

DOCKETED

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South Coast Air Quality Management District

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June 6, 2014

Ms. Monica Rudman

Via email at Monica_rudman@hotmail.com

Subject: Huntington Beach Energy Project (HBEP)
 Preliminary Determination of Compliance, Response to Comments

Dear Ms. Rudman,

Thank you for your comment letter dated May 5, 2014 on the Huntington Beach Energy Project (HBEP). Your interest and willingness to express your concern is the type of citizen involvement that is critical to the effort to achieve healthful air quality in Southern California. As you know, the HBEP is a combined cycle gas turbine power plant project proposed for the existing Huntington Beach Generating Station located at 21730 Newland St, Huntington Beach, CA 92646. The project as proposed will replace the older, less efficient utility boilers currently operating on this site since the 1950's, with a state of the art and more efficient combined cycle gas turbine generating system.

We realize that the issues involved in air permitting are technical in nature, and may be difficult for lay-persons to fully comprehend. Unfortunately the Clean Air Act requirements and federal, state, and local air quality rules and regulations governing the permitting of this type of equipment are complex and in order to evaluate the equipment and demonstrate compliance, a technical discussion is warranted. However, we do wish to fully inform the public about the projects we permit, and to this end, we and the California Energy Commission provide opportunities for community involvement through public notices and public meetings held in the location of the project. This gives individuals a chance to seek information and share their concerns.

Harmful Particulate Pollution

Your comment centers around the issue of the actual PM10 emissions from the existing plant as compared to the new plant's potential to emit (PTE), and the health effects of the particulate emissions.

While a comparison of the actual emissions to potential to emit (PTE) will almost always show that the new plant has a larger PTE than the old plant's actual emissions, in reality the extent to which the new plant will actually operate is somewhat uncertain. Generally, a plant operator will wish to permit the project at a high enough level to allow flexibility in its operation and to avoid a situation where the plant has to cease operation because of permit restrictions. This may be the operator's 'worst case' emission scenario. However, page 13 of the PDOC states that the plant operator has estimated that the actual operating time of the plant would be between 35-50% on an annual basis. And although the actual emissions from the new plant may still be higher than the actual emissions from the existing plant, the new plant will be more efficient meaning it generates the same amount of electricity while burning less fuel than the existing utility boilers. Also, the actual emissions may be a fraction of the PTE.

Furthermore, the PM10 and PM2.5 air quality of coastal Orange County (i.e., area of the proposed project) is among the cleanest regions in the four-county jurisdictional area of the SCAQMD; see Figures 1 through 3, which are taken from the 2012 Air Quality Management Plan (<http://www.aqmd.gov/aqmp/2012aqmp/index.htm>). As shown in Figure 1, the annual PM10 air quality is well below the old annual National Ambient Air Quality Standard (NAAQS) of 50 mg/m^3 (The annual PM10 NAAQS was revoked in 2006). The whole four-county jurisdictional area (including coastal Orange County) currently meets the 24-hour PM10 NAAQS of 150 mg/m^3 . As shown in Figures 2 and 3, the PM2.5 air quality along coastal Orange County is below the 24-hour and annual NAAQS of 35 mg/m^3 and 12 mg/m^3 , respectively. It is anticipated that the Huntington Beach area will continue to have some of the cleanest air quality levels amongst the four-county jurisdictional area of the SCAQMD even with the development of the Huntington Beach Energy Project.

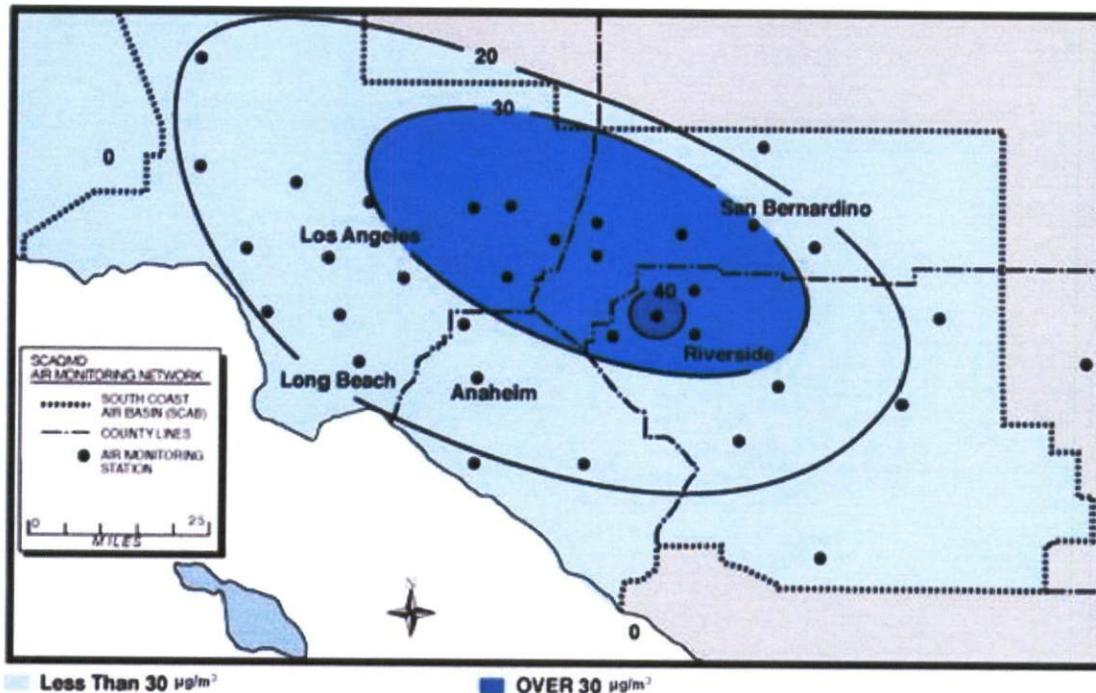


Figure 1. Annual Arithmetic Mean PM10 Particulate Matter ($\mu\text{g}/\text{m}^3$) in 2011.

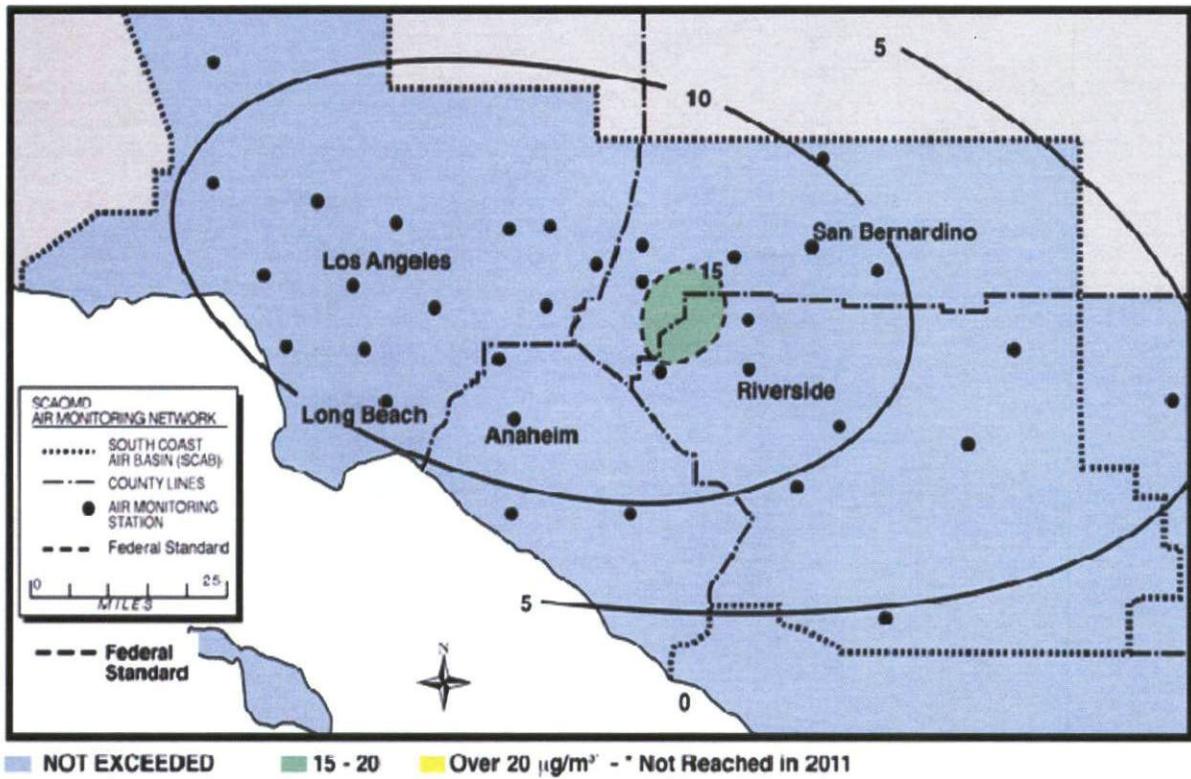


Figure 2. Annual Average PM2.5 ($\mu\text{g}/\text{m}^3$) in 2011 (Annual PM2.5 NAAQS = $15 \mu\text{g}/\text{m}^3$, annual arithmetic mean).

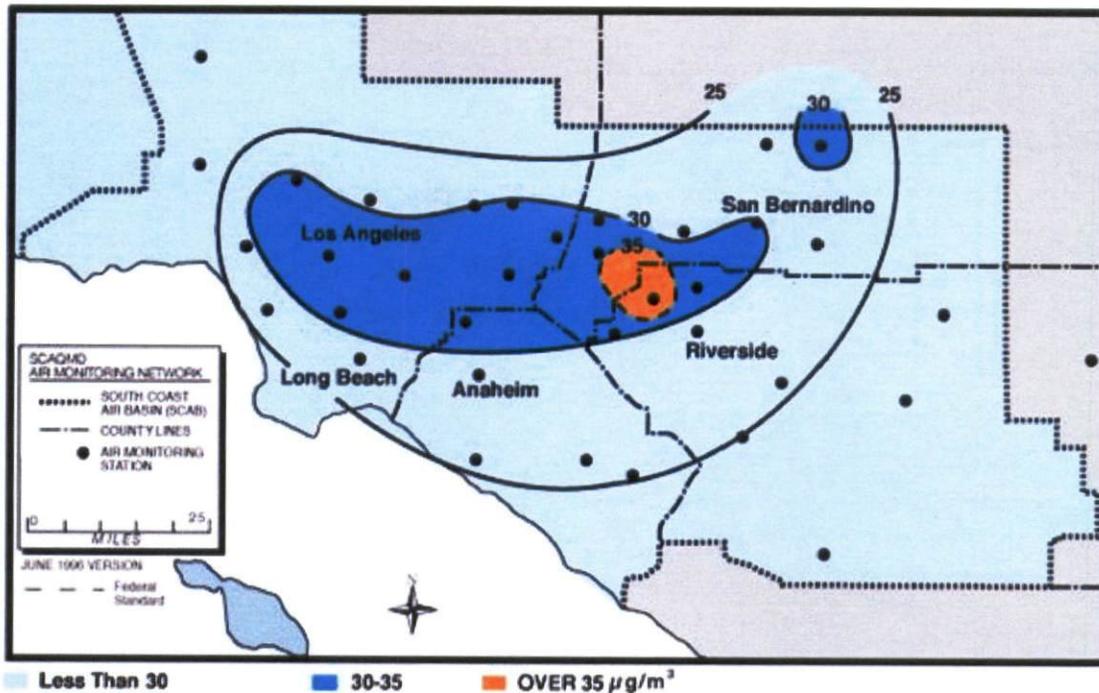


Figure 3. 98th Percentile 24-Hour Average PM_{2.5} ($\mu\text{g}/\text{m}^3$) in 2011 (24-hour PM_{2.5} NAAQS = $35 \mu\text{g}/\text{m}^3$).

And finally, while Rule 1304(a)(2) offset exemption for repowering projects such as HBEP was in no way intended to result in an increase in emissions for any particular neighborhood, it was enacted to allow for the replacement of older less efficient existing generating units with new modern more efficient power plants, which in turn is beneficial to air quality in the basin as a whole. Further, even if the project was not exempt from offsets pursuant to Rule 1304(a)(2), the federal Clean Air Act allows the use of emission reduction credits which may have been generated at a different area in the air basin to offset emission increases at another location. It should be noted that the District provides offsets from its internal bank for projects exempt from offsets under Rule 1304(a)(2) and accounts for those offsets in its annual reports to the EPA. These offsets consist largely of “orphan shutdowns” that have occurred in the District but have not received emission reduction credits as a result of the shutdown.

Air Quality Monitoring Inputs

Your comment is in regards to the John Wayne Airport weather data used to perform the modeling for HBEP, as opposed to Costa Mesa weather data, and the inclusion of emissions from beach bonfires in the analysis.

There are a limited number of wind monitors in coastal Orange County and there are even fewer sites that have the necessary information (e.g., solar radiation and fractional cloud coverage) for air dispersion modeling. Two sites were considered for the air quality modeling analysis: Costa Mesa at 2850 Mesa Verde Drive East and John Wayne Airport. The John Wayne Airport was chosen over the Costa Mesa site for the following reasons at that time (August 2013):

- **Less Missing Data** – The U.S. Environmental Protection Agency (EPA) has established limits on the percent of missing data for meteorological data used in dispersion modeling (i.e., no more than 10% per calendar quarter). The John Wayne Airport meets this criterion whereas Costa Mesa did not. In addition, overall the John Wayne Airport had less missing data than Costa Mesa (i.e., 870 hrs vs. 2,225 hrs).
- **John Wayne Airport Data More Current** – The period of record for the John Wayne Airport data was 2008 to 2012 whereas the period of record for the Costa Mesa data was 2005 to 2009. EPA recommends that the most current data be used.
- **Surface Characteristics at John Wayne Airport More Similar to the Project Site** – The surface roughness at John Wayne Airport in the predominant wind direction (i.e., from the SW quadrant) is more similar to the project site than the Costa Mesa data. This is also a criterion that EPA uses to select meteorological data for dispersion modeling.
- **Costa Mesa Data Shortfall** – Depending on how the Costa Mesa data are processed the percent calms can vary from 0 to 38 percent (or from 0 hrs to 16,848 hrs).

Although the bonfire emissions were not modeled directly as part of the dispersion modeling analysis for the PDOC, they are indirectly taken into account in the background air quality assumptions. The nearest air quality monitor to the proposed project (Anaheim, Station No. 3195) was used to estimate background concentrations in the vicinity of the proposed project. These monitored concentrations would include the cumulative impacts of all existing sources upwind of the sampler, including beach fires if they were occurring during the monitoring period. The project increments are then added to the background concentration for comparison to federal and state ambient air quality standards.

Effects on State Parks

Your comment concerns the impacts of the project emissions on visibility at the Huntington State Beach, a Class II area as defined by EPA.

To address your comment, a visibility analysis was performed for potential visibility impacts from the project on visitors at Huntington State Beach. Briefly, only the hours during which the state beach is open (6 a.m. to 10 p.m.), were considered, and it was conservatively assumed that the emissions from all six exhaust stacks are combined and emitted through a single stack. Lastly, it was assumed that a beach visitor would be looking up at the sky through the plume from the project. Under these conservative conditions, the visibility impacts at Huntington State Beach exceed the Class I significance thresholds for plume contrast and color contrast.

Please note that neither VISCREEN (the model used in the analysis) nor the Class I visibility thresholds were established for Class II areas in southern California, which contain numerous urban areas and lots of commercial and industrial activity. EPA requires, for informational purposes only, a visibility analysis of Class II areas using the Class I visibility thresholds and the

VISCREEN model. However, this does not necessarily mean that permitting actions or project mitigation are required for any significant Class II visibility impacts that are found. As part of the Application for Certification (AFC) process that the California Energy Commission (CEC) is the lead agency for addressing all environmental impacts and, the question you pose may be best addressed by CEC regarding project mitigation.

Health

Your comment pertains to the health effects of the project on long-term residents living in the area.

While the health risk assessment does not go back retrospectively and evaluate previous health impacts to long-term residents, cancer risks from the project assume that individuals are exposed to the project's emissions continuously (except for two weeks each year) from birth through 70 years old. Potential cancer risks less than 10 in a million and non-cancer impacts less than a hazard index of one are considered in compliance with applicable rules and regulations. The peak cancer risk impacts from the AES Huntington Beach Energy Project are 2.4 in a million and the non-cancer chronic and acute hazard indices are 0.008 and 0.069, respectively, which are well within the rule requirement of District Rule 1401. Also, these impacts are conservative since there are associated emission decreases with the shut-down of boiler units 1 and 2, which are not addressed in the analysis.

It should be noted that coastal Orange County, the site of the project, has some of the lowest inhalation cancer risks in the jurisdictional area of the SCAQMD as shown in Figure 4, which was taken from the Multiple Air Toxics Exposure Study (MATES) III report (<http://www.aqmd.gov/prdas/matesIII/matesIII.html>). MATES IV reports are currently under development and should be available in the summer of 2014. Coastal Orange County will continue to have some of the lowest inhalation cancer risks in SCAQMD's jurisdictional area.

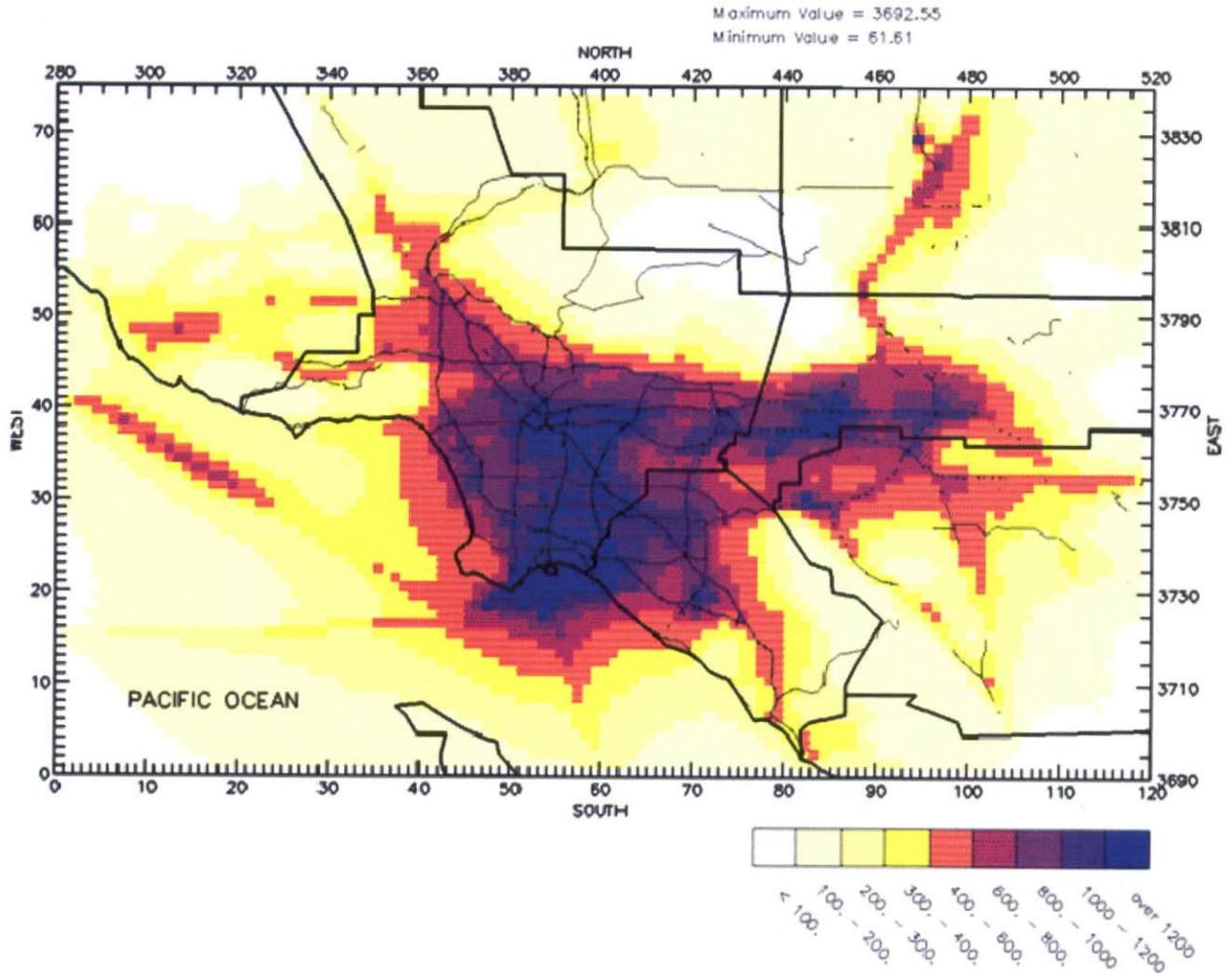


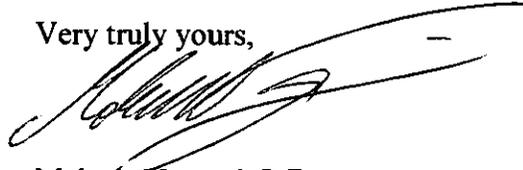
Figure 4. Model-estimated inhalation cancer risk for MATES III (2005 time period).

Greenhouse Gases

Your comment pertains to the thermal efficiency of the new gas turbines proposed for HBEP as compared to the state-wide average thermal efficiency of natural gas fired generation in California as reported in a 2012 CEC document. While it is true that the heat rate of the turbines proposed by HBEP is higher than a typical natural gas fired combined cycle generating plant, the turbines at HBEP maintain a fairly consistent heat rate throughout their operating range. This was an important consideration for the project proponent because their operational requirements necessitate multiple daily start ups with frequent ramping and load following. Under these conditions, the turbines chosen for HBEP will experience minimal loss in efficiency, whereas other turbine models may not have similar capabilities in this regard.

We appreciate the effort spent by you to review and provide comments in response to the public notice for this project. Thank you again for taking the time to provide comments.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Mohsen Nazemi', written over a horizontal line.

Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering and Compliance

MN:AYL:CDT:JTY:CGP

cc: CEC, Docket No.: 12-AFC-02