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Terramar Comments Regarding the Preliminary Determination of Compliance (PDOC) for the Amended Carlsbad Energy Center Project (ACECP).

To: Dr. Steven Moore, APCD

From: Kerry Siekmann representing Terramar & myself

Date: 1-16-2015

After completing a review of the PDOC submitted to the California Energy Commission (CEC), Terramar would like to submit these comments to the Air Pollution Control District (APCD) regarding the PDOC document.

1) On page 6 of the PDOC it states:

The manufacturer estimates that the turbines can reach 100% load within 10 minutes. However, because the oxidation catalyst and SCR catalyst have minimum temperature values below which they are not effective at controlling emissions, it is estimated that for up to 25 minutes after startup the emissions from the turbine will not meet the required emission levels for steady state operation.

Terramar wishes to know if the emissions that occur during this full 25-minute start up time period are all being estimated in the emissions calculations? This question addresses start-ups during regular operation, not during commissioning.

2) On page 9 of the PDOC it states:

For netting purposes under District NSR rules, calculations are based on the average emissions during the most representative consecutive 2-year period in the previous five years unless such a period cannot be determined. Table 2 below shows averages for each 2-year period for the existing equipment.

And on the PDOC page 14 it states:

Based on review of emissions data, the District preliminarily determined that the average annual emissions during the most recent two calendar years (2012-2013) in the past five years (see Table 2) are the most representative for calculating the net emission increase (or decrease) because they reflect operation after the San Onofre Nuclear Generation Station ceased producing power....

This calculation includes an additional annual limit for NO_x for the new equipment as a whole and the existing boilers and peaking turbine accepted by the Applicant to ensure the emission increase stays below 25 tons/yr. Additional annual emission limits are included in the proposed

permit conditions for the other criteria pollutants to ensure that the post-project PTE and, therefore, the net emission increase do not exceed the values listed in Table 11.

Terramar strongly disagrees with the District's choice of baseline. For the original Carlsbad Energy Center Project (CECP) the District chose to average the past five years to create a baseline. Now the District has decided to use a different metric to create baseline. Terramar requests the District use the average of years 2009-2013 as the baseline to maintain consistency. Otherwise it appears that the District is trying to offer the project a preferred average for baseline emissions, thereby avoiding PSD modifications.

Terramar is aware that the District chose the years 2012-2013 as baseline due to the shuttering of San Onofre. Terramar disagrees that this is an appropriate reason to change the District's method for calculating baseline.

For the CECP, the District chose to use the past five years as a baseline. Terramar challenged the District's choice of using the past five years, as the older years had many more emissions than the more current years. This allowed the CECP more NOX emissions and to stay under a certain NOX limitation.

Now the District has chosen to use the past two years for ACECP baseline, instead of five years. Observing the past five years of Encina baseline numbers, it appears that the shutdown of San Onofre was an issue only in 2012. The emission table shows that in 2013, Encina emissions were back down to similar levels as 2009-2011 except CO. By using the five-year baseline, the District would be taking into account the 2012 changes and would also be averaging in the actual minimal use of Encina. The District should place the health of the citizens of San Diego above the benefits to the Amended CECP baseline.

Terramar requests the District use the most representative and consistent average as the baseline and change the baseline to the past five years, 2009-2013.

3) Per PDOC page 16 it states:

Greenhouse gas emissions were also calculated for the existing equipment during years 2012-2013 and compared to existing emissions to determine the increase in GHG emissions. The table below lists GHG emission calculations for the entire facility. Detailed results of the calculations for each category of equipment can be seen in the appendices.

And on page 16 there is a table:

Table 13: Estimated GHG Emissions for the Proposed Project

Terramar would like a fuller explanation of this page of information.

Where it states, "for the entire facility", what does that include?

Where it states, “Greenhouse gas emission were also calculated for the existing equipment during 2012-2013 and compared to existing emissions to determine the increase in GHG emissions?” Terramar needs a fuller explanation of what this is referring to. It is very unclear as it is stated.

4) On page 17 it states:

This project is expected to begin operation in 2017, so the dates of interest are calendar years 2013-2017 for determining the contemporaneous emission increases. Aside from the licensed CECP, no applications have been filed and/or implemented that result or may result in emission increases during the subject period. The proposed permit conditions contain provisions that prohibit the construction or operation of both the licensed CECP and ACECP. Hence, the contemporaneous increase from the licensed CECP is not considered in the contemporaneous increase for the ACECP.

Terramar disagrees with the District in this decision. There will be a great deal of testing done while the Encina Plant is running. During the testing there will be times when the ACECP will be running with no pollution controls and the Encina Plant will be running. Terramar sees this as a “contemporaneous increase for the ACECP” and would like an explanation from the District on this.

Also, Terramar believes that if the proper baseline of 2009-2013 were used, then ACECP would be considered in “contemporaneous increase”.

5) On page 18 it states:

A major modification is defined in District Rule 20.1 as a physical or operational change which results or may result in a contemporaneous emission increase at an existing major source in A major modification is defined in District Rule 20.1 as a physical or operational change which results or may result in a contemporaneous emission increase at an existing major source in excess of the following limits for each of the corresponding pollutants: PM10 – 15 tons per year; NOx – 25 tons per year; VOC – 25 tons per year; SOx – 40 tons per year; CO – 100 tons per year; Lead – 0.6 tons per year. Proposed permit conditions contain an annual emission limits covering the ACECP and the existing boilers and peaking turbine that limits total NOx emissions from this equipment to 84.8 tons of NOx per year, which ensures that the contemporaneous emission increase of NOx does not exceed 25 tons per year, and that limit the potential increase for other pollutants so that emissions of these pollutants do not exceed any of the applicable NSR or PSD modification thresholds (see PSD below). Therefore, the project is not a major modification for any pollutant.

NOx – 25 tons per year; VOC – 25 tons per year; SOx – 40 tons per year; CO – 100 tons per year; Lead – 0.6 tons per year. Proposed permit conditions contain an annual emission limits covering the ACECP and the existing boilers and peaking turbine that limits total NOx emissions from this equipment to 84.8 tons of NOx per year, which ensures that the contemporaneous emission increase of NOx does not exceed 25 tons per year, and that limit the potential increase for other pollutants so that emissions of these pollutants do not exceed any of the applicable NSR or PSD modification thresholds (see PSD below). Therefore, the project is not a major modification for any pollutant.

Terramar would like to point out that by using the 2012-2013 baseline for the ACECP instead of averaging the five years, the District is allowing the plant to stay below the limits required for NOx and limits for definition of a major modification for PSD. Once again, Terramar asks the District to use the five years baseline and repeat all of their calculations to protect the emission levels for the safety of the public.

6) Per page 19 it states:

Under District rules, a PSD modification means a contemporaneous emissions increase occurring at a modified PSD stationary source equal to or greater than any of the following levels: PM10 – 15 tons per year; NOx – 40 tons per year; VOC – 40 tons per year; SOx – 40 tons per year; CO – 100 tons per year; and lead – 0.6 tons per year. Regardless of whether this source is considered a modified PSD stationary source, the contemporaneous emission increases do not exceed any of these levels, so this project is not a PSD modification.

Terramar would like to point out that if the District used the five year baseline the increase in NOx would be over 40 tons per year, causing PSD modification.

Once again on page 19 it states:

Since the project emission increase is not a PSD modification and none of the emission units by themselves constitute a new PSD stationary source of CO (see Tables 5, 6, and 7), BACT is not required for CO.

LAER is applicable only to federal nonattainment pollutants or their precursors. For the District, the only nonattainment pollutants are NOx and VOCs, which are precursors for ozone for which the District is in nonattainment of the federal 8-hour ambient air quality standard. At existing major sources, LAER is applicable to projects that have a contemporaneous emission increase equal to or greater than 25 tons per year, which constitutes a major modification under District NSR rules, or to emission units with an emission increase that constitute a new major source by themselves. The proposed project emission increase is not a major modification for NOx or VOCs, and the emission increase from each new emission unit does not constitute a major stationary source of NOx or VOCs by itself (see Tables 5, 6, and 7). Hence, none of the emission units are subject to the LAER requirements of 20.3(d)(v).

Terramar would like to point out again that if the five-year baseline were used, the plant would be considered a new PSD stationary source and BACT would be required.

On page 26 it states:

As previously discussed, this site is an existing PSD source, but the project does not result in a contemporaneous emission increase in excess of the PSD modification thresholds for any pollutant, so no further PSD requirements apply. This is ensured by proposed conditions limiting the actual emissions from the existing EPS units in sufficient amounts such that at no time will the contemporaneous emission increase exceed the PSD modification thresholds. Table A-13 in the appendix shows the quantities of reductions required based on the number of the proposed new units that have started up. After completion of the project, the potential to emit for all pollutants would be reduced sufficiently such that the site would no longer be a PSD stationary source.

Terramar once again contends that if the five-year baseline were used then there would be further PSD requirements that would apply and they are being avoided by using the two-year baseline.

On page 26 it states:

Emission offsets are required for any project that results in a major modification at an existing major source or results in a new major stationary source by itself for federal nonattainment air pollutants or their precursors. The District is currently only in nonattainment of the federal 8-hour ozone standard. As ozone precursors, NO_x and VOCs are the only nonattainment pollutants in the District. The EPS is currently an existing major source. The proposed permit conditions contain annual emission limits for NO_x and VOC emissions to ensure that the contemporaneous increase for NO_x or VOC emissions is less than 24.9 ton/yr., which is below the major modification threshold of 25 ton/yr.

Here again the five-year baseline would make the NO_x emissions above 40 ton/yr. and cause the project to cross the major modification threshold.

In conclusion, Terramar finds that the District has made a grave error in its choice of baseline and hopes the District corrects this error for consistency, for the health of the public and for trust from the public that the baseline choices are not made to accommodate the Applicant. Terramar requests that the District correct the baseline for all calculations in the FDOC.

