance of the priority pollutant standard and the measures that are in place to reduce pollutant levels. These designations are specific to the area and the pollutant. Because the local air basin does not meet state standards for O_3 and inhalable particulate matter (PM_{10}), San Luis

Obispo County is considered a state non-attainment area for those pollutants; however, the air basin is considered to be in attainment for $PM_{2.5}$, CO, NO_2, and SO_2. Table 3.3.3-1 lists federal and state attainment status for the San Luis Obispo County Air Pollution Control District (APCD) portion of the SCCAB.

Table 3.3.3-1. Federal and State Attainment Status for San Luis Obispo County APCD Portion of the South Central Coast Air Basin

Pollutants	Federal Classification	State Classification
O_3 (1-hour standard)	Classification revoked June 2005	Moderate Non-attainment
O_3 (8-hour standard)	Unclassified/Attainment	Non-attainment
PM_{10}	Unclassified	Non-attainment
$PM_{2.5}$	Unclassified/Attainment	Attainment
CO	Unclassified/Attainment	Attainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Unclassified	Attainment

Source: California Air Resources Board: Area Designation Maps State/National 2010

The San Luis Obispo County APCD maintains a network of air quality monitoring stations located throughout the county. The permanent monitoring station that is closest to the Project area is the Morro Bay Station, which is located approximately 8.0 km (5.0 mi] north of Montaña de Oro State Park.

Criteria pollutants O_3, NO, NO_2, NO_X, and PM_{10} are monitored at the Morro Bay Station. A summary of monitoring data for the last three most recent years (2007 to 2009) is included in Table 3.3.3-2. The closest CO monitoring station to the site was San Luis Obispo Station; monitoring of CO at this station was discontinued in November, 2006. Monitoring data, shown in Table 3.3.3-2, show the following pollutant trends: neither state nor national O_3 standards were exceeded during the three-year reporting period. CO and NO_2 concentrations are low, with no recorded exceedances during that reporting period. Particulate matter (PM_{10} and $PM_{2.5}$) concentrations are largely affected by meteorology and show some variability and that the national $PM_{2.5}$ standard was not exceeded during the reporting period.

Table 3.3.3-2. Air Quality Data from the Project Area

Pollutant Standards	2007	2008	2009
Ozone (O_3)			
State standard (1-hour average = 0.09 ppm)[a]			
National standard (8-hour average = 0.08 ppm)			
Maximum concentration 1-hour period (ppm)	0.071	0.083	0.073
Maximum concentration 8-hour period (ppm)	0.062	0.081	0.065
Days state 1-hour standard exceeded	0	0	0
Days national 8-hour standard exceeded	0	1	0
Carbon Monoxide (CO)			
State standard (8-hour average = 9 ppm)			
National standard (8-hour average = 9 ppm)			
Maximum concentration 8-hour period (ppm)	NA[b]	NA[b]	NA[b]
Days state/national 8-hour standard exceeded	NA[b]	NA[b]	NA[b]
Nitrogen Dioxide (NO_2)			
State standard (1-hour average = 0.18 ppm)			
Maximum 1-hour concentration	0.046	0.045	0.046
Days state standard exceeded	0	0	0
Suspended Particulates (PM_{10})[d, e]			
State standard (24-hour average = 50 µg/m^3)[e]			
National standard (24-hour average = 150 µg/m^3)			
Maximum 24-hour concentration (*µg/m^3*)	42.0	59.5	69.0
Days exceeding state standard	0	13.5	*
Days exceeding national standard	0	0	0
Suspended Particulates ($PM_{2.5}$)[c,d, e]			
National standard (24-hour average = 35 µg/m^3)			
Maximum 24-hour concentration (*µg/m^3*)	19.2	18.4	19.7
Days exceeding national standard	0	0	0

Data obtained from the Morro Bay monitoring station.

[a] Parts per million has been abbreviated to ppm.
[b] NA represents Not Available: CO is no longer monitored at the Morro Bay or San Luis Obispo monitoring stations.
[c] $PM_{2.5}$ data are from San Luis Obispo monitoring station, the next most proximate monitoring station.
[d] PM_{10} sampling occurs every six days, therefore a single PM_{10} exceedance is statistically equated to six exceedance days.
[e] Microgram per cubic meter has been abbreviated to µg/m^3.
* Insufficient data available
Source: California Air Resources Board.

Global Climate Change. GCC is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. Common GHGs (gases that trap heat in the atmosphere) include water vapor, carbon dioxide (CO_2), methane (CH_4), NO_x, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. GHGs are emitted by both natural processes and human activities, and the accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, the earth's surface would be approximately 34 degrees Centigrade (°C) cooler. However, it is generally agreed by the scientific community that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006, which focuses on reducing GHGs in California. As defined under AB 32, GHGs include: CO_2, CH_4, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires the California Air Resources Board (CARB), the state agency charged with regulating statewide air quality, to adopt rules and regulations that by 2020 would achieve GHG emissions equivalent to statewide levels in 1990.

Section 15064.4 of the State CEQA Guidelines provides regulatory direction on how to determine the significance of potential impacts from GHGs. Under this section, lead agencies are required to describe, calculate, or otherwise characterize GHG emissions. Where feasible, lead agencies should strive to quantify emissions, but section 15064.4 provides that a qualitative analysis or reliance on performance based standards are allowed, as long as the lead agency makes a "good-faith effort" based on scientific, factual data, to disclose and analyze GHG impacts.

3.3.3.2 Regulatory Setting

Federal Regulations. The CAA was first enacted in 1955 and has been amended many times in subsequent years (i.e., 1963, 1965, 1967, 1970, 1977, and 1990). It establishes federal air quality standards, known as NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement a SIP for local areas not meeting those standards. SIPs must include pollution control measures that demonstrate how the standards will be met. The 1990 CAA Amendments identify specific emission-reduction goals for areas not meeting the NAAQS. The sections of the CAA that would most substantially affect the development of the Project include Title I (Non-attainment Provisions) and Title II (Mobile-Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for criteria pollutants. Table 3.3.3-3 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for fine particulate matter ($PM_{2.5}$).

Table 3.3.3-3. Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS[a]	NAAQS[b]
Ozone (O_3)	1 hour 8 hour	0.09 ppm[c] 0.07 ppm	-- 0.075 ppm
Carbon Monoxide (CO)	1 hour 8 hour	20 ppm 9.0 ppm	35 ppm 9 ppm
Nitrogen Dioxide (NO_2)	1 hour Annual	0.18 ppm 0.030 ppm	-- 0.053 ppm
Sulfur Dioxide (SO_2)	1 hour 3 hour 24 hour Annual	0.25 ppm -- 0.04 ppm --	-- 0.5 ppm 0.14 ppm 0.030 ppm
Inhalable Particulate Matter (PM_{10})	24 hour Annual	50 µg/m^3 [c] 20 µg/m^3	150 µg/m^3 --
Fine Particulate Matter ($PM_{2.5}$)	24 hour Annual	-- 12 µg/m^3	35 µg/m^3 15 µg/m^3

Notes:
[a] The California Ambient Air Quality Standards (CAAQS) for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.
[b] NAAQS, other than O_3 and those based on annual averages, are not to be exceeded more than once a year. The O_3 standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.
[c] ppm = parts per million by volume; µg/m^3 = micrograms per cubic meter.
Source: California Air Resources Board 2007.

State Regulations.

California Global Warming Solutions Act of 2006 (AB 32). The California Global Warming Solutions Act requires that the state cap GHG emissions at 1990 levels by the year 2020. The Act requires that CARB establish a program for statewide GHG emission reporting, and monitor and enforce compliance with the program.

California Diesel Fuel Regulations. This rule sets sulfur concentration limitations for diesel fuel sold in California for use in on-road and off-road motor vehicles (CARB 2004). Harbor craft were originally excluded from the rule, but were later included by a 2004 rule amendment (CARB 2005a). Under this rule, diesel fuel used in motor vehicles except harbor craft has been limited to 500 parts per million (ppm) sulfur since 1993. The sulfur limit was reduced to 15 ppm beginning September 1, 2006 (a similar federal diesel rule limiting on-road vehicle sulfur content to 15 ppm began October 15, 2006).

Heavy Duty Diesel Truck Idling Regulation. The CARB Heavy Duty Diesel Truck Idling rule, which became effective on February 1, 2005, prohibits heavy-duty diesel trucks from idling for longer than five minutes at a time. Truck idling for longer than five minutes while queuing is allowed, however, provided the queue is located beyond 30 m (100 ft) from any homes or schools (CARB 2006b).

Statewide Portable Equipment Registration Program (PERP). This Program establishes a uniform program to regulate portable engines and portable engine-driven equipment units (CARB 2005b). Once registered in the PERP, engines and equipment units may operate throughout California without the need to obtain individual permits from local air districts. The PERP generally would apply to shore-end and land-based construction equipment such as generators, compressors and power winches.

Local Regulations. The San Luis Obispo APCD is the local agency in San Luis Obispo County primarily responsible for attaining the air quality standards established by the CARB and EPA. The APCD implements programs and regulations to control air pollution released from stationary sources within the APCD; it also implements programs to encourage alternative means of transportation. In 2009, the APCD published a revised CEQA Air Quality Handbook to help local governments analyze and mitigate project-specific air quality impacts. This handbook, which provides standards, methodologies, and procedures for conducting air quality analyses in EIRs, was used extensively in the preparation of this assessment. The APCD has established CEQA thresholds for the emissions of air pollutants by construction activities. The established threshold for Best Available Control Technology (BACT) for construction equipment is 185 lbs/day or 2.5 tons/calendar quarter of ROG or NO_x. If these thresholds are exceeded, mitigation measures, including offsets, may be required.

Through the attainment planning process, the APCD developed the *County APCD Rules and Regulations* to regulate sources of air pollution in the county. The emission sources associated with the Project are mobile sources, and therefore, not subject to the APCD rules that apply to stationary sources, such as Regulation VI - New Source Review and Regulation VII - New Source Review of Toxic Air Contaminants.

3.3.3.3 Impact Analysis

Significance Criteria. Applicable significance thresholds are contained in the San Luis Obispo County APCD (2009) CEQA Air Quality Handbook. If any of the thresholds below are exceeded, Project emissions are considered to result in a significant impact.

1. Operational impact threshold for ROG, NO_x, SO_2, PM_{10} that exceed 10 lbs/day, and for CO that exceed 550 lbs/day. The APCD considers impacts significant and requires more stringent environmental review for projects exceeding 25 lbs/day of ROG, NO_x, SO_2 and PM_{10} emissions, or 550 lbs/day of CO emissions.
2. Construction impact threshold for ROG, NO_X, SO_2, PM_{10} that exceeds 185 lbs/day or 2.5 tons/quarter and for PM_{10} emissions that exceed 2.5 tons/quarter. The APCD requires BACT for construction equipment for projects with ROG or NO_X emissions between 2.5 and 6.0 tons/quarter and requires BACT plus further mitigation for projects with emissions exceeding 6.0 tons/quarter.
3. The APCD has established health risk threshold values under the Air Toxics “Hot Spots” Information and Assessment Act. These values trigger community notification and a risk reduction plan:

- **Cancer Risk**: ten in one million lifetime cancer risk (continual 70-year exposure);
- **Non-Cancer Acute Hazard**: acute hazard index greater than or equal to 1.0 (sum of acute hazard hourly index of each pollutant with similar adverse health effects);
- **Non-Cancer Chronic Hazard**: chronic hazard index greater than or equal to 1.0 (sum of chronic hazard annual index of each pollutant with similar adverse health effects).

4. Any violation of APCD Rule 402, which states "*A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property*."

The APCD has not yet established GHG emissions thresholds; however, the potential significance of GHG emissions is evaluated as part of this analysis.

Impact Discussion. The Project would generate emissions through the use of marine vessels when placing and retrieving the OBS units and cable, from on-road equipment hauling trucks, and from vehicles used by construction workers commuting to and from the Project area. For the purposes of analysis the following tables indicate "worst-case" air quality emissions (this assumes that project mobilization and marine installation occur on the same day, which may or may not occur [see Section 2.5 for the proposed schedule]). Onshore installation activities would be limited to the extension of an existing conduit at the DCPP facility and would not require any heavy equipment or additional truck trips to the DCPP facility. Table 3.3.3-4 provides the calculated emissions from the Project. Detailed emission calculation worksheets are provided in Appendix C. No mitigation was assumed in the emissions calculations.

Table 3.3.3-4. Lbs/Day Emission Totals

Activity	ROG	CO	NO_x	PM_{10}	CO_2
Equipment Delivery*	0.72	3.64	11.70	0.47	1,869.72
Off-Road Vessels and Equipment	12.50	37.12	103.61	5.37	28.69
Worker Transportation	0.17	3.64	0.33	0.03	284.92
Totals (lbs/day)	**13.39**	**44.4**	**115.64**	**5.87**	**2,183.33**

* Equipment delivery occurring during project mobilization activities is anticipated to require one day.

a) Conflict with or obstruct implementation of the applicable air quality plan?

The 2010 Clean Air Plan, a regional plan that addresses pollutants of concern within the airshed, is the most recent clean air plan adopted by the APCD. This Plan includes emission control techniques such as vapor recovery, solvent content reduction,

improved transfer efficiency, fuel switching or electrification of stationary emissions sources, and chemical or catalytic reduction. These reduction methods are primarily directed toward reducing emissions from existing and new stationary sources. Since the Project does not develop new stationary sources or modify existing sources of emissions, it would not be in violation of the 2010 Clean Air Plan.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Significance thresholds are contained in the San Luis Obispo County APCD (2009) CEQA Air Quality Handbook. The Handbook includes a provision for construction activities and requires further assessment and mitigation of ROG, NO_X, SO_2, PM_{10} that exceed 185 lbs/day or 2.5 tons/quarter, and for PM_{10} emissions that exceed 2.5 tons/quarter. Projects exceeding this threshold would be required to complete a Construction Activity Management Plan (CAMP) that outlines specific mitigation strategies to reduce impacts to sensitive receptors. Sensitive receptors generally refer to residences, schools, daycare facilities, hospitals or senior care facilities.

As shown in Table 3.3.3-4, however, total Project emissions would not exceed 185 lbs/day; emissions are calculated to be: ROGs, 13.39 lbs/day; CO, 44.4 lbs/day; and NO_x, 115.64 lbs/day. Since the Project would be located primarily offshore, no sensitive receptors are located in the Project area. As such, the Project would not be required to complete a CAMP and short-term impacts would be less than significant. In addition, although hauling OBSs and cable from the POLA to Morro Bay would generate Project-related mobile emissions in Los Angeles, Ventura, and Santa Barbara Counties, a total of two truck trips (one northbound trip on one day and a southbound trip on a second day) through those counties would not result in a significant air quality impact.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

For any project that does not individually have significant air quality impacts, the determination of a significant cumulative impact should be based on an evaluation of the consistency of the Project with the local general plan and of the general plan with the regional air quality plan. As demonstrated above, the Project would be consistent with the adopted Clean Air Plan. The Project would also be consistent with the Energy and Extractive Resource Areas (EX) land use designation applied to the Project area by the County of San Luis Obispo Coastal Zone Land Use Ordinance (CZLUO).[3] According to CZLUO section 23.07.040, EX areas are those where:

[3] The EX land use designation is a combined designation to protect significant resource extraction and energy production areas identified by the Land Use Element from encroachment by incompatible land uses that could hinder resource extraction or energy production operations, or land uses that would be adversely affected by extraction or energy production.

a. Mineral or petroleum extraction occurs or is proposed to occur;

b. The state geologist has designated a mineral resource area of statewide or regional significance pursuant to the Surface Mining and Reclamation Act (Pub. Resources Code, § 2710 et seq.); or

c. Major public utility electric generation facilities exist or are proposed.

The Project consists of the installation on the seafloor and operation of OBS instruments and a cable in support of the existing DCPP. As it is an existing major public utility, the DCPP facility falls under the "c" category of CZLUO section 23.07.040. Based on the Project's consistency with the Clean Air Plan and General Plan, the Project's air emissions would not be cumulatively considerable or result in a significant cumulative impact.

d) Expose sensitive receptors to substantial pollutant concentrations?

The Project would be predominately located in ocean waters offshore of the DCPP. The only onshore component is the extension of an existing conduit within the DCPP facility. No public access is allowed within the DCPP grounds. Since the Project is located offshore and within the boundaries of the existing DCPP facility, no sensitive receptors are located within the Project area. As such, no impacts to sensitive receptors would result.

e) Create objectionable odors affecting a substantial number of people?

Installation of the OBS units would slightly and temporarily increase ambient air pollutant concentrations offshore due to the combustion of diesel fuel. Some individuals consider diesel combustion odors to be objectionable, although quantifying the odor impacts of such emissions is difficult. The location of the Project, offshore of DCPP, ensures that only those associated with installation activities onboard the *MV Michael Uhl* or its support vessel would be exposed to any odors. The mobile nature of the marine engine emission sources would help disperse those emissions. Therefore, any temporary impact would be less than significant.

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

See response below.

g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Based on anticipated construction equipment lists and activities, GHGs were calculated for the Project based on EMFAC (2007a) and URBEMIS (Urban Emissions Model) (2007b) data files. Table 3.3.3-5 shows estimated construction equipment emissions for each phase of the Project. Detailed emission calculation worksheets are provided in Appendix C. Construction of the Project is expected to produce approximately 27.96 tons of CO_2 equivalent ($CO_{2\ eq}$) emissions. Over the long-term no new employees would

be required, as the Project would use existing personnel for monitoring and maintenance activities. Additionally, the Project's long-term energy use is anticipated to be virtually the same as currently exists.

Table 3.3.3-5. Total GHG Emissions through Project Duration (tons)

Source	CO_2	NO_2	CH_4	Total (tons)
Off-Road Vessels and Equipment	28.69	0.001	0.002	
Worker Transportation	1.42	0.0002	0.0002	
Equipment Delivery from POLA	0.85	0.000026	0.000031	
Total English Tons	30.96	0.001	0.002	
Total Metric Tons	27.65	0.001	0.002	
$CO_{2\ eq}$	27.65	0.268	0.044	**27.96**

Due to the lack of significance thresholds, a determination of the Project's impact on regional, statewide, or continental resources of concern affected by GCC (i.e., regional water supply and hydrology, plant and wildlife species range expansions or contractions, Sierra snowpack, extent of polar ice caps, sea level rise, etc.) would be speculative. However, the Attorney General requires GHG impact evaluation and the implementation of feasible mitigation at the Project level. As such, consideration of GHG impacts should be considered for both operational and construction-related emissions.

San Luis Obispo County has not adopted specific thresholds for determining the significance of GHG emissions. For the purposes of this analysis, and due to the fact that hauling equipment (OBSs and cable) from the POLA to Morro Bay would result in Project-related mobile emissions in Los Angeles, Ventura and Santa Barbara Counties, GHG emissions thresholds adopted by the South Coast Air Quality Management District (SCAQMD) could be considered applicable to the Project. However, no formal regulations establishing GHG thresholds at the local level exist in the South Coast Air Basin either. In October, 2008, the SCAQMD distributed a Draft Guidance Document – Interim CEQA GHG Significance Threshold. According to the SCAQMD, the purpose of the Guidance Document was to: provide information on GHG legislation relative to CEQA; summarize a Working Group process; provide information on the SCAQMD's authority to establish a GHG significance threshold pursuant to CEQA; and develop guidance for the resulting staff-recommended interim GHG significance threshold proposal and how to use it. The Guidance Document does not recommend GHG thresholds, but GHG thresholds may be provided in subsequent SCAQMD documents.

As such, for the purposes of this analysis, Project emissions were compared to the Thresholds of Significance established by the Bay Area Air Quality Management District (BAAQMD). The BAAQMD's approach to developing a Threshold of Significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move the state towards climate stabilization. If a

project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. Table 3.3.3-6 provides the BAAQMD thresholds for GHG emissions.

Table 3.3.3-6. Bay Area Air Quality Management District GHG Significance Thresholds (Updated 2011)

GHGs	**Construction-Related Average Emissions** (lbs/day)	**Operational-Related**
Stationary Sources	None	10,000 MT/yr
Other Projects (not Stationary Sources)	None	Compliance with qualified GHG Reduction Strategy; **or** 1,100 metric tons (MT) of $CO_{2\ eq}$/year (yr); **or** 4.6 MT $CO_{2\ eq}$/SP/yr (residents + employees)

The Project and operation of the OBS units would not result in long-term emissions of GHGs. The only Project-related GHG emissions would result from short-term, installation-related operations. Based on GHG emission estimates provided in Table 3.3.3-5 above, the Project would generate approximately 27.96 tons of CO_{2eq} emissions. Although the BAAQMD GHG emission thresholds do not provide a numerical threshold for short-term, construction-related emissions and the Project's short-term GHG emissions would be below a 1,100 MT/yr threshold for non-stationary source emissions, these construction-related GHGs can still be reduced by implementing Project-design measures typically required by the San Luis Obispo APCD CAMP. As noted above, the CAMP outlines specific mitigation strategies.

The Project would not generate additional emissions during operation of the OBS units; only short-term, installation-related GHGs would occur. Implementation of Standard Control Measures for Construction Equipment are measures in the CAMP that would be applicable to the Project. With implementation of these measures, listed in MM AIR-1, Project GHG emissions are considered less than significant.

3.3.3.4 Mitigation and Residual Impacts

The following mitigation measure will reduce Project-related GHG emissions.

MM AIR-1. The Applicant shall implement Standard Control Measures for Construction Equipment, which include:

- Maintain all construction equipment in proper tune according to manufacturer's specifications;
- Fuel all off-road and portable diesel-powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);

- Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation;
- Use on-road heavy-duty trucks that meet CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- Construction or trucking companies that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g., captive or NO_x-exempt area fleets) may be eligible by proving alternative compliance;
- All on and off-road diesel equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the five-minute idling limit;
- Diesel idling within 300 meters (1,000 feet) of sensitive receptors is not permitted;
- Staging and queuing areas shall not be located within 300 meters (1,000 feet) of sensitive receptors;
- Electrify equipment when feasible;
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and,
- Use alternatively fueled construction equipment onsite where feasible, such as compressed natural gas, liquefied natural gas, propane or biodiesel.

The Project's incremental contribution to GCC is not cumulatively considerable due to the small amount of GHG emissions in relation to that emitted in the region (California's annual GHG emissions have been estimated at 468.8 million tons in 2004), and the short-term nature of these emissions. Therefore, construction of the Project would not contribute to a significant cumulative impact to GHGs or GCC.

Residual Impacts. With the incorporation of the recommended mitigation, there will be no residual impacts to air quality or associated with GHG emissions.