

## DOCKETED

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## Appendix M

### Responses to PDOC Comment Letters

## **Puente Power Project - Response to PDOC Comment Letter**

### **Ventura County APCD Rule 26.9 DOC/Authority to Construct No. 00013-370**

#### **Shirley and Larry Godwin – Email Dated June 20, 2016**

There were no revisions made to the PDOC in response to these comments.

1. The term “nominal” as used in the PDOC was not intended to mean “small”. Nominal was used in the context of an electrical rating which generally means a nameplate rating.
2. The term “generating capacity” was used in a manner similar to the word capacity’s definition which means “maximum amount”. It is a matter of fact that the maximum amount of electricity that is “permitted” to be generated at the Mandalay Generating Station (MGS) will be reduced by 85% when comparing the combined permitted generating capacity of MGS Unit 1 and MGS Unit 2 to the permitted generating capacity of the proposed Puente Power Project.

The PDOC does compare “present operations” (actual operations) to “planned future operations” (potential emissions) in Table VII-20. In fact, VCAPCD Rule 26, “New Source Review”, requires Emission Reduction Credit offsets for NOx because the actual emissions of NOx from MGS Unit 2 are less than the potential or permitted emissions for the Puente Power Project.

3. VCAPCD Rule 26.1, “New Source Review - Definitions” defines the terms “emissions unit” and “stationary source”. In addition, VCAPCD Rule 26, “New Source Review – General”, states that the provisions of Rule 26 are applicable on a “pollutant-by-pollutant” and “emissions unit-by-emissions unit” basis. Therefore, for the purposes of the DOC, the requirements of Rule 26.2, “New Source Review – Requirements” (including Best Available Control Technology, Offsets, and Protection of Ambient Air Quality Standards and Increments) apply only to the proposed Puente Power Project at the existing Mandalay Generating Station (VCAPCD Permit No. 00013). For the purpose of this DOC, Rule 26 does not apply to the Ormond Beach Generating Station (VCAPCD Permit No. 00065) or the McGrath Beach Peaker (VCAPCD Permit No. 07891) as they are defined by Rule 26.1 to be separate stationary sources. Mandalay Unit 3 will in fact continue to operate as currently allowed by VCAPCD Permit No. 00013 and is not subject to the requirements of Rule 26, “New Source Review” as it is not considered to be a new, replacement, modified or relocated emissions unit as it relates to the Puente Power Project.

The ambient air quality analysis modeling conducted in Appendix G of the PDOC was required by Section C of Rule 26.2, “New Source Review – Requirements”. Note that Rule 26.2.C requires its ambient air quality analysis modeling for only a new, replacement, modified or relocated emissions units. Therefore, the Appendix G modeling was only conducted for the Puente Power Project. Rule 26.2.C does not require ambient air quality analysis modeling for “nearby” emissions units such as Unit

3 at the Mandalay Generating Station (MGS Unit 3) or the McGrath Beach Peaker (VCAPCD Permit No. 07891).

The VCAPCD understands that the California Energy Commission will model the Puente Power Project and these nearby emission sources as a part of their Final Staff Assessment to demonstrate that their combined operation will not cause a violation of the ambient air quality standards.

## **Puente Power Project - Response to PDOC Comment Letter**

### **Ventura County APCD Rule 26.9 DOC/Authority to Construct No. 00013-370**

#### **Shana Lazerow – Letter Dated July 29, 2016**

#### **Communities for a Better Environment / California Environmental Justice Alliance**

In response to these comments, the FDOC deletes the discussion regarding emergency diesel engines at a typical Ventura County hospital.

1. The VCAPCD respectfully disagrees that the discussion regarding emergency diesel engines at a typical Ventura County hospital is “spurious propaganda”. It is important to understand the “bigger picture” of sources of electricity generation that the VCAPCD regulates through its permit system in its efforts to control air pollution in Ventura County. Most of the electricity used on a daily basis in Ventura County is “imported” from outside the County and according to [www.ca.iso.com](http://www.ca.iso.com) includes natural gas-fired units and renewables such as wind, solar, and geothermal. The Ventura County APCD has no regulatory authority over imported electricity. Without imported electricity, the options for electrical generation within Ventura County currently include natural gas fired units at the NRG Mandalay Generating Station, NRG Ormond Beach Generating Station, SCE McGrath Beach Peaker, and about 750 emergency backup diesel-fired engines at locations such as factories, office buildings, hotels, banks, fire stations, police stations, cell phone towers, wastewater treatment plants, drinking water pump stations, sewage lift stations, assisted living facilities, and hospitals. About 125 of these emergency diesel engines are located in Oxnard. These emergency diesel engines if and when operated emit relatively large quantities of NOx and diesel particulate matter, a known human carcinogen. Any proposed electrical generating strategy for Ventura County must include the use of emergency diesel engines only as a “last resort”.
2. The VCAPCD disagrees that the Puente Power Project is a New Emissions Unit as compared to a Replacement Emissions Unit as defined in VCAPCD Rule 26, “New Source Review”.

VCAPCD Rule 26.1.21 defines New Emissions Unit as “*An emissions unit that is part of a new stationary source, an emissions unit that is added to an existing stationary source, or any existing emissions unit that is located at a stationary source in violation of Rule 10*”.

VCAPCD Rule 26.1.29 defines Replacement Emissions Unit as “*An emissions unit which supplants another emissions unit where the replacement emissions unit serves the identical function of the emission unit being replaced*”.

As stated in this DOC, the Puente Power Project is being installed at the Mandalay Generating Station (MGS), which is an existing stationary source with VCAPCD Permit to Operate No. 00013. If and when constructed and operated, the Puente Power Project will “supplant” MGS Unit 1 and MGS Unit 2 as these existing emissions units

will be shut down and will no longer be operated. The word supplant is defined at [www.merriam-webster.com/dictionary/supplant](http://www.merriam-webster.com/dictionary/supplant) as “to take the place of (someone or something that is old or no longer used or accepted)”.

The ultimate fate of the existing emissions units is irrelevant to the definition of Replacement Emissions Unit provided that the existing emissions units are currently in operation with a valid VCAPCD Permit to Operate. In fact, it is quite common in the VCAPCD permitting system for a permit holder to submit an Authority to Construct application to replace an existing emissions unit when the existing emissions unit is subject to a future rule or regulation that will not let the existing emissions unit operate “as-is” into the future. Specifically for the Once Through Cooling (OTC) Policy, the VCAPCD understands that there are other alternatives to shut-down that would allow MGS Units 1 and 2 to operate into the future (although not relevant to the definition of Replacement Emissions Unit as discussed above).

Although as discussed above, the ultimate fate of MGS Units 1 and 2 is not relevant to the VCAPCD definition of Replacement Emissions Unit, the VCAPCD disagrees with the premise that “Mandalay Units 1 and 2 must be shut down regardless of whether P3 is built” as required by Once Through Cooling Policies. The VCAPCD has reviewed the California EPA State Water Resources Control Board OTC Policy and has concluded that there are other options to complying with the OTC Policy in addition to the shutdown of units that use sea water for cooling as described in the following links:

[http://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/policy.shtml](http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/policy.shtml)

[http://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/powerplants/mandalay/](http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/powerplants/mandalay/)

[http://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/powerplants/mandalay/docs/mandalay\\_letter\\_04282015.pdf](http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/powerplants/mandalay/docs/mandalay_letter_04282015.pdf)

As for MGS Units 1 and 2, in the April 23, 2015 letter to the State Water Resources Board referenced above, NRG stated that “If P3 is not approved, then MGS would investigate other Track 1 or Track 2 compliance methods to comply with the Policy.”

As long as MGS Units 1 and 2 hold a valid APCD Permit to Operate, the Puente Power Project is considered to be Replacement Emissions Unit and not a New Emissions Unit. Section H (Renewal Fee) of Rule 42, “Permit Fees”, confirms that a stationary source with a Permit to Operate may maintain its permit even though it may not be in operation as follows:

*If a source will be non-operational during the permit period for the renewed permit, the permittee may pay a non-refundable fee equal to a minimum renewal fee based on no permitted emissions. To exercise this option, the permittee shall submit a written request to the Air Pollution Control Officer. Prior to resuming operation of a non-operational source, the permittee shall pay the regular renewal fee in full.*

In addition, Section B.3.b (Permitted Emissions) of Rule 29, “Conditions on Permits”,

confirms that a stationary source is required to surrender its permit for only emissions units that are permanently removed as follows:

*Upon annual renewal, any permitted emissions unit that has been permanently removed from the stationary source shall be removed from the Permit to Operate and the permitted emissions for the stationary source shall be reduced by the permittee emissions calculated for the emissions unit. If any piece of combustion equipment can no longer use a fuel it was permitted to use, the permitted emissions for the stationary source shall be reduced as appropriate. The permittee shall be notified in writing of, the removal of any permitted equipment from a Permit to Operate, and any revisions to permitted emissions, made pursuant to this subsection. Such notice shall be given at the time of notification of the renewal fee due.*

The definition of Replacement Emission Unit includes the term “serves the identical function”. The word serve is defined at [www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone](http://www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone) as “act as, substitute for, function as, do the work of, do duty as • She ushered me into the front room, which served as her office”. In terms of electrical generation at the Mandalay Generating Station, the Puente Power Project will “substitute for” and “do the work of” MGS Unit 1 and MGS Unit 2. The fact the Puente Power Project (simple cycle gas turbine) and MGS Units 1 and 2 (steam generating units) are not identical emissions units is irrelevant to the definition of Replacement Emissions Unit.

The word “function” is defined at [www.collinsdictionary.com/dictionary/english/function](http://www.collinsdictionary.com/dictionary/english/function) as “the natural action or intended purpose of a person or thing in a specific role ⇒ the function of a hammer is to hit nails into wood.” In the simplest form, the function of MGS Units 1 and 2 is to generate electricity. As stated in the DOC: “The new 262 MW gas turbine will be connected to the same Southern California Edison 220-KV switchyard that the two (2) existing 215 MW Babcock and Wilcox Steam Generator boilers (MGS Units 1 and 2) are connected to. Once operating, the new 262 MW gas turbine will provide dispatchable power to provide voltage support to the local reliability area in the same manner as the current two 215 MW Babcock and Wilcox Steam Generators.” Beyond the single, primary function of generating electricity, the Puente Power Project and MGS Units 1 and 2 have additional identical secondary functions to provide dispatchable power to provide voltage support to the local reliability area.

The VCAPCD has determined that the Puente Power Project is a Replacement Emissions Unit for MGS Units 1 and 2 and is not a New Emissions Unit as defined by VCAPCD Rule 26.1. Given the above definitions of “serve” and “function”, a hammer and an electric-powered nail gun could serve the identical function of hitting a nail into a piece of wood. The speed, efficiency, color, cost, etc. of the device that hits the nail into the piece of wood is not relevant to the identical function. As discussed above, to qualify as a Replacement Emissions Unit, the emissions units do not need to be identical, but rather the emissions units need to serve an identical function.

The definition of Replacement Emissions Unit in VCAPCD Rule 26.1 was carefully designed to be a simple definition to actually encourage the construction of

replacement emissions units as opposed to the retrofit or repair of existing emissions units. As a comparison, “Replacement Unit” is defined in EPA’s Prevention of Significant Deterioration (PSD) regulation at 40 CFR Part 52.21(b)(33) as follows:

*(33) Replacement unit means an emissions unit for which all the criteria listed in paragraphs (b)(33)(i) through (iv) of this section are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.*

*(i) The emissions unit is a reconstructed unit within the meaning of §60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit.*

*(ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.*

*(iii) The replacement does not alter the basic design parameters (as discussed in paragraph (cc)(2) of this section) of the process unit.*

*(iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.*

In the EPA PSD regulation, a Replacement Unit has a rigorous definition as it is exempt from the requirements of PSD as Replacement Unit is included in the PSD definition of Existing Emissions Unit. In PSD, a Replacement Unit is not subject to the PSD definition of Best Available Control Technology (BACT) and other PSD requirements, such as air quality impact analysis dispersion modeling. In contrast, as defined by VCAPCD Rule 26.1, a Replacement Emissions Unit is subject to the requirements of Rule 26, New Source Review, including the Best Available Control Technology (BACT), Offsets, and Protection of Ambient Air Quality Standards and Ambient Air Increments requirements of Rule 26.2. Note that the VCAPCD’s definition of BACT is essentially the federal definition of Lowest Achievable Emission Rate (LAER) which is more stringent than BACT required by PSD.

VCAPCD Rule 26 encourages Replacement Emissions Units because Replacement Emissions Units require the installation of BACT (=LAER), and are not exempt from the requirement to install BACT. Since BACT is required, a replacement emissions unit will likely be the superior option compared to retrofitting or repairing an existing emissions unit to operate into the future. In terms of electrical generation, the Puente Power Project is more efficient, faster starting, smaller in size, and will result in less overall air emissions per megawatt of power generated as compared to the continued operation of MGS Units 1 and 2. In order to encourage replacement instead of repair or retrofit, Rule 26.6, “New Source Review – Calculations”, requires a “potential to potential” emission increase calculation (Rule 26.6.D.2) except for the “actual to potential” emission increase calculation of Rule 26.6.D.7. For the Puente Power Project, the emissions increase calculation of Rule 26.6.D.2 (potential to potential) was used for



ROC, PM10, SOx, and CO. Since the Puente Power Project was determined to be a major modification for NOx, the emission increase calculation of Rule 26.6.D.7 (pre-project actual to post-project potential) was used for NOx. The CO emissions calculations were conducted in the PDOC even though Rule 26.2 does not require BACT or emission offsets for CO.

The actual to potential emissions increase calculation of Rule 26.6.D.7 for NOx does not require that the actual NOx emissions be reduced to reflect BACT. Rather, the Rule 26.6.C.1 definition of Actual Emissions requires that the actual emissions not “exceed the permitted emissions” and not be operated “in violation of any applicable federal, state or District law, rule, regulation, order, or permit condition”. The actual emissions of NOx for MGS Units 1 and 2 were determined to be in compliance with all applicable requirements, including VCAPCD Rule 59, “Electrical Power Steam Generating Equipment – Oxides of Nitrogen Emissions”. In order to comply with Rule 59, MGS Units 1 and 2 are fired only on natural gas and equipped and operated with selective catalytic reduction (SCR) for NOx emissions control. MGS Units 1 and 2 meet a Rule 59 NOx emissions limit of 0.10 pounds of NOx per megawatt hour (MW-hr) produced (net).

The potential to potential emissions increase calculation of Rule 26.6.D.2 for ROC, PM10, and SOx does require that the post-project potential emissions and pre-project potential emissions be adjusted to reflect the application of the current Best Available Control Technology. The current Best Available Control Technology for ROC, PM10, and SOx for both the Puente Power Project and for MGS Units 1 and 2 is the use of PUC regulated natural gas and no additional reductions are required.

3. The Southern California Edison Emission Reduction Credits (ERC) Nos. 1078, 1079, 1080, 1083, 1085, 1091, 1092, 1094, 1097, 1104, and 1107 proposed for the Puente Power Project (a total of 50.66 tons of NOx per year) all comply with the emission offset requirements of VCAPCD Rule 26, "New Source Review". Rule 26 does not have a “distance” or “location” requirement for the location of the emissions requiring offsets relative to the location that was the source of the ERCs. This is true because ozone is a regional problem in Ventura County.

ERC No. 1092 represents 23.24 tons of NOx per year (59.7%) of the 38.91 tons of NOx per year required as offsets for the Puente Power Project. ERC No. 1092 was not created in Ojai, Ventura, or Fillmore. ERC No. 1092 was issued for the replacement of eleven (11) 200 BHP Waukesha rich-burn natural gas fired engines, used to power water well pumps for irrigation water, with electric motors. The engines were owned by the Pleasant Valley County Water District and were all located and used on the Oxnard Plain, south of Camarillo and east of Oxnard. The engines were removed from service, and replaced by electric motors, at their respective water wells as verified by a VCAPCD field inspection.

The VCAPCD’s permitting program does contain an environmental justice component as required by the EPA Section 105 Grant process. The EPA-approved work plan for the Section 105 Grant requires the following Environmental Justice Objective for the

VCAPCD Title V and New Source Review Permitting Program:

*Enhance the opportunities for public involvement in the permitting process when new or modified sources that significantly increase air pollutant emissions are located in areas likely to have environmental justice issues. Enhanced opportunities will occur through preparing and distributing fact sheets in English and Spanish, if appropriate, to individuals or organizations in the vicinity of the new or modified source, and providing the opportunity for public meetings. For purposes of this milestone, a significant increase in air pollutant emissions is defined as an increase triggering the public notice requirements in the District rules for criteria pollutants, or 10 tons per year of a single EPA HAP (listed pursuant to §112(b) of the federal Clean Air Act), or 25 tons per year of a combination of EPA HAPs.*

Since the Puente Power Project triggered the public notification requirements of Rule 26.7, “New Source Review – Notification” for NO<sub>x</sub> emissions, the VCAPCD followed this environmental justice objective and provided a public notice for the Puente Power Project in English, Spanish, Mixteco, and Tagalog both in local newspapers (Ventura County Star in English and Ventura County VIDA in Spanish) and on the VCAPCD website (in all four languages). In addition, the VCAPCD participated in the CEC Preliminary Staff Assessment (PSA) workshop that was conducted in Oxnard on July 21, 2016 that included a “real time” translation in Spanish.

## **Puente Power Project - Response to PDOC Comment Letter**

### **Ventura County APCD Rule 26.9 DOC/Authority to Construct No. 00013-370**

#### **Alison Seel and Brian Segee – Letter Dated July 29, 2016**

#### **Sierra Club / Environmental Defense Center**

In response to these comments, the FDOC includes a revision to the discussion regarding the use of the Adjusted U\* Option in Appendix G, “Ambient Air Quality Analysis and Risk Management Review”.

1. The ambient air quality analysis modeling conducted in Appendix G of the PDOC was required by Section C of Rule 26.2, “New Source Review – Requirements”. Rule 26.2.C states:

*The APCO shall deny an applicant an Authority to Construct for any new, replacement, modified or relocated emissions unit that would cause the violation of any ambient air quality standard or the violation of any ambient air increment as defined in 40 CFR 51.166(c). In making this determination the APCO shall take into account any offsets which were provided for the purpose of mitigating the emission increase.*

Note that Rule 26.2.C requires its ambient air quality analysis modeling for only a new, replacement, modified or relocated emissions units (underline added). Therefore, the Appendix G modeling was only conducted for the Puente Power Project. Rule 26.2.C does not require ambient air quality analysis modeling for “nearby” emissions units such as Unit 3 at the Mandalay Generating Station (MGS Unit 3) or the McGrath Beach Peaker (VCAPCD Permit No. 07891). Note that the ambient air quality analysis modeling conducted for the Puente Power Project did not take into account the NOx Emission Reduction Credits provided as offsets even though allowed by Rule 26.2.C.

The VCAPCD understands that the California Energy Commission will model the Puente Power Project and these nearby emission sources as a part of their Final Staff Assessment to demonstrate that their combined operation will not cause a violation of the ambient air quality standards.

The ambient air quality analysis modeling required by Rule 26.2.C is not the same as the modeling required by EPA’s Prevention of Significant Deterioration (PSD) program. This is because the requirements of Ventura County APCD Rule 26, “New Source Review”, a non-attainment permitting rule, are more stringent than the requirements of PSD for attainment pollutants. For example, Rule 26.2 requires emission offsets at a threshold of 5 tons per year for ROC and NOx and at a threshold of 15 tons per year for PM10 and SOx. Note that EPA’s PSD program does not require emission offsets at all.

Although Rule 26.2 and EPA’s PSD program both require the application of Best Available Control Technology (BACT), the Rule 26.2 definition of BACT is more

stringent than the PSD definition of BACT as the Rule 26.2 definition of BACT is essentially the EPA definition of LAER (Lowest Achievable Emission Rate). In addition, Rule 26.2 has a “zero” BACT threshold for ROC, NO<sub>x</sub>, PM<sub>10</sub>, and SO<sub>x</sub> while the PSD program only requires BACT for “major” sources that trigger PSD applicability. Were it not for its proposed location at the existing Mandalay Generating Station, the Puente Power Project by itself has emissions much lower than the PSD applicability thresholds.

2. The air dispersion modeling conducted for the PDOC was intended to comply with Rule 26.2.C and was not intended to comply with PSD modeling requirements. If a PSD Permit is required for the Puente Power Project, the PSD-required modeling will be conducted in accordance with PSD modeling regulations and requirements as a part of the EPA Region 9 PSD permitting process.

Although the VCAPCD originally used the modeling beta option called “Adjusted U\*” to determine compliance with the Rule 26.2.C ambient air quality analysis discussed above, Appendix G for the Puente Power Project included modeling both with, and without, the “Adjusted U\*” to alleviate earlier concerns raised by the Sierra Club.

As shown in Appendix G, the Puente Power Project complied with Rule 26.2.C under various operating scenarios for all pollutants, both with and without the “Adjusted U\*” option. For all pollutants, except for NO<sub>2</sub> as discussed below, compliance with Rule 26.2.C was demonstrated by a wide margin. For compliance with the CO 8-hr NAAQS of 10,000 µg/m<sup>3</sup>, Appendix G Table 5-14 (with Adjusted U\*) shows that the total CO concentration was 13.4% of the standard, and in Table 5-15 (without Adjusted U\*) the total CO concentration was 14.3% of the standard. This is a difference of about only 1%. This makes sense considering that the Puente Power Project is proposed to be fired on pipeline quality natural gas and is proposed to be equipped and operated with selective catalytic reduction (SCR) for NO<sub>x</sub> control and an oxidation catalyst.

For NO<sub>2</sub>, Appendix G showed that the Puente Power Project will comply with the NO<sub>2</sub>, 1-hour NAAQS of 188 µg/m<sup>3</sup> under all scenarios with and without the “Adjusted U\*” option. Table 5-14 and Table 5-15 of Appendix G showed the highest 1-hour NO<sub>2</sub> concentrations. As shown in these tables, the NO<sub>2</sub> background concentration is higher than the NO<sub>2</sub> modeled concentration. In Table 5-14 (with Adjusted U\*) the total NO<sub>2</sub> concentration was 60.1% of the standard, and in Table 5-15 (without Adjusted U\*) the total NO<sub>2</sub> concentration was 82.9% of the standard. Despite the contention that “the use of Adjusted U\* significantly deflates modeled air impacts across multiple modeling runs”, the use of Adjusted U\* had little effect on the modeling results and compliance with Rule 26.2.C.

3. The VCAPCD does not agree with the comment that “*The PDOC incorrectly classifies Puente as a replacement emissions unit for MGS Unit 2 and in doing so triggers an accounting method for the increase in air pollution that underestimates the true impacts*”.

VCAPCD Rule 26.1.21 defines New Emissions Unit as “*An emissions unit that is part of a new stationary source, an emissions unit that is added to an existing stationary*”

source, or any existing emissions unit that is located at a stationary source in violation of Rule 10”.

VCAPCD Rule 26.1.29 defines Replacement Emissions Unit as “An emissions unit which supplants another emissions unit where the replacement emissions unit serves the identical function of the emission unit being replaced”.

As stated in this DOC, the Puente Power Project is being installed at the Mandalay Generating Station (MGS), which is an existing stationary source with VCAPCD Permit to Operate No. 00013. If and when constructed and operated, the Puente Power Project will “supplant” MGS Unit 1 and MGS Unit 2 as these existing emissions units will be shut down and will no longer be operated. The word supplant is defined at [www.merriam-webster.com/dictionary/supplant](http://www.merriam-webster.com/dictionary/supplant) as “to take the place of (someone or something that is old or no longer used or accepted)”.

The definition of Replacement Emissions Unit includes the term “serves the identical function”. The word serve is defined at [www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone](http://www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone) as “act as, substitute for, function as, do the work of, do duty as • She ushered me into the front room, which served as her office”. In terms of electrical generation at the Mandalay Generating Station, the Puente Power Project will “substitute for” and “do the work of” MGS Unit 1 and MGS Unit 2. The fact the Puente Power Project (simple cycle gas turbine) and MGS Units 1 and 2 (steam generating units) are not identical emissions units is irrelevant to the VCAPCD definition of Replacement Emissions Unit.

The word “function” is defined at [www.collinsdictionary.com/dictionary/english/function](http://www.collinsdictionary.com/dictionary/english/function) as “the natural action or intended purpose of a person or thing in a specific role ⇒ the function of a hammer is to hit nails into wood.” In the simplest form, the function of MGS Units 1 and 2 is to generate electricity. As stated in the DOC: “*The new 262 MW gas turbine will be connected to the same Southern California Edison 220-KV switchyard that the two (2) existing 215 MW Babcock and Wilcox Steam Generator boilers (MGS Units 1 and 2) are connected to. Once operating, the new 262 MW gas turbine will provide dispatchable power to provide voltage support to the local reliability area in the same manner as the current two 215 MW Babcock and Wilcox Steam Generators.*” Beyond the single, primary function of generating electricity, the Puente Power Project and MGS Units 1 and 2 have additional identical secondary functions to provide dispatchable power to provide voltage support to the local reliability area.

The VCAPCD is implementing the intention of Rule 26 that the Puente Power Project is a Replacement Emissions Unit for MGS Units 1 and 2 and is not a New Emissions Unit, as defined by VCAPCD Rule 26.1. Given the above definitions of “serve” and “function”, a hammer and an electric-powered nail gun both serve the identical function of hitting a nail into a piece of wood. The speed, efficiency, color, cost, etc. of the device that hits the nail into the piece of wood is not relevant to the identical function. As discussed above, to qualify as a Replacement Emissions Unit, the emissions units do not need to be identical, but rather the emissions units need to serve an identical function.

The definition of Replacement Emissions Unit in VCAPCD Rule 26.1 was carefully designed to be a simple definition to actually encourage the construction of replacement emissions units as opposed to the retrofit or repair of existing emissions units. As a comparison, “Replacement Unit” is defined in EPA’s Prevention of Significant Deterioration (PSD) regulation at 40 CFR Part 52.21(b)(33) as follows:

*(33) Replacement unit means an emissions unit for which all the criteria listed in paragraphs (b)(33)(i) through (iv) of this section are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.*

*(i) The emissions unit is a reconstructed unit within the meaning of §60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit.*

*(ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.*

*(iii) The replacement does not alter the basic design parameters (as discussed in paragraph (cc)(2) of this section) of the process unit.*

*(iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.*

In the EPA PSD regulation, a Replacement Unit has a rigorous definition as it is exempt from the requirements of PSD as Replacement Unit is included in the PSD definition of Existing Emissions Unit. In PSD, a Replacement Unit is not subject to the PSD definition of Best Available Control Technology (BACT) and other PSD requirements, such as air quality impact analysis dispersion modeling. In contrast, as defined by VCAPCD Rule 26.1, a Replacement Emissions Unit is subject to the requirements of Rule 26, New Source Review, including the Best Available Control Technology (BACT), Offsets, and Protection of Ambient Air Quality Standards and Ambient Air Increments requirements of Rule 26.2. Note that the VCAPCD’s definition of BACT is essentially the federal definition of Lowest Achievable Emission Rate (LAER) which is more stringent than BACT required by PSD.

VCAPCD Rule 26 encourages Replacement Emissions Units (as opposed to the retrofit of existing emissions units) because Replacement Emissions Units require the installation of BACT (=LAER), and are not exempt from the requirement to install BACT. Since BACT is required, a replacement emissions unit will likely be the superior air quality option compared to retrofitting or repairing an existing emissions unit to operate into the future.

For the Puente Power Project, the VCAPCD’s design of the definition of Replacement Emissions Unit has accomplished its exact goal. Rather than being repaired or retrofitted to meet the California EPA State Water Resources Control Board OTC (Once Through Cooling) Policy, the “Eisenhower-era” MGS Units 1 and 2 gas-fired steam boilers are being replaced with modern-day electrical generating equipment. In terms of electrical generation, the Puente Power Project is more efficient, faster-starting, smaller in size, and will result in less overall air emissions per megawatt of

power generated as compared to the continued operation of MGS Units 1 and 2 (if retrofitted to comply with the OTC Policy). In order to encourage replacement, instead of repair or retrofit, Rule 26.6, “New Source Review – Calculations”, requires a “potential to potential” emission increase calculation (Rule 26.6.D.2) except for the “actual to potential” emission increase calculation of Rule 26.6.D.7. For the Puente Power Project, the emissions increase calculation of Rule 26.6.D.2 (potential to potential) was used for ROC, PM10, SOx, and CO. Since the Puente Power Project was determined to be a major modification for NOx, the emission increase calculation of Rule 26.6.D.7 (pre-project actual to post-project potential) was used for NOx. The CO emissions calculations were conducted in the PDOC even though Rule 26.2 does not require BACT or emission offsets for CO.

The difference in ROC emission factors between the Puente Power Project and MGS Unit 2 is not relevant to the determination of whether the Puente Power Project is a new emissions unit or replacement emissions unit under Rule 26. In addition, the emissions unit’s annual hours of operation limit is a necessary component to calculate its potential to emit. The fact that the Puente Power Project will have an hours per year limit that is lower than full-time operation of 8,760 hours per year is also not relevant to the determination of new vs. replacement emissions unit.

MGS Unit 2 and the proposed Puente Power Project are both fired by commercial pipeline natural gas. In addition, the Puente Power Project will be equipped and operated with an oxidation catalyst that may provide additional control for ROC emissions that may result from the combustion of natural gas. The ROC emission factor of 1.4 lb/MMCF for MGS Unit 2 was not determined by source testing of MGS Unit 2, but rather was based on emission factors in EPA AP-42 Table 1.4-3 (dated January 1995) for Utility/large industrial boilers rated at greater than 100 MMBTU/Hr heat input. The ROC emission factor of 2.61 lb/MMCF for the Puente Power Project is based on an ROC emissions limit of 2.0 ppmvd that will be verified by stack source testing.

A more recent version of EPA AP-42 emission factors for natural gas combustion was released in 1998 which would have increased the ROC emission factor for MGS Unit 2 from 1.4 lb/MMCF to 5.5 lb/MMCF. However, the VCAPCD elected not to change the emission factor for the calculation of permitted emissions for MGS Unit 2 at that time as both the older and newer ROC emission factors have a rating of “C” and there was no other evidence to justify the increase of the ROC emission factor.

Given the above, the proposed installation and operation of the Puente Power Project as a replacement for MGS Unit is expected to result in a “potential to potential” decrease in ROC emissions due to the fact that the emissions units both fire commercial natural gas, the Puente Power Project will be operated with an oxidation catalyst, and the permitted hours of operation will decrease from 8,760 to 2,150 hours per year.

## Puente Power Project - Response to PDOC Comment Letter

### Ventura County APCD Rule 26.9 DOC/Authority to Construct No. 00013-370

#### Robert Sarvey and Rob Simpson – Email Dated July 29, 2016

##### Robert Sarvey / Helping Hand Tools (2HT)

In response to these comments, Appendix K, Condition Nos. 27, 28, 29, 31, and 38 have been revised to clarify that all PM10 emissions are assumed to be equal to PM2.5 emissions. In addition, the FDOC includes a revision to the discussion regarding VCAPCD Rule 26.2.E, “Analysis of Alternatives”, and the applicability of VCAPCD Rule 26.13, “New Source Review – Prevention of Significant Deterioration”.

1. THE PUENTE POWER PROJECT IS A NEW EMISSION UNIT NOT A REPLACEMENT EMISSION UNIT: The comment that *“to qualify as a replacement unit the replacement unit must be identical or functionally equivalent to the replaced unit and the replacement unit cannot change the basic design parameters of the replaced unit”* is not correct as it is not the definition of “Replacement Emissions Unit” in VCAPCD Rule 26, “New Source Review”. The VCAPCD is implementing the intention of Rule 26 that the Puente Power Project is a replacement emissions unit and not a new emissions unit.

VCAPCD Rule 26.1.21 defines New Emissions Unit as *“An emissions unit that is part of a new stationary source, an emissions unit that is added to an existing stationary source, or any existing emissions unit that is located at a stationary source in violation of Rule 10”*.

VCAPCD Rule 26.1.29 defines Replacement Emissions Unit as *“An emissions unit which supplants another emissions unit where the replacement emissions unit serves the identical function of the emission unit being replaced”*.

As stated in this DOC, the Puente Power Project is being installed at the Mandalay Generating Station (MGS), which is an existing stationary source with VCAPCD Permit to Operate No. 00013. If and when constructed and operated, the Puente Power Project will “supplant” MGS Unit 1 and MGS Unit 2 as these existing emissions units will be shut down and will no longer be operated. The word supplant is defined at [www.merriam-webster.com/dictionary/supplant](http://www.merriam-webster.com/dictionary/supplant) as “to take the place of (someone or something that is old or no longer used or accepted)”.

The definition of Replacement Emissions Unit includes the term “serves the identical function”. The word serve is defined at [www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone](http://www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone) as “act as, substitute for, function as, do the work of, do duty as • She ushered me into the front room, which served as her office”. In terms of electrical generation at the Mandalay Generating Station, the Puente Power Project will “substitute for” and “do the work of” MGS Unit 1 and MGS



Unit 2. The fact the Puente Power Project (simple cycle gas turbine) and MGS Units 1 and 2 (steam generating units) are not identical emissions units is irrelevant to the VCAPCD definition of Replacement Emissions Unit.

The word “function” is defined at [www.collinsdictionary.com/dictionary/english/function](http://www.collinsdictionary.com/dictionary/english/function) as “the natural action or intended purpose of a person or thing in a specific role ⇒ the function of a hammer is to hit nails into wood.” In the simplest form, the function of MGS Units 1 and 2 is to generate electricity. As stated in the DOC: “The new 262 MW gas turbine will be connected to the same Southern California Edison 220-KV switchyard that the two (2) existing 215 MW Babcock and Wilcox Steam Generator boilers (MGS Units 1 and 2) are connected to. Once operating, the new 262 MW gas turbine will provide dispatchable power to provide voltage support to the local reliability area in the same manner as the current two 215 MW Babcock and Wilcox Steam Generators.” Beyond the single, primary function of generating electricity, the Puente Power Project and MGS Units 1 and 2 have additional identical secondary functions to provide dispatchable power to provide voltage support to the local reliability area.

The VCAPCD has determined that the Puente Power Project is a Replacement Emissions Unit for MGS Units 1 and 2 and is not a New Emissions Unit as defined by VCAPCD Rule 26.1. Given the above definitions of “serve” and “function”, a hammer and an electric-powered nail gun both serve the identical function of hitting a nail into a piece of wood. The speed, efficiency, color, cost, etc. of the device that hits the nail into the piece of wood is not relevant to the identical function. As discussed above, to qualify as a Replacement Emissions Unit, the emissions units do not need to be identical, but rather the emissions units need to serve an identical function.

The definition of Replacement Emissions Unit in VCAPCD Rule 26.1 was carefully designed to be a simple definition to actually encourage the construction of replacement emissions units as opposed to the retrofit or repair of existing emissions units. As a comparison, “Replacement Unit” is defined in EPA’s Prevention of Significant Deterioration (PSD) regulation at 40 CFR Part 52.21(b)(33) as follows:

*(33) Replacement unit means an emissions unit for which all the criteria listed in paragraphs (b)(33)(i) through (iv) of this section are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.*

*(i) The emissions unit is a reconstructed unit within the meaning of §60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit.*

*(ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.*

*(iii) The replacement does not alter the basic design parameters (as discussed in paragraph (cc)(2) of this section) of the process unit.*

*(iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.*

In the EPA PSD regulation, a Replacement Unit has a rigorous definition as it is exempt from the requirements of PSD as Replacement Unit is included in the PSD definition of Existing Emissions Unit. In PSD, a Replacement Unit is not subject to the PSD definition of Best Available Control Technology (BACT) and other PSD requirements, such as air quality impact analysis dispersion modeling. In contrast, as defined by VCAPCD Rule 26.1, a Replacement Emissions Unit is subject to the requirements of Rule 26, New Source Review, including the Best Available Control Technology (BACT), Offsets, and Protection of Ambient Air Quality Standards and Ambient Air Increments requirements of Rule 26.2. Note that the VCAPCD's definition of BACT is essentially the federal definition of Lowest Achievable Emission Rate (LAER) which is more stringent than BACT required by PSD.

VCAPCD Rule 26 encourages Replacement Emissions Units (as opposed to the retrofit of existing emissions units) because Replacement Emissions Units require the installation of BACT (=LAER), and are not exempt from the requirement to install BACT. Since BACT is required, a replacement emissions unit will likely be the superior air quality option compared to retrofitting or repairing an existing emissions unit to operate into the future. In terms of electrical generation, the Puente Power Project is more efficient, faster starting, smaller in size, and will result in less overall air emissions per megawatt of power generated as compared to the continued operation of MGS Units 1 and 2. In order to encourage replacement, instead of repair or retrofit, Rule 26.6, "New Source Review – Calculations", requires a "potential to potential" emission increase calculation (Rule 26.6.D.2) except for the "actual to potential" emission increase calculation of Rule 26.6.D.7. For the Puente Power Project, the emissions increase calculation of Rule 26.6.D.2 (potential to potential) was used for ROC, PM10, SOx, and CO. Since the Puente Power Project was determined to be a major modification for NOx, the emission increase calculation of Rule 26.6.D.7 (pre-project actual to post-project potential) was used for NOx. The CO emissions calculations were conducted in the PDOC even though Rule 26.2 does not require BACT or emission offsets for CO.

Condition No. 2 of the PDOC requires that the permit for MGS Unit 2 be canceled prior to the commissioning of the Puente Power Project CTG. This is an enforceable permit condition and if MGS Unit 2 were to fail to comply with this condition it would be a new emissions unit subject to all requirements of VCAPCD Rule 26, "New Source Review".

2. BACT FOR VOC EMISSIONS IS 1 PPM AVERAGED OVER 1 HOUR: The VCAPCD disagrees with this comment and has determined that BACT for VOC (=ROC) emissions is 2.0 ppmvd @15% O2 averaged over 1 hour.

ROC BACT for the Puente Power Project was determined pursuant to Rule 26.1.3.a that requires the most stringent emission limitation or control technology for an emissions unit which has been achieved in practice for such emissions unit category. The Puente Power Project emission unit category is considered to be a large (262 MW) simple-cycle gas turbine used for peaking with a capacity factor of approximately 25%, fired only on commercial pipeline natural gas. In addition, the Puente Power Project turbine is equipped with dry low-NOx combustion, a selective catalytic reduction (SCR) system with aqueous ammonia injection, and an oxidation catalyst as BACT. The

Puente Power Project turbine does not include water injection as an air emissions control technology.

The ROC BACT determination of 2 ppm averaged over 1 hour for the Puente Power Project is identical to recent ROC BACT determinations issued by the South Coast AQMD and the San Diego County APCD for simple cycle turbines.

On July 1, 2016, the South Coast AQMD issued a Preliminary Determination of Compliance (PDOC) for the Alamitos Energy Center that determined ROC BACT for a simple cycle turbine (approximately 100 MW) to be 2.0 ppmvd @ 15% O<sub>2</sub> averaged over 1 hour. This South Coast AQMD PDOC was issued after the May 19, 2016 issuance date for the Puente Power Project PDOC.

[http://docketpublic.energy.ca.gov/PublicDocuments/13-AFC-01/TN212045\\_20160630T171919\\_Alamitos\\_Energy\\_Center\\_AEC\\_13AFC01.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/13-AFC-01/TN212045_20160630T171919_Alamitos_Energy_Center_AEC_13AFC01.pdf)

On April 17, 2015, the San Diego County APCD issued a Revised Final Determination of Compliance for the Carlsbad Energy Center project that also determined ROC BACT for a simple cycle turbine (approximately 100 MW) to be 2.0 ppmvd @ 15% O<sub>2</sub> averaged over 1 hour.

[http://docketpublic.energy.ca.gov/PublicDocuments/07-AFC-06C/TN204243\\_20150417T153416\\_San\\_Diego\\_APCD\\_Revised\\_Final\\_Determination\\_of\\_Compliance\\_FDOC.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/07-AFC-06C/TN204243_20150417T153416_San_Diego_APCD_Revised_Final_Determination_of_Compliance_FDOC.pdf) )

The above-referenced South Coast AQMD and San Diego County APCD BACT determinations both considered, and rejected, an ROC BACT determination of 1 ppmvd @ 15% O<sub>2</sub>. The VCAPCD specifically agrees with the San Diego County APCD's conclusion that an ROC BACT limit of 1.0 ppmvd @ 15% O<sub>2</sub> is not considered to be achieved in practice for a simple cycle turbine that is not equipped with water injection for NO<sub>x</sub> control. The VCAPCD also agrees with the South Coast AQMD that an ROC BACT determination that relies on a source testing method not approved by the VCAPCD should not be considered in the ROC BACT determination for the Puente Power Project.

The VCAPCD also reviewed the Major Facility Review Permit for the Marsh Landing Generating Station (Facility #B9169) issued by the Bay Area AQMD on November 3, 2015. This Bay Area AQMD Permit requires the use of California ARB Method 100 for the determination of POC (= ROC) emissions. ARB Method 100 is not approved by the VCAPCD for the determination of ROC emissions from combustion equipment. VCAPCD Rule 74.9, "Stationary Internal Combustion Engines", and the PDOC for the Puente Power Project, both require the use of EPA Method 25 or EPA Method 18, referenced to methane, for the determination of ROC emissions.

[http://www.baaqmd.gov/~media/files/engineering/title-v-permits/b9169/b9169\\_2015\\_11\\_initial\\_final\\_permit\\_02-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/engineering/title-v-permits/b9169/b9169_2015_11_initial_final_permit_02-pdf.pdf?la=en)

The gas turbines associated with the Mariposa Energy Project described in the Bay Area AQMD Final Determination of Compliance (FDOC) dated November 24, 2010 are not in the same “emissions unit category” as the Puente Power Project. The Puente Power Project turbine will not be equipped with water injection emissions control while the Mariposa Energy Project turbines are equipped with water injection emissions control. In this FDOC, the Bay Area AQMD compared turbines with water injection, and without water injection (dry low-NOx) and concluded on Page 7 that dry low-NOx turbines “have higher hydrocarbon and CO emission rates” compared to water-injected turbines. This confirms the VCAPCD determination that a water injected turbine and a dry low-NOx turbine are not the same emissions unit category when determining ROC BACT.

(<http://docketpublic.energy.ca.gov/PublicDocuments/Regulatory/Non%20Active%20AF C's/09-AFC-3%20Mariposa%20Energy/2010/Nov/TN%2059081%2011-24-10%20Bay%20Area%20Air%20Quality%20Management%20District%20Final%20Determination%20of%20Compliance.pdf> )

3. **BACT ANALYSIS:** The BACT analysis in the PDOC is adequate and correct as it complies with the definition of BACT in VCAPCD Rule 26.1 and follows the VCAPCD BACT Policy issued on November 9, 2009:

<http://www.vcapcd.org/pubs/Engineering/permits2000/BACTPolicy111009.pdf>

The VCAPCD Rule 26.2 definition of BACT is found in Rule 26.1.3 as follows:

*Best Available Control Technology (BACT): The most stringent emission limitation or control technology for an emissions unit which:*

- a. *Has been achieved in practice for such emissions unit category, or*
- b. *Is contained in any implementation plan approved by the Environmental Protection Agency for such emissions unit category. A specific limitation or control shall not apply if the owner or operator of such emissions unit demonstrates to the satisfaction of the Air Pollution Control Officer (APCO) that such limitation or control technology is not presently achievable, or*
- c. *Is contained in any applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants set forth in 40 CFR Parts 60 and 61, or*
- d. *Any other emission limitation or control technology, including, but not limited to, replacement of such emissions unit with a lower emitting emissions unit, application of control equipment or process modifications, determined by the APCO to be technologically feasible for such emissions unit and cost effective as compared to the BACT cost effectiveness threshold adopted by the Ventura County Air Pollution Control Board.*

*In defining emissions unit categories, the APCO may take into account the function of the emissions unit, the capacity of the emissions unit, the annual throughput of the emissions unit and the location of the emissions unit with respect to electricity or fuels needed to achieve an emission limitation or control technology.*

The EPA PSD definition of BACT is found in 40 CFR Part 52.21(b)(12) as follows:

*Best available control technology means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.*

It is important to note that Ventura County is one of the few air pollution control agencies in the nation that has a zero threshold for BACT. In addition, the Ventura County APCD definition of BACT is more like the federal definition of LAER (Lowest Achievable Emission Rate) in that cost-effectiveness is not a consideration under Rule 26.1.3.a, b, or, c. By its construction, a cost-effectiveness analysis is only used under Rule 26.1.3.d for proposed BACT limits that are more stringent than BACT determined under Rule 26.1.3.a, b, or, c. Note that VCAPCD Rule 26 BACT requirements apply equally to both federal major source permitting and “local” minor source permitting. The PSD definition of BACT does allow for cost considerations. However, EPA guidelines do not allow for routine consideration of the cost of control in LAER determinations. The EPA LAER guidelines are more concerned that the control costs may be “prohibitive” such that the new source could not be built or operated with the control technology. The definition of BACT and LAER in California State Law (Health & Safety Code Section 40405) has no explicit reference to cost considerations.

BACT for the Puente Power Project was determined pursuant to Rule 26.1.3.a that requires the most stringent emission limitation or control technology for an emissions unit which has been achieved in practice for such emissions unit category. The VCAPCD definition of BACT does not require a “top-down process” or “collateral impacts” and does not require a review of energy, environmental, and economic impacts and other costs. A review of the past few years of CEC Power Plant Projects

clearly indicates that the use of selective catalytic reduction (SCR) with ammonia injection, an oxidation catalyst, and the use of commercial pipeline natural gas is considered to be the most stringent emission control technology for an emissions unit which has been achieved in practice for such emissions unit category. The Puente Power Project emissions unit category is considered to be a large (262 MW) simple-cycle gas turbine used for peaking with a capacity factor of approximately 25%, fired only on commercial pipeline natural gas.

The BACT emission limits for the Puente Power Project determined under Rule 26.1.3.a is more stringent than the BACT limits determined under Rule 26.1.3.b and Rule 26.1.3.c. The NO<sub>x</sub> BACT limit determined under Rule 26.1.3.b is considered to be the 9 ppmv at 15% O<sub>2</sub> limit of Rule 74.23, "Stationary Gas Turbines". The NO<sub>x</sub> BACT limit determined under Rule 26.1.3.c is considered to be the 15 ppmv at 15% O<sub>2</sub> limit of NSPS 40 CFR Part 60, Subpart KKKK, "Standards of Performance for Stationary Combustion Turbines".

4. THE EXISTING MANDALAY UNITS ARE REQUIRED TO BE SHUTDOWN BY THE STATES OTC POLICIES: The ultimate fate of MGS Units 1 and 2 is not relevant to the Rule 26, "New Source Review", requirements of the PDOC.

VCAPCD Rule 26.1.29 defines Replacement Emissions Unit as "*An emissions unit which supplants another emissions unit where the replacement emissions unit serves the identical function of the emission unit being replaced*".

As stated in this DOC, the Puente Power Project is being installed at the Mandalay Generating Station (MGS), which is an existing stationary source with VCAPCD Permit to Operate No. 00013. If and when constructed and operated, the Puente Power Project will "supplant" MGS Unit 1 and MGS Unit 2 as these existing emissions units will be shut down and will no longer be operated. The word supplant is defined at [www.merriam-webster.com/dictionary/supplant](http://www.merriam-webster.com/dictionary/supplant) as "to take the place of (someone or something that is old or no longer used or accepted)".

The ultimate fate of the existing emissions units is irrelevant to the definition of Replacement Emissions Unit provided that the existing emissions units are currently in operation with a valid VCAPCD Permit to Operate. In fact, it is quite common in the VCAPCD permitting system for a permit holder to submit an Authority to Construct application to replace an existing emissions unit when the existing emissions unit is subject to a future rule or regulation that will not let the existing emissions unit operate "as-is" into the future. Specifically for the Once Through Cooling (OTC) Policy, the VCAPCD understands that there are other alternatives to shut-down that would allow MGS Units 1 and 2 to operate into the future (although not relevant to the definition of Replacement Emissions Unit as discussed above).

Although as discussed above, the ultimate fate of MGS Units 1 and 2 is not relevant to the VCAPCD definition of Replacement Emissions Unit, the VCAPCD disagrees with the premise that "The Existing Mandalay Units are required to be shut down by the States OTC policies". The VCAPCD has reviewed the California EPA State Water Resources Control Board OTC Policy and has concluded that there are other options to

complying with the OTC Policy in addition to the shutdown of units that use sea water for cooling as described in the following links:

[http://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/policy.shtml](http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/policy.shtml)

[http://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/powerplants/mandalay/](http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/powerplants/mandalay/)

[http://www.waterboards.ca.gov/water\\_issues/programs/ocean/cwa316/powerplants/mandalay/docs/mandalay\\_letter\\_04282015.pdf](http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/powerplants/mandalay/docs/mandalay_letter_04282015.pdf)

As for MGS Units 1 and 2, in the April 23, 2015 letter to the State Water Resources Board referenced above, NRG stated that “If P3 is not approved, then MGS would investigate other Track 1 or Track 2 compliance methods to comply with the Policy.”

As long as MGS Units 1 and 2 hold a valid APCD Permit to Operate, the Puente Power Project is considered to be Replacement Emissions Unit and not a New Emissions Unit. Section H (Renewal Fee) of Rule 42, “Permit Fees”, confirms that a stationary source with a Permit to Operate may maintain its permit even though it may not be in operation as follows:

*If a source will be non-operational during the permit period for the renewed permit, the permittee may pay a non-refundable fee equal to a minimum renewal fee based on no permitted emissions. To exercise this option, the permittee shall submit a written request to the Air Pollution Control Officer. Prior to resuming operation of a non-operational source, the permittee shall pay the regular renewal fee in full.*

In addition, Section B.3.b (Permitted Emissions) of Rule 29, “Conditions on Permits”, confirms that a stationary source is required to surrender its permit for only emissions units that are permanently removed as follows:

*Upon annual renewal, any permitted emissions unit that has been permanently removed from the stationary source shall be removed from the Permit to Operate and the permitted emissions for the stationary source shall be reduced by the permittee emissions calculated for the emissions unit. If any piece of combustion equipment can no longer use a fuel it was permitted to use, the permitted emissions for the stationary source shall be reduced as appropriate. The permittee shall be notified in writing of, the removal of any permitted equipment from a Permit to Operate, and any revisions to permitted emissions, made pursuant to this subsection. Such notice shall be given at the time of notification of the renewal fee due.*

5. **ANALYSIS OF ALTERNATIVES:** The Puente Power Project has been determined to be a NO<sub>x</sub> major modification and is therefore required to submit an analysis of alternatives pursuant to Section E of Rule 26.2, “New Source Review – Requirements” as follows:

Rule 26.2.E:

*The APCO shall deny an application for an Authority to Construct for any new major source or major modification unless the applicant provides an analysis as required by Section 173(a)(5) of the federal Clean Air Act, of alternative sites, sizes, production processes, and environmental control techniques for the proposed source demonstrating that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.*

The applicant's analysis of alternatives was included in Appendix J of the PDOC for the Puente Power Project. The VCAPCD has determined that the applicant's analysis of alternatives complies with Rule 26.2.E with the understanding that the California Energy Commission (CEC) Application For Certification process includes its own "Alternatives" analysis in Section 4.2 of the Revised Preliminary Staff Assessment (PSA) for the Puente Power Project (15-AFC-01) dated June 2016. The CEC analysis of alternatives is governed by the California Environmental Quality Act (CEQA) as described in the PSA as follows:

### **CEQA REQUIREMENTS**

*As lead agency for the proposed P3, the Energy Commission is required to consider and discuss alternatives to the proposed project. The guiding principles for the selection of alternatives for analysis in an environmental impact report (EIR) are provided by the California Environmental Quality Act Guidelines (CEQA Guidelines) (Cal. Code Regs., tit. 14, § 15000 et seq.). Section 15126.6 of the CEQA Guidelines indicates that the alternatives analysis must:*

- describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project;*
- evaluate the comparative merits of the alternatives;*
- consider alternatives that would avoid or substantially lessen any significant environmental impacts of the proposed project, including alternatives that would be more costly or would otherwise impede the project's objectives; and*
- describe the rationale for selecting alternatives to be discussed and identify alternatives that were initially considered but then rejected from further evaluation.*

*These regulations also apply to the document used as a substitute for an EIR in a certified state regulatory program (Cal. Code Regs., tit. 14, §§ 15251 and 15252).*

*The range of potentially feasible alternatives selected for analysis is governed by the "rule of reason," requiring evaluation of only those alternatives "necessary to permit a reasoned choice" (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)). In addressing feasibility of alternatives, factors that may be taken into account include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (Cal. Code*



*Regs., tit. 14, § 15126.6, subd. (f)(1)). Under the “rule of reason,” an EIR “need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative” (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)(3)).*

*Alternatives may be eliminated from detailed consideration by the lead agency if they fail to meet most of the basic project objectives, are infeasible, or could not avoid any significant environmental effects (Cal. Code Regs., tit. 14, § 15126.6, subd. (c)). The CEQA Guidelines require analysis of a “no-project alternative” in comparison to the proposed project. “The ‘no project’ analysis shall discuss the existing conditions...at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” (Cal. Code Regs., tit. 14, § 15126.6, subd. (e)(2)). If the environmentally superior alternative is the “no project” alternative, the EIR shall identify an environmentally superior alternative among the other alternatives.*

The CEC alternatives analysis includes a no project alternative, off-site alternative locations, and a reconfiguration of the Puente Power Project within the Mandalay Generating Station. The CEC analysis of alternatives included a review of socioeconomics, including environmental justice factors such as minority populations and poverty level. As for socioeconomics, the PSA for the Puente Power Project includes the following overall conclusion:

### **SOCIOECONOMICS**

*Staff concludes that construction and operation of the P3 would not cause significant adverse direct, indirect, or cumulative socioeconomic impacts on the project area's housing, law enforcement services, or parks. Staff also concludes the project would not induce a substantial population growth or displacement of population, or induce substantial increases in demand for housing, parks, or law enforcement services. Staff proposed Condition of Certification **SOCIO-1** would ensure project compliance with applicable LORS. Staff concludes the socioeconomic impacts from the proposed P3 are less than significant. Therefore, the socioeconomic impacts are less than significant for any population within the six-mile radius of the P3, including the EJ population.*

As for the comment that the alternative analysis ignores energy (battery) storage as an alternative to the Puente Power Project, the VCAPCD understands that energy storage did not attain most of the objectives of the project and was not required by CEQA to be included in the alternatives analysis.

6. **RULE 15:** As stated in the PDOC, Rule 26.13, “New Source Review – Prevention of Significant Deterioration (PSD)” has not yet been approved by EPA into the California State Implementation Plan (SIP). As such, any implementation of PSD requirements, including applicability determinations and/or determination of compliance with PSD requirements can only be performed by U.S. EPA. The Ventura County ACPD does not have the authority to implement and enforce the requirements of PSD at this time. The PDOC was not intended to be a PSD applicability analysis as discussed below.

The VCAPCD is not making a PSD applicability determination at this time as the VCAPCD does not have federal authority to do so. However, the lack of a PSD applicability determination in the Determination of Compliance does not necessarily mean the project is not required to obtain a PSD permit. It would be a violation of section 165 of the federal Clean Air Act to commence construction of a project subject to the PSD program without first obtaining a PSD permit.

In an August 2, 2016 telephone conversation (see link below) regarding Rule 26.13 between the California Energy Commission and EPA Region 9, it was confirmed that:

*“Both Region 9 and Energy Commission staff agree the PSD provision of this rule is not federally enforceable until the rule has been adopted into the SIP. EPA is reviewing Rule 26.13 for SIP approval and working with the District to obtain additional information prior to approval. Once the rule is approved into the California SIP, local PSD actions will be federally enforceable and the district will be “acting in the role of” EPA. At that point, PSD issues would be addressed in any Determination of Compliance (DOC) done for future Energy Commission permitting activities and in local permitting activities for any proposed projects not subject to Energy Commission permitting.”*

<http://www.vcapcd.org/pubs/Engineering/permits2000/PSD-Rule-26-13-EPA-Approval-Status.pdf>

As also detailed in the above link, in a letter dated August 10, 2016, the VCAPCD provided additional information needed as a part of the approval to transfer responsibility of the PSD program from EPA to the VCAPCD. The transfer of PSD responsibility from EPA to the VCAPCD will not occur before the Final Determination of Compliance (FDOC) for the Puente Power Project is issued by the VCAPCD.

The VCAPCD does not agree that PSD Rule 26.13 is an applicable federal requirement subject to Rule 15, “Standards For Permit Issuance”. Rule 15.A states that:

*“The Air Pollution Control Officer shall deny an Authority to Construct or a Permit to Operate unless the applicant shows that the emissions units will comply with all applicable federal, state or District orders, rules or regulations including any requirement promulgated pursuant to a federal implementation plan for Ventura County” (underline added).*

As a District rule that implements a federal regulation, Rule 26.13 is not considered to be an applicable District rule, and is not considered to be an applicable federal regulation, since EPA has not approved Rule 26.13 into the California State Implementation Plan (SIP) through a final notice in the Federal Register.

If a PSD Permit is required, the PSD Permit application would be submitted to, evaluated by, and issued by EPA Region 9 as discussed above. The PSD Permit would be a separate permit and would not be included as a part of the VCAPCD’s Determination of Compliance (DOC) issued pursuant to VCAPCD Rule 26.9, “New

Source Review – Power Plants”. A similar situation occurred recently with the air permitting for the Pio Pico Energy Center in Otay Mesa, California. The San Diego County APCD issued a Final Determination of Compliance and EPA Region 9 issued a PSD Permit. Similar to VCAPCD Rule 15, San Diego County APCD Rule 20, “Standards For Granting Permits”, also requires compliance with PSD as it specifically refers to San Diego County APCD Rule 20.3, “New Source Review Major Stationary Sources and PSD Stationary Sources”.

Although the VCAPCD is on the record as recommending to the CEC that the Puente Power Project obtain a PSD applicability determination from the EPA, the VCAPCD now understands that such an applicability determination approved by EPA is not required by PSD regulations.

7. PM 2.5 EMISSIONS: Vendor guarantees are often used in the VCAPCD Authority to Construct permitting process to establish “not to exceed” emission limits or emission caps in enforceable permit conditions. Condition No. 29 of Appendix K of the PDOC requires a PM10 emissions limit of 10.10 pounds per hour as verified by initial and annual source testing with EPA-approved methods (all PM emissions are assumed to be PM2.5 emissions).

At this time, the VCAPCD has no reason to believe the Puente Power Project will not be able to comply with this PM10 emissions limit. The VCAPCD has permitted other gas turbines and none have failed their Authority to Construct PM10 emissions limits as demonstrated by stack source testing. If the PM10 limit is ever exceeded, the VCAPCD will require a modification and/or re-evaluation of the Puente Power Project to ensure that it complies with all applicable rules and regulations. The VCAPCD has a two-step permitting system (Authority to Construct followed by Permit to Operate) to ensure that emissions limits in an Authority to Construct are confirmed by source testing during the Permit to Operate process. In fact, Section B of VCAPCD Rule 15, “Standards For Permit Issuance” requires that:

*“The Air Pollution Control Officer shall deny a Permit to Operate if an emissions unit has not been constructed in accordance with the conditions on the Authority to Construct and if the emissions unit as constructed provides less effective air pollution control than the emissions unit specified in the Authority to Construct.”*

8. ERC’S: The PDOC correctly states that the NOx ERC’s provided for the Puente Power Project are not required to be surplus at the time of use pursuant to Rules 26.2.B.2.d and Rule 26.11.C.6. The most recent Rule 26.11 ERC Report dated April 1, 2016 (<http://www.vcapcd.org/pubs/Engineering/permits2000/Forms/Rule26-11-Annual-Equivalency-Demonstration-Report-2016.pdf>) indicates a NOx balance of +38.32 tons of NOx per year. Since Rule 26.11 was adopted on May 14, 2002, there has been zero Authority to Constructs issued for new major sources or major modifications. Pursuant to Section D of Rule 26.9, “New Source Review – Power Plants”:

*“The APCO shall consider the AFC to be equivalent to an application for an Authority to Construct during the Determination of Compliance review, and shall apply all provisions*

*of Rule 26 and all other District rules and regulations which apply to applications for an Authority to Construct.”*

The VCAPCD expects to issue the Final Determination of Compliance (FDOC = final Authority to Construct) before the end of 2016. The Authority to Construct / FDOC will be issued before the CEC approves Application For Certification No. 15-AFC-01 and not after CEC approval. No other Authority to Constructs for new major sources or major modifications are expected to be issued in 2016. Therefore, the Puente Power Project is not required to provide NOx ERC's that are surplus at the time of use.

The fact that the VCAPCD requires new oil wells to be equipped with electric motor driven artificial lift equipment is not relevant to the NOx ERCs provided for the Puente Power Project because as discussed above the ERCs are not required to be surplus at the time of use. In addition, the definition of Surplus Emission Reduction in Rule 26.6.1.31 states that a BACT requirement (Rule 26.2.A) for an emission reduction is not to be considered when determining if an emission reduction is surplus to any federal, state, or district law, rule, order, permit or regulation.

*As for the comment that “The mitigation for the projects NOx emissions are inappropriate for an environmental justice community as all of the ERCs for mitigation of the projects NOx emission were created 25 years ago” consider the following:*

The Southern California Edison Emission Reduction Credits (ERC) Nos. 1078, 1079, 1080, 1083, 1085, 1091, 1092, 1094, 1097, 1104, and 1107 proposed for the Puente Power Project (a total of 50.66 tons of NOx per year) all comply with the emission offset requirements of VCAPCD Rule 26, "New Source Review". Rule 26 does not have a "distance" or "location" requirement for the location of the emissions requiring offsets relative to the location that was the source of the ERCs. This is true because ozone is a regional problem in Ventura County. In addition, Rule 26 does not have an "expiration date" for an ERC Certificate. However as discussed above for major new sources and major modifications, Rule 26.2 and Rule 26.11 may require an evaluation to determine if an ERC is "surplus at the time of use".

ERC No. 1092 represents 23.24 tons of NOx per year (59.7%) of the 38.91 tons of NOx per year required as offsets for the Puente Power Project. ERC No. 1092 was not created in Ojai, Ventura, or Fillmore. ERC No. 1092 was issued for the replacement of eleven (11) 200 BHP Waukesha rich-burn natural gas fired engines, used to power water well pumps for irrigation water, with electric motors. The engines were owned by the Pleasant Valley County Water District and were all located and used on the Oxnard Plain, south of Camarillo and east of Oxnard. The engines were removed from service, and replaced by electric motors, at their respective water wells as verified by a VCAPCD field inspection.

9. HEALTH RISK ASSESSMENT: The health risk assessment contained in Section G of the PDOC for the Puente Power Project correctly followed the VCAPCD Policy "Air Toxics Review of Permit Applications" issued on February 12, 1992 and revised on July 10, 2002. The Policy requires that only the potential health risk from the Puente Power Project be evaluated for the PDOC. The Policy does not require an evaluation of the

health risk from the other existing emissions units at the Mandalay Generating Station. The following is a link to this Policy:

<http://www.vcapcd.org/pubs/Engineering/permits2000/AirToxicsReviewOfPermitApplications.pdf>

The Policy states that if a health risk assessment is needed “*the health risk assessment shall be prepared for the air toxic emissions from the emissions units that are the subject of the application*”. The Policy establishes health risk thresholds for permit issuance and denial and also states that “*If the health risk assessment indicates that the additional (underline added) carcinogenic risk associated with the emissions units that are the subject of the application...*” The health risk assessment for the Puente Power Project was “worst case” in the sense that it did not consider the reduction in potential health risk from the future shutdown of MGS Units 1 and 2. In fact, the potential health risk from the combustion of natural gas at the Mandalay Generating Station is expected to decrease significantly as the PDOC calculated that the Puente Power Project will result in an annual permitted (= potential) electrical generating capacity reduction from 3,766,800 MW-hrs per year to 563,300 MW-hrs per year, which equals a reduction of approximately 85 percent. This reduction of permitted / potential generating capacity will be accompanied by a commensurate reduction in permitted / potential natural gas consumption.

The VCAPCD regulates the health risk from existing stationary sources by implementing and enforcing the California ARB Air Toxics “Hot Spots” Program, that is also known as AB 2588. Stationary sources subject to this program must prepare a comprehensive inventory of their air toxics emissions and submit the inventory to the VCAPCD for review and approval. Based on these air toxic emissions inventories, the VCAPCD “prioritizes” the stationary source inventories and “high” priority stationary sources are required to conduct and submit a health risk assessment (HRA). If the HRA shows that the stationary source poses a “significant risk” to the local community, the stationary source is required to notify the public of the risk and may also be required to reduce the health risk as required by AB-2588.

The VCAPCD will be re-evaluating the health risk from existing stationary sources based on the new “Guidance Manual for Preparation of Health Risk Assessments” issued in February 2015 by the California Environmental Protection Agency’s Office of Environmental Health Hazard Assessment (OEHHA). Existing stationary sources will be prioritized as discussed above using the new “Air Toxics Hot Spots Program Facility Prioritization Guidelines” issued in August 2016 by the California Air Pollution Control Officer Association’s Air Toxics and Risk Managers Committee.

The most recent VCAPCD Air Toxics “Hot Spots” Information and Assessment Act of 1987 2014 Annual Report is located on the VCAPCD website at:

<http://www.vcapcd.org/pubs/Engineering/AirToxics/AnnualReport2014.pdf>

For the Mandalay Generating Station (Facility No. 00013 formerly owned by Reliant Energy) this report shows that the lifetime excess cancer risk was determined to be

0.04 in a million by a health risk assessment conducted in 1998. Based on the new health risk assessment and prioritization guidelines, the revised health risk from the Mandalay Generating Station is not expected to be significant, with or without the Puente Power Project.

10. ENVIRONMENTAL JUSTICE: The VCAPCD does receive a monetary grant from the EPA known as a “Section 105 Grant”. The EPA-approved work plan for the Section 105 Grant requires the following Environmental Justice Objective for the VCAPCD Title V and New Source Review Permitting Program:

*Enhance the opportunities for public involvement in the permitting process when new or modified sources that significantly increase air pollutant emissions are located in areas likely to have environmental justice issues. Enhanced opportunities will occur through preparing and distributing fact sheets in English and Spanish, if appropriate, to individuals or organizations in the vicinity of the new or modified source, and providing the opportunity for public meetings. For purposes of this milestone, a significant increase in air pollutant emissions is defined as an increase triggering the public notice requirements in the District rules for criteria pollutants, or 10 tons per year of a single EPA HAP (listed pursuant to §112(b) of the federal Clean Air Act), or 25 tons per year of a combination of EPA HAPs.*

Since the Puente Power Project triggered the public notification requirements of Rule 26.7, “New Source Review – Notification” for NOx emissions, the VCAPCD followed this environmental justice objective and provided a public notice for the Puente Power Project in English, Spanish, Mixteco, and Tagalog both in local newspapers (Ventura County Star in English and Ventura County VIDA in Spanish) and on the VCAPCD website (in all four languages). In addition, the VCAPCD participated in the CEC Preliminary Staff Assessment (PSA) workshop that was conducted in Oxnard on July 21, 2016 that included a “real time” translation in Spanish.

## **Puente Power Project - Response to PDOC Comment Letter**

### **Ventura County APCD Rule 26.9 DOC/Authority to Construct No. 00013-370**

#### **George L. Piantka – Letter Dated June 23, 2016**

#### **NRG Oxnard Energy Center, LLC**

Appendix K of the PDOC was revised as requested in response to these comments, except for Condition Nos. 29, 31, and 48 of Appendix K discussed below. The changes that were made to Appendix K are all considered to be corrections or clarifications. In addition to revisions to Appendix K in response to these comments, minor revisions and/or clarifications related to the comments were made to the PDOC as shown in the FDOC.

1. Condition No. 29: Changes to Condition No. 29 were made as requested except that a source test for NOx and CO will still be required to verify compliance with the emission limits of Condition No. 29. Therefore, Condition No. 29 will require both an annual source test, and a CEMS, to verify compliance with the NOx and CO emission limits in ppmvd and in pounds per hour.
2. Condition No. 31: This condition was not revised and the tons per year emission limits will continue to include emissions from the commissioning period as required by VCAPCD Rule 26, “New Source Review”.

The NOx emissions increase for the Puente Power Project was calculated pursuant to Section D.7.a of VCAPCD Rule 26.6, “New Source Review – Calculations”. NOx offsets were required pursuant to Section B.1 and B.2.d of Rule 26.2, “New Source Review – Requirements”.

For the Puente Power Project, the NOx emissions increase was equal to the post-project potential to emit minus the pre-project actual emissions. Rule 26.6.B defines potential to emit as:

*“The potential to emit is an emission limit which specifies the maximum quantity of each air pollutant which may be emitted by an emissions unit during a 12 calendar month rolling period. This limit shall be based on any period of 12 consecutive calendar months and shall be expressed in the units of tons per year. The potential to emit shall be calculated based on the maximum design capacity or other operating conditions which reflect the maximum potential emissions, unless specific limiting conditions on the Authority to Construct and/or Permit to Operate restrict emissions to a lower level. Other operating conditions may include, but are not limited to, production bottlenecks where other equipment may limit the throughput of an emissions unit.”*

Since the definition of potential to emit includes the term “maximum quantity” then commissioning emissions must be included. Also note that all tons per year emissions limits and tons per year emission calculations for the Puente Power

Project are based on the term “potential to emit” and therefore the commissioning emissions must be included.

In addition for the emissions from the commissioning period, VCAPCD rules do not allow for a 180 day “shakedown period” as cited for EPA regulations. Section C of Rule 26.8, “New Source Review - Permit to Operate”, does allow a 90 day startup period for simultaneous operation as follows:

*26.8.C. Startup Period for Replacement Equipment*

*For a new emissions unit which will be a replacement, in whole or in part, for an existing emissions unit at the same stationary source, the APCO may allow a startup period of up to 90 days for the simultaneous operation of such units.*

This simultaneous operation allowance does not relieve the Puente Power Project from the requirement to supply NOx emission offsets for its potential to emit.

This comment also requested that the requirement to monitor compliance with an annual operating hours limit be replaced with the requirement to monitor compliance with an annual natural gas consumption limit. As discussed in Item No. 3 below regarding Condition No. 48, the requirement to monitor annual operating hours will remain.

3. Condition No. 48: This condition was not revised and will maintain the annual operational limit of 2,150 hours per year, with additional annual limits of 200 startups per year and 200 shutdowns per year. The annual operational hour limits of Condition No. 48 are directly used to limit the annual tons per year limits of Condition No. 31.

The VCAPCD agrees that a CEMS is adequate to demonstrate compliance with the annual NOx and CO tons per year emission limits of Appendix K, Condition No. 31. However, the Puente Power Project gas turbine is not equipped with a CEMS to measure ROC and PM10 emissions. The proposed method to monitor compliance with the annual tons per year ROC and PM10 emission limits through the use of an assumed natural gas higher heating value (HHV) and a “normal operation emission factor” based on a single annual source test is not adequate to ensure continuous ongoing compliance.



## **Puente Power Project - Response to PDOC Comment Letter**

### **Ventura County APCD Rule 26.9 DOC/Authority to Construct No. 00013-370**

#### **Edward T. Schexnayder – Letter Dated July 29, 2016**

#### **Shute, Mihaly & Weinberger LLP on Behalf of the City of Oxnard**

In response to these comments, Appendix K, Condition Nos. 27, 28, 29, 31, and 38 have been revised to clarify that all PM10 emissions are assumed to be equal to PM2.5 emissions and Appendix K, Condition No. 38 has been revised to include EPA Method 5 (front half and back half) or EPA Methods 201A and 202 for the determination of PM10 and PM2.5 emissions. In addition, the FDOC includes a revision to the discussion regarding VCAPCD Rule 26.2.E, “Analysis of Alternatives”, the applicability of VCAPCD Rule 26.13, “New Source Review – Prevention of Significant Deterioration”, and the use of the Adjusted U\* Option in Appendix G, “Ambient Air Quality Analysis and Risk Management Review”.

1. The PDOC Erred in Failing to Conduct PSD Review: The PDOC was not intended to be a PSD applicability determination. The VCAPCD is not making a PSD applicability determination at this time as the VCAPCD does not have federal authority to do so. However, the lack of a PSD applicability determination in the Determination of Compliance does not necessarily mean the project is not required to obtain a PSD permit. It would be a violation of section 165 of the federal Clean Air Act to commence construction of a project subject to the PSD program without first obtaining a PSD permit.

As stated in the PDOC, Rule 26.13, “New Source Review – Prevention of Significant Deterioration (PSD)” has not yet been approved by EPA into the California State Implementation Plan (SIP). As such, any implementation of PSD requirements, including applicability determinations and/or determination of compliance with PSD requirements can only be performed by U.S. EPA. The Ventura County APCD does not have the authority to implement and enforce the requirements of PSD at this time.

In an August 2, 2016 telephone conversation (see link below) regarding Rule 26.13 between the California Energy Commission and EPA Region 9, it was confirmed that:

*“Both Region 9 and Energy Commission staff agree the PSD provision of this rule is not federally enforceable until the rule has been adopted into the SIP. EPA is reviewing Rule 26.13 for SIP approval and working with the District to obtain additional information prior to approval. Once the rule is approved into the California SIP, local PSD actions will be federally enforceable and the district will be “acting in the role of” EPA. At that point, PSD issues would be addressed in any Determination of Compliance (DOC) done for future Energy Commission permitting activities and in local permitting activities for any proposed projects not subject to Energy Commission permitting.”*

<http://www.vcapcd.org/pubs/Engineering/permits2000/PSD-Rule-26-13-EPA-Aproval-Status.pdf>

As also detailed in the above link, in a letter dated August 10, 2016, the VCAPCD provided additional information needed as a part of the approval to transfer responsibility of the PSD program from EPA to the VCAPCD. The transfer of PSD responsibility from EPA to the VCAPCD will not occur before the Final Determination of Compliance (FDOC) for the Puente Power Project is issued by the VCAPCD.

The VCAPCD does not agree that PSD Rule 26.13 is an applicable federal requirement subject to Rule 15, “Standards For Permit Issuance”. Rule 15.A states that:

*“The Air Pollution Control Officer shall deny an Authority to Construct or a Permit to Operate unless the applicant shows that the emissions units will comply with all applicable federal, state or District orders, rules or regulations including any requirement promulgated pursuant to a federal implementation plan for Ventura County” (underline added).*

As a District rule that implements a federal regulation, the version of Rule 26.13 most recently adopted on November 10, 2015 is not considered to be an applicable District rule, and is not considered to be an applicable federal regulation, since EPA has not approved Rule 26.13 into the California State Implementation Plan (SIP) through a final notice in the Federal Register. The prior version of Rule 26.13 adopted on June 28, 2011 had not been approved into the SIP and is also not considered to be an applicable federal regulation. In addition, prior to the adoption of Rule 26.13 on June 28, 2011, Federal PSD requirements were referenced in VCAPCD Rule 26.10, “New Source Review – Prevention of Significant Deterioration”. Rule 26.10 stated that if a PSD permit was required, the PSD permit would be obtained from the EPA as follows:

*“Any source that is subject to this rule is required to obtain separate permits from both the District and the U.S. Environmental Protection Agency”.*

If a PSD Permit is required for the Puente Power Project, the PSD Permit application would be submitted to, evaluated by, and issued by EPA Region 9 as discussed above. The PSD Permit would be a separate permit and would not be included as a part of the VCAPCD’s Determination of Compliance (DOC) issued pursuant to VCAPCD Rule 26.9, “New Source Review – Power Plants”. A similar situation occurred recently with the air permitting for the Pio Pico Energy Center in Otay Mesa, California. The San Diego County APCD issued a Final Determination of Compliance and EPA Region 9 issued a PSD Permit. Similar to VCAPCD Rule 15, San Diego County APCD Rule 20, “Standards For Granting Permits”, also requires compliance with PSD as it specifically refers to San Diego County APCD Rule 20.3, “New Source Review Major Stationary Sources and PSD Stationary Sources”.

The ambient air quality analysis modeling conducted in Appendix G of the PDOC was required by Section C of Rule 26.2, “New Source Review – Requirements”. Rule 26.2.C states:

*The APCO shall deny an applicant an Authority to Construct for any new, replacement, modified or relocated emissions unit that would cause the violation of any ambient air quality standard or the violation of any ambient air increment as defined in 40 CFR 51.166(c). In making this determination the APCO shall take into account any offsets which were provided for the purpose of mitigating the emission increase.*

Note that Rule 26.2.C requires its ambient air quality analysis modeling for only a new, replacement, modified or relocated emissions units. Therefore, the Appendix G modeling was only conducted for the Puente Power Project. Rule 26.2.C does not require the modeling of any other “existing” or “nearby” emissions units.

The modeling conducted for the PDOC was intended to comply with Rule 26.2.C and was not intended to comply with PSD modeling requirements. If a PSD Permit is required for the Puente Power Project, the PSD-required modeling will be conducted in accordance with PSD modeling regulations and requirements as a part of the EPA Region 9 PSD permitting process.

The VCAPCD understands that the California Energy Commission will model the Puente Power Project and these nearby emission sources as a part of their Final Staff Assessment to demonstrate that their combined operation will not cause a violation of the ambient air quality standards.

Although the VCAPCD originally used the modeling beta option called “Adjusted U\*” to determine compliance with the Rule 26.2.C ambient air quality analysis discussed above, Appendix G for the Puente Power Project included modeling both with, and without, the “Adjusted U\*” option to alleviate earlier concerns raised by the Sierra Club.

As shown in Appendix G, the Puente Power Project complied with Rule 26.2.C under various scenarios, both with and without the “Adjusted U\*.” For all pollutants, except for NO<sub>2</sub> as discussed below, compliance with Rule 26.2.C was demonstrated by a wide margin. For compliance with the CO 8-hr NAAQS of 10,000 µg/m<sup>3</sup>, Appendix G Table 5-14 (with Adjusted U\*) shows that the total CO concentration was 13.4% of the standard, and in Table 5-15 (without Adjusted U\*) the total CO concentration was 14.3% of the standard. This is a difference of about only 1%. This makes sense considering that the Puente Power Project is proposed to be fired on pipeline quality natural gas and is proposed to be equipped and operated with selective catalytic reduction (SCR) for NO<sub>x</sub> control and an oxidation catalyst for CO control.

For NO<sub>2</sub>, Appendix G showed that the Puente Power Project will comply with the NO<sub>2</sub>, 1-hour NAAQS of 188 µg/m<sup>3</sup> under all scenarios with and without the “Adjusted U\*.” Table 5-14 and Table 5-15 of Appendix G showed the highest 1-hour NO<sub>2</sub> concentrations. As shown in these tables, the NO<sub>2</sub> background concentration is higher than the NO<sub>2</sub> modeled concentration. In Table 5-14 (with Adjusted U\*) the total NO<sub>2</sub> concentration was 60.1% of the standard, and in Table 5-15 (without Adjusted U\*) the total NO<sub>2</sub> concentration was 82.9% of the standard. Despite the contention that “the use of Adjusted U\* significantly deflates modeled air impacts across multiple modeling runs” compliance with Rule 26.2.C, the use of Adjusted U\* had little effect on the overall modeling results and conclusions.

2. The Project Requires a PSD Permit: As discussed above, Rule 26.13, “New Source Review – Prevention of Significant Deterioration (PSD)” has not yet been approved by EPA into the California State Implementation Plan (SIP). As such, any implementation of PSD requirements, including applicability determinations and/or determination of compliance with PSD requirements can only be performed by U.S. EPA. The Ventura County ACPD does not have the authority to implement and enforce the requirements of PSD at this time.

In the original application for the Puente Power Project, NRG stated that PSD did not apply to the Puente Power Project. In letters dated September 2, 2016 and October 6, 2016 in the links below, NRG replied to these City of Oxnard specific comments regarding the PSD permit requirement for PM2.5, emission factor for PM2.5, actual emissions baseline, and the Puente Power Project potential to emit. In these letters, NRG confirmed its analysis that PSD does not apply to the Puente Power Project. At this time, the VCAPCD has no reason to dispute this PSD applicability determination, but as noted above has no authority to approve or deny this PSD applicability determination.

[http://docketpublic.energy.ca.gov/PublicDocuments/15-AFC-01/TN213482\\_20160902T170935\\_Responses\\_to\\_Comments\\_on\\_P3\\_PDOC\\_Made\\_by\\_City\\_of\\_Oxnard\\_R\\_Sarve.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/15-AFC-01/TN213482_20160902T170935_Responses_to_Comments_on_P3_PDOC_Made_by_City_of_Oxnard_R_Sarve.pdf)

[http://docketpublic.energy.ca.gov/PublicDocuments/15-AFC-01/TN213919\\_20161006T164403\\_Letter\\_to\\_Ventura\\_County\\_APCD\\_re\\_Applicant's\\_Responses\\_to\\_City.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/15-AFC-01/TN213919_20161006T164403_Letter_to_Ventura_County_APCD_re_Applicant's_Responses_to_City.pdf)

The VCAPD does acknowledge that for other than the emissions of PM2.5, the requirements of PSD clearly do not apply to the Puente Power Project. For example, as proposed, the Puente Power Project does not result in a significant net emissions increase of CO, NOx, SO2, PM, PM10, ROC, and all other PSD pollutants that would trigger the need to obtain a PSD permit.

This comment contends that the Puente Power Project triggers PSD permit requirements for PM2.5 because the Puente Power Project results in a significant net emissions increase that exceeds a rate of 10 tons per year of PM2.5. This comment further contends that the PM2.5 PSD applicability determination provided by NRG for the Puente Power Project was incorrect for the following reasons:

- a) NRG’s PSD analysis uses an incorrect baseline, including the use of an outdated emission factor for PM2.5 and an incorrect 2-year baseline.
- b) NRG understates the PM2.5 potential to emit from the Puente Power Project.

The PDOC assumes that all PM10 emissions are equal to PM2.5 emissions. VCAPCD Rule 26, “New Source Review” regulates the emissions of PM10 and VCAPCD Rule 42, “Permit Fees” regulates the emissions of PM (particulate matter). These VCAPCD rules do not directly regulate the emissions of PM2.5. PDOC Table VII-14 states that

the potential to emit for the Puente Power Project is 10.68 tons per year of PM10. PDOC Table VII-16 states that the actual emissions from MGS Unit 2 (that will be replaced by the Puente Power Project) are 1.62 tons per year of PM10. Subtracting the actual emissions of MGS Unit 2 (1.62 tons per year of PM10) from the potential to emit of the Puente Power Project (10.68 tons per year of PM10) results in a net emissions increase of +9.06 tons per year of PM10. These PM10 emissions in PDOC Tables VII-14 and VII-16 have not been revised in response to these PSD comments because these PM10 calculations are based on the definitions and calculation methods in VCAPC Rule 26, “New Source Review” and are not based on the definitions and calculation methods of the PSD regulation.

The Rule 26 and PSD definitions and calculation methods are not the same. For example, the VCAPCD Rule 26.4.C definition of “Actual Emissions” is based on “*two years immediately preceding the date of application*” or a more representative period of “*two consecutive years during the five years immediately preceding the date of such application.*” The PSD definition of “Baseline actual emissions” for an existing electric steam generating unit is based on any consecutive 24-month period within the 5-year period “*immediately preceding when the owner or operator begins actual construction of the project*”. The major difference in these definitions is the 5-year trigger of date of application (Rule 26.4.C) vs. begins actual construction of the project (PSD Regulation). In addition, Rule 26.4.C definition of “Actual Emissions” requires a “representative” period and the PSD definition of “Baseline actual emissions” requires “any” period.

It is important to note that for the purposes of the PDOC, the actual emissions of PM10 from MGS Unit 2 are not required to be determined as Rule 26.6, “New Source Review – Calculations”, requires for a “potential to potential” emission increase calculation (Rule 26.6.D.2) except for the “actual to potential” emission increase calculation of Rule 26.6.D.7. For the Puente Power Project, the emissions increase calculation of Rule 26.6.D.2 (potential to potential) was used for ROC, PM10, SOx, and CO. Since the Puente Power Project was determined to be a major modification for NOx, the emission increase calculation of Rule 26.6.D.7 (pre-project actual to post-project potential) was used for NOx.

As it relates to the PM10 emissions limits based on VCAPCD Rule 26, “New Source Review”, and not to the PM2.5 emission limits based on the PSD Regulation, the VCAPCD disagrees with the comment that “*NRG understates the PM2.5 potential to emit from the Puente Power Project*”.

Vendor guarantees are often used in the VCAPCD Authority to Construct permitting process to establish “not to exceed” emission limits or emission caps in enforceable permit conditions. Condition No. 29 of Appendix K of the PDOC requires a PM10 emissions limit of 10.10 pounds per hour as verified by initial and annual source testing with California ARB or EPA-approved methods (all PM emissions are assumed to be PM2.5 emissions). This limit applies at all times and at all ambient temperatures and in addition will apply at all times into the future. At this time, the VCAPCD has no reason to believe the Puente Power Project will not be able to comply with this PM10 emissions limit. The VCAPCD has permitted other gas turbines and none have failed

their Authority to Construct PM10 emissions limits as demonstrated by stack source testing. If the PM10 limit is ever exceeded, the VCAPCD will require a modification and/or re-evaluation of the Puente Power Project to ensure that it complies with all applicable rules and regulations. The VCAPCD has a two-step permitting system (Authority to Construct followed by Permit to Operate) to ensure that emissions limits in an Authority to Construct are confirmed by source testing during the Permit to Operate process. In fact, Section B of VCAPCD Rule 15, “Standards For Permit Issuance” requires that:

*“The Air Pollution Control Officer shall deny a Permit to Operate if an emissions unit has not been constructed in accordance with the conditions on the Authority to Construct and if the emissions unit as constructed provides less effective air pollution control than the emissions unit specified in the Authority to Construct.”*

The VCAPCD also disagrees with the comment that the emission limits in the PDOC are “*neither federally or practically enforceable*”. The PM10 emissions limits in the PDOC have been applied pursuant to the best available control technology (BACT) and emission offset requirements of Rule 26.2, “New Source Review – Requirements”, which is a federally enforceable rule. In addition, if constructed and operated as proposed, the Puente Power Project will be required to obtain a Title V Federal Operating Permit that will contain a federally enforceable PM10 emissions limit.

As for “practically enforceable” for the purposes of the PDOC’s PM10 emission limit, the PDOC requires initial and annual source testing using California ARB-approved or EPA-approved methods. In addition the PDOC requires monitoring and recording keeping of the hours of operation and of the amount of natural gas consumed, for the Puente Power Project. Annual emissions source testing, records of hours of operation and records of the amount of natural gas consumed are well-recognized and accepted methods to enforce emission limits.

3. The PDOC Fails to Require Offsets for the Project’s PM10 Emissions: The VCAPCD disagrees that the Puente Power Project is a New Emissions Unit as compared to a Replacement Emissions Unit as defined in VCAPCD Rule 26, “New Source Review”. As stated in the PDOC, since the Puente Power Project is a Replacement Emissions Unit, emission offsets for PM10 are not required for the Puente Power Project.

VCAPCD Rule 26.1.21 defines New Emissions Unit as “*An emissions unit that is part of a new stationary source, an emissions unit that is added to an existing stationary source, or any existing emissions unit that is located at a stationary source in violation of Rule 10*”.

VCAPCD Rule 26.1.29 defines Replacement Emissions Unit as “*An emissions unit which supplants another emissions unit where the replacement emissions unit serves the identical function of the emission unit being replaced*”.

As stated in this DOC, the Puente Power Project is being installed at the Mandalay Generating Station (MGS), which is an existing stationary source with VCAPCD Permit to Operate No. 00013. If and when constructed and operated, the Puente Power

Project will “supplant” MGS Unit 1 and MGS Unit 2 as these existing emissions units will be shut down and will no longer be operated. The word supplant is defined at [www.merriam-webster.com/dictionary/supplant](http://www.merriam-webster.com/dictionary/supplant) as “to take the place of (someone or something that is old or no longer used or accepted)”.

The definition of Replacement Emissions Unit includes the term “serves the identical function”. The word serve is defined at [www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone](http://www.collinsdictionary.com/dictionary/english-thesaurus/serve-as-something-or-someone) as “act as, substitute for, function as, do the work of, do duty as • She ushered me into the front room, which served as her office”. In terms of electrical generation at the Mandalay Generating Station, the Puente Power Project will “substitute for” and “do the work of” MGS Unit 1 and MGS Unit 2. The fact the Puente Power Project (simple cycle gas turbine) and MGS Units 1 and 2 (steam generating units) are not identical emissions units is irrelevant to the VCAPCD definition of Replacement Emissions Unit.

The word “function” is defined at [www.collinsdictionary.com/dictionary/english/function](http://www.collinsdictionary.com/dictionary/english/function) as “the natural action or intended purpose of a person or thing in a specific role ⇒ the function of a hammer is to hit nails into wood.” In the simplest form, the function of MGS Units 1 and 2 is to generate electricity. As stated in the DOC: “The new 262 MW gas turbine will be connected to the same Southern California Edison 220-KV switchyard that the two (2) existing 215 MW Babcock and Wilcox Steam Generator boilers (MGS Units 1 and 2) are connected to. Once operating, the new 262 MW gas turbine will provide dispatchable power to provide voltage support to the local reliability area in the same manner as the current two 215 MW Babcock and Wilcox Steam Generators.” Beyond the single, primary function of generating electricity, the Puente Power Project and MGS Units 1 and 2 have additional identical secondary functions to provide dispatchable power to provide voltage support to the local reliability area.

The VCAPCD is implementing the intention of Rule 26 that the Puente Power Project is a Replacement Emissions Unit for MGS Units 1 and 2 and is not a New Emissions Unit as defined by VCAPCD Rule 26.1. Given the above definitions of “serve” and “function”, a hammer and an electric-powered nail gun both serve the identical function of hitting a nail into a piece of wood. The speed, efficiency, color, cost, etc. of the device that hits the nail into the piece of wood is not relevant to the identical function. As discussed above, to qualify as a Replacement Emissions Unit, the emissions units do not need to be identical, but rather the emissions units need to serve an identical function.

The definition of Replacement Emissions Unit in VCAPCD Rule 26.1 was carefully designed to be a simple definition to actually encourage the construction of replacement emissions units as opposed to the retrofit or repair of existing emissions units. As a comparison, “Replacement Unit” is defined in EPA’s Prevention of Significant Deterioration (PSD) regulation at 40 CFR Part 52.21(b)(33) as follows:

*(33) Replacement unit means an emissions unit for which all the criteria listed in paragraphs (b)(33)(i) through (iv) of this section are met. No creditable emission*

*reductions shall be generated from shutting down the existing emissions unit that is replaced.*

*(i) The emissions unit is a reconstructed unit within the meaning of §60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit.*

*(ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.*

*(iii) The replacement does not alter the basic design parameters (as discussed in paragraph (cc)(2) of this section) of the process unit.*

*(iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.*

In the EPA PSD regulation, a Replacement Unit has a rigorous definition as it is exempt from the requirements of PSD as Replacement Unit is included in the PSD definition of Existing Emissions Unit. In PSD, a Replacement Unit is not subject to the PSD definition of Best Available Control Technology (BACT) and other PSD requirements, such as air quality impact analysis dispersion modeling. In contrast, as defined by VCAPCD Rule 26.1, a Replacement Emissions Unit is subject to the requirements of Rule 26, New Source Review, including the Best Available Control Technology (BACT), Offsets, and Protection of Ambient Air Quality Standards and Ambient Air Increments requirements of Rule 26.2. Note that the VCAPCD's definition of BACT is essentially the federal definition of Lowest Achievable Emission Rate (LAER) which is more stringent than BACT required by PSD.

VCAPCD Rule 26 encourages Replacement Emissions Units (as opposed to the retrofit of existing emissions units) because Replacement Emissions Units require the installation of BACT (=LAER), and are not exempt from the requirement to install BACT. Since BACT is required, a replacement emissions unit will likely be the superior air quality option compared to retrofitting or repairing an existing emissions unit to operate into the future.

For the Puente Power Project, the VCAPCD's design of the definition of Replacement Emissions Unit has accomplished its exact goal. Rather than being repaired or retrofitted to meet the California EPA State Water Resources Control Board OTC (Once Through Cooling) Policy, the MGS Units 1 and 2 gas-fired steam boilers are being replaced with modern-day electrical generating equipment. In terms of electrical generation, the Puente Power Project is more efficient, faster starting, smaller in size, and will result in less overall air emissions per megawatt of power generated as compared to the continued operation of MGS Units 1 and 2. In order to encourage replacement, instead of repair or retrofit, Rule 26.6, "New Source Review – Calculations", requires a "potential to potential" emission increase calculation (Rule 26.6.D.2) except for the "actual to potential" emission increase calculation of Rule 26.6.D.7. For the Puente Power Project, the emissions increase calculation of Rule 26.6.D.2 (potential to potential) was used for ROC, PM10, SOx, and CO. Since the Puente Power Project was determined to be a major modification for NOx, the emission increase calculation of Rule 26.6.D.7 (pre-project actual to post-project potential) was



required to be used for NOx. The CO emissions calculations were conducted in the PDOC even though Rule 26.2 does not require BACT or emission offsets for CO.

4. The PDOC's Consideration of Alternatives is Legally Deficient: The VCAPCD agrees that the Puente Power Project has been determined to be a NOx major modification and is therefore required to submit an analysis of alternatives pursuant to Section E of Rule 26.2, "New Source Review – Requirements" as follows:

Rule 26.2.E:

*The APCO shall deny an application for an Authority to Construct for any new major source or major modification unless the applicant provides an analysis as required by Section 173(a)(5) of the federal Clean Air Act, of alternative sites, sizes, production processes, and environmental control techniques for the proposed source demonstrating that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.*

The applicant's analysis of alternatives was included in Appendix J of the PDOC for the Puente Power Project. The VCAPCD has determined that the applicant's analysis of alternatives complies with Rule 26.2.E with the understanding that the California Energy Commission (CEC) Application For Certification process includes its own "Alternatives" analysis in Section 4.2 of the Revised Preliminary Staff Assessment (PSA) for the Puente Power Project (15-AFC-01) dated June 2016. The CEC analysis of alternatives is governed by the California Environmental Quality Act (CEQA) as described in the PSA as follows:

#### *CEQA REQUIREMENTS*

*As lead agency for the proposed P3, the Energy Commission is required to consider and discuss alternatives to the proposed project. The guiding principles for the selection of alternatives for analysis in an environmental impact report (EIR) are provided by the California Environmental Quality Act Guidelines (CEQA Guidelines) (Cal. Code Regs., tit. 14, § 15000 et seq.). Section 15126.6 of the CEQA Guidelines indicates that the alternatives analysis must:*

- *describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project;*
- *evaluate the comparative merits of the alternatives;*
- *consider alternatives that would avoid or substantially lessen any significant environmental impacts of the proposed project, including alternatives that would be more costly or would otherwise impede the project's objectives; and*
- *describe the rationale for selecting alternatives to be discussed and identify alternatives that were initially considered but then rejected from further evaluation.*

*These regulations also apply to the document used as a substitute for an EIR in a certified state regulatory program (Cal. Code Regs., tit. 14, §§ 15251 and 15252).*

*The range of potentially feasible alternatives selected for analysis is governed by the “rule of reason,” requiring evaluation of only those alternatives “necessary to permit a reasoned choice” (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)). In addressing feasibility of alternatives, factors that may be taken into account include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)(1)). Under the “rule of reason,” an EIR “need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative” (Cal. Code Regs., tit. 14, § 15126.6, subd. (f)(3)).*

*Alternatives may be eliminated from detailed consideration by the lead agency if they fail to meet most of the basic project objectives, are infeasible, or could not avoid any significant environmental effects (Cal. Code Regs., tit. 14, § 15126.6, subd. (c)). The CEQA Guidelines require analysis of a “no-project alternative” in comparison to the proposed project. “The ‘no project’ analysis shall discuss the existing conditions...at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services” (Cal. Code Regs., tit. 14, § 15126.6, subd. (e)(2)). If the environmentally superior alternative is the “no project” alternative, the EIR shall identify an environmentally superior alternative among the other alternatives.*

The CEC alternatives analysis includes a no project alternative, off-site alternative locations, and a reconfiguration of the Puente Power Project within the Mandalay Generating Station. The CEC analysis of alternatives included a review of socioeconomics, including environmental justice factors such as minority populations and poverty level. As for socioeconomics, the PSA for the Puente Power Project includes the following overall conclusion:

### **SOCIOECONOMICS**

*Staff concludes that construction and operation of the P3 would not cause significant adverse direct, indirect, or cumulative socioeconomic impacts on the project area's housing, law enforcement services, or parks. Staff also concludes the project would not induce a substantial population growth or displacement of population, or induce substantial increases in demand for housing, parks, or law enforcement services. Staff proposed Condition of Certification SOCIO-1 would ensure project compliance with applicable LORS. Staff concludes the socioeconomics impacts from the proposed P3 are less than significant. Therefore, the socioeconomic impacts are less than significant for any population within the six-mile radius of the P3, including the EJ population.*

## **Responses to Selected Comments on:**

### **Attachment A Comments on the Puente Power Project Phyllis Fox, Ph.D., PE July 29, 2016**

Attachment A of the Edward T. Schexnayder letter (on behalf of the City of Oxnard) dated July 29, 2016 provides a detailed analysis that supports the comment that “The Project Triggers PSD Review For PM2.5.”

As discussed above, Rule 26.13, “New Source Review – Prevention of Significant Deterioration (PSD)” has not yet been approved by EPA into the California State Implementation Plan (SIP). As such, any implementation of PSD requirements, including applicability determinations and/or determination of compliance with PSD requirements can only be performed by U.S. EPA. The Ventura County ACPD does not have the authority to implement and enforce the requirements of PSD at this time.

At this time, the VCAPCD has no reason to dispute this PSD applicability determination, but as noted above has no authority to approve or deny this PSD applicability determination. Therefore, the VCAPCD is not providing a detailed point-by-point response to Attachment A as it relates to PSD applicability as any conclusion reached by the VCAPCD is subject to “override” by the EPA. However, the VCAPCD provides the following responses to Attachment A as it relates to the PDOC’s regulation of PM10 emissions and VCAPCD rules and regulations that may not have been addressed in the response to the City of Oxnard’s comment above. It is important to note that VCAPCD Rule 26, “New Source Review”, does not regulate PM2.5 emissions at this time as it regulates only PM10 emissions.

Baseline Period: The baseline period selected for the Puente Power Project PSD PM2.5 applicability determination is not regulated by the VCAPCD Rule 26.4.C definition of “Actual Emissions” but is regulated by the PSD definition of “Baseline actual emissions”. These definitions are not the same as described above. The major difference in these definitions is the 5-year trigger of date of application (Rule 26.4.C) vs. begins actual construction of the project (PSD Regulation). In addition, Rule 26.4.C definition of “Actual Emissions” requires a “representative” period and the PSD definition of “Baseline actual emissions” requires “any” period. The baseline period chosen for PSD applicability is “allowable” as long as it complies with the PSD definition of “Baseline actual emissions”.

For the purpose of PM10 emissions as regulated by the PDOC and VCAPCD Rule 26, “New Source Review”, the actual emissions of PM10 are not required to be determined for MGS Unit 2. Rule 26.6, “New Source Review – Calculations”, requires a “potential to potential” emission increase calculation (Rule 26.6.D.2) except for the “actual to potential” emission increase calculation of Rule 26.6.D.7. For the Puente Power Project, the emissions increase calculation of Rule 26.6.D.2 (potential to potential) was used for PM10. Since the Puente Power Project was determined to be a major

modification for NOx, the emission increase calculation of Rule 26.6.D.7 (pre-project actual to post-project potential) was required to be used for NOx.

Non-Compliance Emissions Were Not Excluded: The VCAPCD disagrees with the comment that MGS Unit 2 violated its “PM permit limit” of 4.74 pounds per hour. For the purposes of PM10 emission offsets (Rule 26.2.B) and PM10 actual emissions (Rule 26.4.C) emissions are measured and regulated in the units of “tons per year”. In addition, the PSD pollutant emissions rates are also measured in the units of “tons per year”. “Pounds per hour” emissions are not regulated by Rule 26 and are defined by Section C of VCAPCD Rule 29, “Conditions on Permits”, as follows:

*“For all emissions units, hourly permitted emissions shall be calculated based on the maximum quantity of each air pollutant which may be emitted from the emissions unit during a one hour period, as limited by any applicable rules or permit conditions. Hourly permitted emissions shall be expressed in the units of pounds per hour.”*

The PM pounds per hour permitted emissions for MGS Unit 2 have been calculated to be 4.74 pounds per hour and are not limited by an applicable rule or permit condition, but rather they were calculated based on the steam boiler nameplate heat input rating of 1990 MMBTU per hour and an “assumed” natural gas heating value of 1,050 MMBTU per MCF. These pounds per hour permitted emissions are not a “limit” that are subject to “violation” as Rule 29.B.3.c allows the pounds per hour permitted emissions to be increased as follows:

*“Upon annual renewal, the APCO may revise the permitted emissions of any emissions unit based on better emission rate information if the correction will not result in the violation of any applicable federal, state or district laws, rules, regulations, agreements or orders. The permittee shall be notified in writing of any revisions to permitted emissions, made pursuant to this subsection. Such notice shall be given at the time of notification of the renewal fee due.”*

Specifically for MGS Unit 2, the pounds per hour permitted emissions of PM of 4.74 pounds per hour are not a limit and may be increased to their “maximum quantity” (Rule 29.C) pursuant to Rule 29.B.3.c based on “better emission rate information” such as the MGS Unit 2 maximum heat input rating and the minimum heating value of the natural gas combusted by MGS Unit 2.