Proposed Final
Subsequent Environmental Impact Report
Mirada Petroleum Oil and Gas Project
Case No. PL13-0158
SCH# 2015021045

Revised Chapter 4.4 Climate Change

Presented below is a revised Chapter 4.4 regarding the analysis of the effects on Climate Change that would result from the proposed project. This chapter has been updated to reflect the analysis of greenhouse gas emissions included in the two October 19, 2015 Ventura County Air Pollution Control District (VCAPCD) memoranda submitted to the Board of Supervisors for its consideration of the CRC Oil and Gas Project (PL13-0150). This document replaces previous versions of Chapter 4.4 in its entirety. Section 7.0 (References) of the EIR has been modified to list the above mentioned VCAPCD memoranda.

4.4 Climate Change

The issue of climate change is not evaluated in the 1983 FEIR. The following discussion is provided to disclose the potential impacts of greenhouse gas emissions that would result from implementation of the proposed project. The estimate of project greenhouse gas emissions provided below is based on the analysis of greenhouse gas emissions included in the two October 19, 2015 memoranda prepared by the VCAPCD for the CRC Oil and Gas Project (PL13-0150). ~~Mitigated Negative Declaration Addendum for Mirada Petroleum Project (Case No. LU11-0041) adopted by the Planning Commission on May 30, 2013~~. Staff of the Ventura County Air Pollution Control District (Chuck Thomas, pers. comm., ~~March~~ October 2015) has reviewed and found adequate the analysis presented herein.

4.4.1 Project Impact Discussion:

Utilizing the updated ~~same~~ methodology that was employed to assess the greenhouse gas emissions of the oil and gas wells prepared in response to the administrative appeals

of the approval of the PL13-0150 application, ~~included in the previous and separate Mirada Petroleum Project (Case No. LU11-0041),~~ the annual Reactive Organic Compound (ROC) emissions for one new oil well is 0.365 tons of ROC per year (0.331 metric tonnes per year). ~~0.48 tons/year (0.53 metric tons /year).~~ The current proposed project (PL13-0158) involves the installation of up to three new wells and the re-drilling of an existing well. Thus, the project involves an estimated increase of ROC emissions of 1.32 metric tonnes/year. ~~2.1 metric tons/year.~~ According to the VCAPCD, a worst case ~~reasonable~~ estimate is that 90 percent of oil field emissions are methane, a greenhouse gas (GHG), and 10 percent are ROC. With these parameters, the estimated GHG emissions from the proposed project would be 11.9 metric tonnes/year of methane (1.32 x 9 = 11.9). ~~18.9 tons/year of methane (2.1 x 9 = 18.9).~~

The currently accepted global warming potential (GWP) of methane is 25 times the GWP of carbon dioxide (CO_2). This means that one metric tonne of methane is equivalent to 25 metric tonnes of CO_2 equivalents ($MTCO_2e$), which is the standard unit for tracking GHG emissions. These methane emissions are equivalent to 298 $MTCO_2e$ (11.9 x 25 = 298). ~~397 metric tons/year of CO_2 (18.9 x 21 = 397).~~ If all six existing plus proposed oil wells are considered, the total GHG emissions from the project site will be an estimated 447 ~~596~~ metric tons per year of CO_2 (298 x 6/4 = 447). ~~(397 x 6/4 = 596).~~ In addition, the VCAPCD has estimated that fluid hauling activities would contribute an estimated 13.7 ~~34~~ metric tons per year of GHG (Chuck Thomas, VCAPCD, pers. commun.). As explained in the following discussion of climate change, this level (up to 461 $MTCO_2e$ per year) ~~630 metric tons per year)~~ of greenhouse gas (GHG) emissions is below the applicable Threshold of Significance of 10,000 $MTCO_2e$ per year. ~~metric tons/year of CO^2 equivalents.~~

Impacts involving greenhouse gas emissions pertain to changes in global climate. This is a cumulative effect that would not involve project-specific or local impacts. As indicated above, the estimated GHG emissions would be less than the applicable threshold. Thus, the contribution of the project to the impact of global climate change is not cumulatively considerable.

4.4.2 Background Information on Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are known as greenhouse gases (GHGs). GHGs are emitted by natural processes and human activities. Examples of GHGs that are produced both by natural processes and industry include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). GHGs in the atmosphere regulate the temperature of the earth's atmosphere. Without these natural GHGs, the Earth's surface would be about 61°F cooler (AEP 2007). However, emissions from fossil fuel combustion by humans have elevated the concentration of GHGs in the atmosphere to above current natural levels. Scientific evidence indicates a correlation between increasing global temperatures/climate change over the past century and human induced levels of GHGs. According to the United Nations' Intergovernmental Panel on

Climate Change (IPCC) "Fourth Assessment Report, Climate Change 2007," most of the observed increase in global average temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic concentrations of these three gases, collectively known as *Greenhouse Gases (GHG)*. The report states, "*Global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities since 1750 and now* ~~*activities since 1750*~~ *far exceed pre-industrial values determined from ice cores spanning many thousands of years. The global increases in carbon dioxide concentration are primarily due to fossil fuel use and land use change, while those of methane and nitrous oxide are primarily due to agriculture*" (IPCC 2007: Summary for Policymakers).

Some observed effects of climate change include shrinking glaciers, thawing permafrost, later freezing and earlier break-up of ice on rivers and lakes, a lengthened growing season, shifts in plant and animal ranges, and earlier flowering of trees (IPCC 2007). Other, longer term environmental impacts of global warming may include sea level rise, changing weather patterns with increases in the severity of storms and droughts, changes to local and regional ecosystems including the potential loss of species, and a significant reduction in winter snow pack. These ~~GHG and other~~ induced environmental changes are predicted to have severe negative environmental, economic, and social consequences around the globe. For example, one study estimates that the Sierra Nevada Mountains as a whole could lose as much as 50 percent of its average April snowpack compared to current levels by the end of the 21st century (California Department of Water Resources 2006). Current data suggests that in the next 25 years, in every season of the year, California will experience unprecedented heat, longer and more extreme heat waves, greater intensity and frequency of heat waves, and longer dry periods. More specifically, the California Climate Change Center predicted that California could witness the following events (Fried, et al 2006):

- Temperature rises between 3-10.5°F;
- 6-20 inches or more of sea level rise;
- 2-4 times as many heat wave days in major urban centers;
- 2-6 times as many heat related deaths in major urban centers;
- 1-1.5 times more critically dry years; and
- 10-55 percent increase in the expected risk of wildfires.

GHGs have varying amounts of global warming potential or GWP. ~~(GWP).~~ The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. By convention, CO_2 is assigned a GWP of one. In comparison, CH4 (methane or natural gas) has a GWP of 25 ~~21~~, which means that it has a global warming effect 25 ~~21~~ times greater than CO_2 on an equal-mass basis. To account for their GWP, GHG emissions are often reported as a CO_2 equivalent or CO_2e. ~~(CO2e).~~ The CO_2e for a source is calculated by multiplying each GHG emission by its GWP, and adding the results together to produce a single, combined emission rate representing all GHGs.

To date, 12 states, including California, have set state GHG emission targets. Executive Order S-3-05 and the passage of AB 32, the California Global Warming Solutions Act of 2006, promulgated the California target to achieve 1990 GHG levels by the year 2020. This emissions reduction approach allows progress to be made in addressing climate change, and is a forerunner to the setting of emission limits. The Federal government and EPA have also begun regulating ~~the process to regulate~~ GHGs as pollutants (see discussion below).

4.4.3 Regulatory Setting

International Initiatives:

Over the past 15 years, various international, national, regional, state, and local initiatives have been adopted to address climate change. The foremost international climate change initiative is the United Nations Framework Convention on Climate Change (UNFCCC), commonly known as the Kyoto Protocol. Signed on March 21, 1994, the Kyoto Protocol calls for governments to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change. There have been several international summits since Kyoto, most recently Copenhagen (December 2009), which seek to advance and cement climate change goals and programs, but no significant advances in this area have been accomplished since Kyoto.

Federal Initiatives and Regulations:

Although the U.S. has not ratified the Kyoto Protocol, it established a comprehensive policy to address climate change in 2002. The policy has three basic components: slowing the growth of GHG emissions; strengthening the science, technology, and institutions; and enhancing international cooperation. The federal government is implementing this policy through voluntary and incentive-based programs and has established major programs to advance climate technologies and improve climate science.

The U.S. government administers a wide array of public-private partnerships to reduce U.S. GHG intensity. These programs focus on energy efficiency, renewable energy, methane, and other non-carbon dioxide (non- CO_2) gases, agricultural practices and implementation of technologies to achieve GHG reductions. The United States Environmental Protection Agency (EPA) has the authority to regulate CO_2 or GHG emissions as an air pollutant under the federal Clean Air Act (42 U.S.C. § 7602(g)). The EPA also implements several voluntary programs that substantially contribute to the reduction of GHG emissions.

Final Mandatory Reporting of GHG Rule:

The EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule on October 30, 2009 (EPA 2009). The rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities with stationary sources that emit 25,000 metric tons or more per year of CO_2e emissions to collect emissions activity data and submit annual emissions reports to the EPA beginning with year 2010 operations. The rule does not apply to mobile sources of GHGs. This reporting system will provide a better understanding of GHG emission sources within the U.S. and it will guide the development of policies and programs to reduce GHG emissions. It was also intended to ~~also will~~ support implementation of the EPA Prevention of Significant Deterioration and Title V GHG Tailoring Rule. This rule has similarities to the California Regulation for the Mandatory Reporting of GHG Emissions, which also specifies a reporting threshold of 25,000 metric tons of CO_2e for stationary sources. Reporting of greenhouse gases by major sources in California is required ~~by~~ by AB 32.

Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas Tailoring Rule:

On May 13, 2010, the EPA finalized the "GHG Tailoring Rule" to address GHG emissions from the largest stationary sources. The rule included ~~includes~~ a phased implementation schedule, where ~~when~~ Clean Air Act (CAA) permitting requirements for GHGs began ~~will begin~~ in January 2011 for large facilities that are already required to obtain PSD and Title V permits for other pollutants. However, on June 23, 2014, the Supreme Court of the United States (SCOTUS) vacated the GHG Tailoring Rule provisions which applied EPA permitting to sources solely due to their GHG emissions. ~~In July 2011, CAA permitting requirements expanded to cover all new facilities with GHG emissions of at least 100,000 TPY CO_2e and modifications at existing facilities that would increase these emissions by at least 75,000 TPY.~~ The SCOTUS decision left intact the provisions applying PSD requirements to GHG emissions at sources subject to PSD due to increase in emissions of other PSD pollutants. These permits must demonstrate the use of best available control technologies (BACT) to minimize GHG emission increases when facilities are constructed or significantly modified.

California Initiatives and Regulations:

AB 32 - California Global Warming Solutions Act of 2006

The enactment of AB 32, "The California Global Warming Solutions Act of 2006" (Health & Safety Code § 38500 et seq), established a comprehensive program of regulatory and market mechanisms to achieve quantifiable reductions of GHGs within the state. The California Air Resources Board (ARB) is the primary state agency responsible for developing and maintaining a statewide inventory of GHG emissions and for formulating plans and action steps to reduce current GHG emissions statewide to 1990 GHG emission levels by the year 2020. AB 32 defines GHGs as CO_2, CH_4, N_2O, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride.

From 2007 to 2009, the ARB promulgated several discrete early action measures to reduce GHG emissions prior to the full and final adoption of a plan to reduce aggregate California GHG emissions. Specifically, these discrete early action measures include (1) Green Ports/Electrification, (2) SmartWays truck efficiency, (3) PFCs in semiconductor manufacturing, (4) landfill gas capture, (5) tire inflation program, and (6) vehicle owner refrigerant (HFC-134e) servicing.

The Act instructed the ARB to establish a mandatory GHG reporting and verification program by January 1, 2008. In April 2008, the ARB finalized a regulation for the mandatory reporting of greenhouse gas emissions from major sources (ARB 2008c). In December 2008, the ARB approved the final Climate Change Proposed Scoping Plan ("Scoping Plan") which outlines the State's strategy for achieving the 2020 GHG emissions limit outlined under the law. The Scoping Plan includes recommendations for reducing GHG emissions from most sectors of the California economy.

On June 30, 2009, California was granted a CAA waiver (42 U.S.C. §7543(a)) from EPA to regulate automotive tailpipe CO_2 emissions. The ARB originally approved regulations to reduce GHG emissions from passenger vehicles in September 2004 based upon 2002 legislation, AB 1493 (Pavley). These regulations are expected to reduce passenger vehicle GHG emissions by approximately 22 percent in 2012 and 30 percent in 2016, while improving fuel efficiency and reducing motorists' costs.

In December 2009, the ARB promulgated a low carbon fuel standards (LCFS) in order to reduce the carbon intensity of transportation fuels used in California (i.e., gasoline, compressed natural gas (CNG), ethanol, liquefied natural gas (LNG), hydrogen, diesel, biodiesel, and electricity). It is expected that the LCFS will reduce carbon intensity from the use of such fuels by an average of 10 percent per year. Carbon intensity is a measure of the GHG emissions associated with the combination of all the steps in the "lifecycle" of a transportation fuel.

AB 32 requires the ARB to incorporate the standards and protocols developed by the California Climate Action Registry (CCAR) into the state's future GHG emissions reporting program, to the maximum extent feasible. The current GHG emission calculation methods used by CCAR are contained in *California Climate Action Registry—General Reporting Protocol,* Version 3.1, (CCAR 2009). This protocol categorizes GHG emission sources as either (1) direct (vehicles, on-site combustion, fugitive, and process emissions) or (2) indirect (from off-site electricity, steam, and co-generation).

Regulation for the Mandatory Reporting of Greenhouse Gas Emissions

As part of the AB 32 requirements, the ARB approved a mandatory GHG reporting regulation in December 2007, which became effective January 2009. The regulation requires operators of facilities in California that emit greater than 25,000 metric tons per

year of CO_2 from stationary combustion sources in any calendar year after 2007 to report these emissions on an annual basis.

SB 97 – CEQA Guidelines for Greenhouse Gas Emissions

The Legislature also adopted Senate Bill 97 (SB 97) in 2007. As required by ~~Under~~ SB 97, the State Office of Planning and Research (OPR) developed ~~is required to develop~~ CEQA guidelines *"for the mitigation* of *greenhouse gas emissions or the effects* of *greenhouse gas emissions* as *required by this division."* (Pub. Res. Code § 21083.05(a)). According to the OPR website:

> Those CEQA Guidelines amendments clarified several points, including the following:
>
> - Lead agencies must analyze the greenhouse gas emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines § 15064.4.)
> - When a project's greenhouse gas emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines § 15126.4(c).)
> - Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).)
> - Lead agencies may significantly streamline the analysis of greenhouse gases on a project level by using a programmatic greenhouse gas emissions reduction plan meeting certain criteria. (See CEQA Guidelines § 15183.5(b).)
> - CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.)
>
> As part of the administrative rulemaking process, the Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. Other rulemaking documents can be accessed on the Natural Resources Agency's rulemaking website. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010.

OPR Technical Advisory - CEQA Review of Greenhouse Gases

On June 19, 2008, OPR issued a Technical Advisory, "CEQA AND CLIMATE CHANGE: Addressing Climate Change through California Environmental Quality Act" *(CEQA) Review),* to guide agencies before the final regulations are issued. This Technical Advisory noted:

Lead agencies should determine whether greenhouse gases may be generated by a proposed project, and if so, quantify or estimate the GHG emissions by type and source. Second, the lead agency must assess whether those emissions are individually or cumulatively significant. When assessing whether a project's effects on climate change are "cumulatively considerable" even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects. Finally, if the lead agency determines that the GHG emissions from the project as proposed are potentially significant, it must investigate and implement ways to avoid, reduce, or otherwise mitigate the impacts of those emissions.

The Technical Advisory also noted the scientific knowledge and understanding of how best to perform this analysis was still evolving. The OPR Technical Advisory also explained that:

We realize that perhaps the most difficult part of the climate change analysis will be the determination of significance. Although lead agencies typically rely on local or regional definitions of significance for most environmental issues, the global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions. To this end, OPR has asked ARB technical staff to recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. Until such time as state guidance is available on thresholds of significance for GHG emissions, we recommend the following approach to your CEQA analysis. Source: www.opr.ca.gov/download.php?dl=ceqa/pdfs/june08- ceqa.pdf.

California Natural Resources Agency (Resources Agency) Final Statement of Reasons for Regulatory Action; Amendments to State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97 (December 2009)

Following extensive public review and comment on the proposed amendments to the CEQA Guidelines to address environmental impact analysis and mitigation of GHG emissions, the Resources Agency adopted amendments to the CEQA Guidelines (Title 14, Cal. Code of Regs., § 15000 et seq.) to comply with the mandate set forth in Public Resources Code section 21083.05.

4.4.3 Thresholds of Significance

CEQA Guidelines:

Due to the global nature of the effects of GHG emissions, the primary CEQA concern with GHG emissions is the cumulative impact of a project's incremental GHG emissions when viewed in connection to past, current and probable future project GHG emissions.

According to GHG amendments to the CEQA Guidelines, each public agency that is a CEQA lead agency needs to develop its own approach to performing a climate change analysis for projects that generate GHG emissions. A consistent approach should be applied for the analysis of all such projects, and the analysis must be based on best available information. For these projects, compliance with CEQA entails three basic steps:

- identify and quantify the GHG emissions;
- assess the significance of the impact on climate change; and
- if the impact is found to be significant, identify alternatives and/or mitigation measures that will reduce the impact below significance.

To date, in California, only a few public agencies have published CEQA thresholds of significance for project specific or cumulative anthropogenic GHG emissions. Moreover, how to address greenhouse gases under CEQA is evolving and fluid because formulating significance thresholds for CEQA purposes is especially problematic for GHG emissions. Unlike other air pollutant emissions that create impacts in local and regional air basins (i.e., air pollution nonattainment areas or toxic air contaminant hotspots), anthropogenic GHG emissions are implicated as a cause for *global climate change* regardless of their emission source or location. In addition, simply estimating GHG emissions from a specific project is not an adequate way to gauge the degree to which those emissions would contribute to global warming or climate change. Substantial additional scientific research and regulatory guidance are needed to determine whether a project's incremental GHG emissions impacts on climate change would be significant, and whether and how cumulative GHG emissions will affect global climate change.

The CEQA Guideline amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. They do not, however, establish a specific threshold of significance. Public agencies are not required to adopt significance thresholds for any environmental issue area. The amendments do identify a general methodology for assessing the significance of impacts from project GHG emissions. Specifically, CEQA Guideline Section 15064.4 states:

"(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with

substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project."

These CEQA Guidelines amendments were adopted and became effective on March 18, 2010.

Air Pollution Control Agency GHG Thresholds:

Since the State CEQA Guidelines amendments were never intended to establish a uniform, widely accepted and adopted standard for determining the CEQA significance of project-specific GHG emissions, the ARB and some local air pollution control districts, such as the South Coast Air Quality Management District (SCAQMD), have been working to develop interim thresholds for evaluating GHG emissions. Both the ARB and SCAQMD prepared draft interim thresholds that would employ a tiered approach to determining significance.

In 2008, the ARB proposed an interim screening threshold of 7,000 metric tons (MT) CO2e per year for industrial, non–transportation emissions, as well as a threshold that would evaluate compliance with "performance standards" for transportation and construction activities. The ARB has never adopted their interim thresholds. Also in 2008, the SCAQMD Governing Board adopted an interim GHG significance threshold for stationary air pollution sources, rules, and plans where the SCAQMD is the lead agency for CEQA purposes. The SCAQMD adopted a 5-tier approach for their interim threshold that includes consideration of direct, indirect, and, to the extent that information is available, life cycle emissions during project construction and operation. Construction emissions are amortized over the life of the project, defined as 30 years,

and added to the operational emissions, which are then compared to the applicable interim GHG significance threshold tier. Tier 3 is a screening tier with a 10,000 $MTCO_2e$/yr threshold. It is based on the District's policy objective of capturing 90 percent of GHG emissions from new industrial projects where the SCAQMD is the CEQA lead agency. The SCAQMD has not adopted GHG significance thresholds for projects where other agencies are the lead agency.

Both the Bay Area Air Quality Management District (BAAQMD) and the San Joaquin Valley Air Pollution Control District (SJVAPCD), the next two largest air pollution control districts in California following the SCAQMD, have also developed recommended thresholds of significance for land use projects.

On June 2, 2010, the BAAQMD's Board of Directors unanimously adopted new and updated thresholds of significance to assist in the review of projects under the CEQA. The new thresholds included three sets of thresholds for GHGs: one for projects where the BAAQMD is the lead agency and two for land use development projects where other public agencies are the CEQA lead agencies.

The threshold for projects where the BAAQMD is the CEQA lead agency is 10,000 MTCO2e/yr, the same as the SCAQMD's Tier 3 screening threshold. The GHG thresholds for projects where other agencies are the CEQA lead agencies include a project-level (*e.g.*, residential, commercial, industrial, and public land uses and facilities) threshold, and a plan-level (*e.g.*, general plans and specific plans) threshold.

The BAAQMD's project level threshold is compliance with a Qualified Climate Action Plan, or a numeric threshold of 1,100 MT CO2e/yr, or a per capita efficiency metric of 4.6 $MTCO_2e$/SP/yr. [Note: "SP" refers to service population, which includes project residents and any employees that will work on the project site.] ~~* (project residents + employees).~~ The threshold for plans is compliance with a qualified climate action plan (or similar criteria included in a general plan) or a per capita metric of 6.6 $MTCO_2e$/SP/yr. ~~(residents + employees).~~

However, on March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted its latest set CEQA thresholds for various air pollutants, including for GHG emissions. The court did not determine whether the thresholds were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court thus issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the District had complied with CEQA.

In view of the court's order, the BAAQMD is no longer recommending its new and updated air pollutant thresholds, including its GHG thresholds, as generally applicable measures of a project's significant air quality impacts. Lead agencies within the BAAQMD's boundaries will need to determine their own appropriate air quality thresholds of significance based on substantial evidence in the record. They may,

however, continue to use the BAAQMD's 1999 set of thresholds as they find applicable. However, those thresholds are only for criteria air pollutants and do not include thresholds for GHG emissions.

SJVAPCD has chosen a slightly different approach to the CEQA significance threshold for GHG emissions. On December 17, 2009, the District adopted the guidance document: "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the accompanying policy document: "District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS), to assess significance of project-specific greenhouse gas emissions on global climate change during the environmental review process required by CEQA.

Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact. The guidance, however, does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.

On March 28, 2012, the San Luis Obispo Air Pollution Control District adopted CEQA greenhouse gas (GHG) emission thresholds for residential, commercial, and industrial projects. The thresholds were developed based on substantial evidence that adheres to the requirements of Senate Bill 97 in a consistent and defensible manner, and ensures new development is able to provide its fair share of GHG reductions to meet the State's AB 32 GHG reduction goals.

The San Luis Obispo Air Pollution Control District adopted a menu approach for residential/commercial land use projects as the most effective approach for assessing the GHG emission impacts for development projects in San Luis Obispo County. Any of the following three options may be used to determine the significance of a residential or commercial project's GHG emission impacts: 1) Qualitative GHG Reduction Strategies (e.g., Climate Action Plans); or, 2) Bright-Line Threshold (1,150 MT CO2e/yr); or: 3) Efficiency-Based Threshold (4.9 $MTCO_2e/SP/yr$). ~~(4.9 MT CO2e/SP service population/yr).~~

The Santa Barbara County Air Pollution Control District (SBAPCD) adopted ~~is developing~~ GHG significance thresholds on April 30, 2015 for projects where the SBAPCD is the lead agency. Their ~~proposed~~ GHG threshold is 10,000 $MTCO_2eq/yr$, the same as SCAQMD's Tier 3 screening threshold. ~~To date, the SBAPCD has not adopted its proposed GHG threshold.~~

The Ventura County Air Pollution Control District (VCAPCD) has not yet adopted any one of these approaches to setting a threshold of significance for land use development projects nor has it developed its own method of determining significance in the area of project GHG emissions. CEQA Guidelines §15064.7(c) states: *"When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."*

The recently adopted revisions to the State CEQA Guidelines, described above, added a new evaluation section for GHG emissions to the CEQA Guidelines initial study checklist (See Appendix G of the CEQA Guidelines). That section poses the following questions:

Would the project:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing emissions of GHGs?

Given the explicit requirements of these revised CEQA Guidelines, the County of Ventura has determined, with the assistance of VCAPCD, that it will use the following Threshold of Significance to determine the potential environmental impact significance of proposed GHG emissions. This Threshold was selected after an extensive review of (1) federal, state, and regional agency GHG regulatory thresholds and (2) GHG CEQA thresholds of significance being developed or adopted by local air quality agencies in California. Thus, for purpose of the County's processing of discretionary permit applications, the Threshold of Significance (i.e. the point where a project's contribution to the impact of global warming is cumulatively considerable) is as follows:

A project has a cumulatively considerable impact on global climate change if it would cause an increase in GHG emissions in excess of 10,000 metric tonnes of CO_2e per year.

~~**The project would generate GHG emissions (in CO2e) in excess of 10,000 metric tons per year.**~~

This threshold is consistent with CEQA significance thresholds adopted by the SCAQMD and the SBAPCD. ~~threshold proposals in the SCAQMD, the VCAPCD, and the SBAPCD~~. Therefore, while not all local air quality districts have formally proposed or adopted this or any other threshold of significance for GHG emissions, it is considered a reasonably suitable threshold for this environmental impact analysis.

Because the project's anticipated annual ~~emission of~~ GHG emissions (298 $MTCO_2e$ per year for the three new wells and one re-drilled well; 461 $MTCO_2e$ per year for all six wells at the facility and associated trucking) ~~(397 metric tons per year for the three new wells and one re-drilled well; 630 metric tons per year for all six wells at the facility and associated trucking)~~ is far before this threshold of significance, no potentially significant impacts related to greenhouse gas emissions would occur with project implementation. Impacts would be less than significant (Class III).

Revised Reference List (10-23-15):

7.0 REFERENCES AND EIR PREPARERS

7.1 References

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