

**Don Oaks**  
2650 latigo dr  
solvang ca 93463  
805.680.1818  
[donoaks@verizon.net](mailto:donoaks@verizon.net)

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## **Review of Lazer Broadcasting Facility - Fire Protection Analysis for San Bernardino County**

My name is Don Oaks. I have substantial background with respect to the fire safety element of the subject matter of the Proposed Project (CV attached). I have been asked to perform an analysis of the environmental information provided for the subject project. The question is one of sufficiency and adequacy for compliance with the California Environmental Quality Act. That is, does the environmental document (November 2015 Administrative Draft EIR) provide objective planning and environmental information sufficient to guide and assist decision-makers, lead agency staff and the public in their evaluation of the potential environmental effects that may result from implementation of the project as proposed.

The fire authority having jurisdiction is the San Bernardino County Fire Department. They use the California Fire Code (CFC) as the basis for their locally adopted San Bernardino County Fire Code.

A brief look at the regulatory structure is important to this analysis of appropriateness and sufficiency of the mitigation measures employed in the situation under review.

California uses the International Fire Code (IFC), as the basis for the California Fire Code. The IFC is one of the several codes in the family of model codes developed and published by the International Code Council (ICC). The ICC family of codes is used throughout the United States as the basis for State and local codes. The ICC codes are under constant review which results in evolution of the text in order to produce greater precision, clarity and sophistication in the code language and to reflect changes in technique and technology with respect to materials and processes utilized within the community.

A revised edition is published every three years. California makes minor changes in the IFC in order to conform to State laws and regulations and place emphasis on areas that may be of special importance to California. California then republishes the CFC on that three-year cycle.

Subordinate political subdivisions, such as San Bernardino County, may make minor changes in order to provide further clarity and to place emphasis on areas that may be of special importance to the County, such as the Fire Safety Overlays for areas with particular physical features. The result of this process is to provide an instrument for achieving fire safety while it avoids omission, contradiction and ambiguity, and further provides certainty, consistency and predictability.

With this regulatory process in place there will be situations where the strict application of the code language will be inappropriate. The Code provide for the reasonable interpretation, in these situations, by the authority having jurisdiction. The creation and maintenance of a safer community by achieving the intent of the code is the desired outcome. Specific code text includes a variety of options. The code recognizes the appropriateness of allowing the Fire Marshal discretion with respect to the value of a risk and of a mitigation measure. Options include the use of Alternative Materials and Methods. Another option is asking for a specialist to study a situation where strict application would not be appropriate and render an opinion and report. The California Fire Code specifically recognizes a fire protection plan alternative to the strict application of the black letter of the code in wildland-urban interface areas such as the area under review. This regulatory process is well established in California. Neighboring counties use the same basic codes and standards and the same approach which includes utilizing code language that provide for reasonable interpretation of the facts and circumstances surrounding the point of application.

I was the Fire Marshal for the County of Santa Barbara for more than a decade and I used the same codes, standards and approach to determining appropriate mitigations that the San Bernardino Fire Marshal, Peter Brierty, used when he originally set requirements for the Lazer monopole. I engage fire marshals from area counties on a

regular basis and I can assure you that they would consider the circumstances found here and utilize the same approach. The current Fire Marshal for San Bernardino County, Mike Horton confirms that the following statement by Chief Brierty, referring to this project, in a memo back in October 2008, remains the Department's position:

*The following is in response to questions regarding this project and the Fire Safety Overlay.*

*When the Fire Safety Overlay was written, it was written with Life Safety issues in mind, that is fire protection for people and their homes and businesses. This is the first situation that I am aware of where un-occupied structures or in this case, equipment is being considered for application to standards required for the Fire Safety Overlay. It becomes obvious when applying the FSO standards to un-occupied structures and equipment that amendments to the Development Code are necessary to accommodate these types of situations.*

*This is a very remote site in terms of providing tactical firefighting methods. It is at the top of a significant upslope with limited access and no alternative escape routes. Placing firefighters at this location to defend equipment and a fuel tank would be putting them at a level of risk that is unacceptable. Therefore, even if an improved water supply was provided, the likelihood of it being used for fire suppression is highly unlikely. There are numerous remote radio and telephone sites across the mountain within the Fire Safety Overlay that have no provision of water supply. Nor is there an expectation that water will be available to responders if they were ever to be dispatched there.*

*Fuel Modification: As this project involves un-occupied structures or equipment and there is no Life Safety at risk, the variance is acceptable. The Container has a three hour fire rating and an internal fire suppression system. Also the fuel tank\* will be in a cinderblock containment. This design is expected to be self sufficient.*

*\*Since Chief Brierty's comments the project has deleted the on-site fuel storage.*

*Fuel modifications provide at least two functions. First, with occupied structures, they provide defensible space where firefighters can successfully defend a home or business. The 100 foot minimum was designed around protecting homes and was not designed for equipment. This principle therefore would not apply here. The second is that they can provide a passive fire protection in remote areas where firefighter response is not likely. This would apply. The 30 feet proposal when coupled with the self-sufficient nature of the equipment as proposed is adequate.*

*Water Supply: There are no Uniform Fire Code water supply requirements specifically for equipment or the types of structures proposed in this project. Again as they will not be occupied, there is no Life Safety at risk.*

*Access: Access as required in the Fire Safety Overlay is not necessary. Improved access (roads that are widened, paved and less than 14% grade) is required in the Fire Safety Overlay for several reasons. Obviously the main reason is to get fire response vehicles to the necessary locations. As stated above this will be highly unlikely. Another very important reason is to provide wide enough roads for evacuating residents to pass as equipment is coming in to protect the homes. There is no one to evacuate so this principle wouldn't apply.*

The reasonable interpretation of the codes (codes tell you what to do) and standards (standards tell you how to do it) clearly allow the authority having jurisdiction to modify the County's fire requirements that were originally provided on this project. Although the perceived ambiguity existed, it has been removed by the subsequent clean-up of language in the County Code covering the Fire Safety Overlay:

**“Unoccupied Structures.** At the discretion of the responsible Fire Authority, the fire safety development standards for projects located within a Fire Safety Overlay that only propose to construct unoccupied structures may be altered at the

discretion of the responsible Fire Authority on a case-by-case basis without an approved variance.”

In the Superior Court Decision, *Citizens for the Preservation of Rural Living vs. County of San Bernardino*, 2013, Judge Alvarez appeared to render his decision weighted heavily on the failure to analyze and evaluate the risk of ignition resulting from lightning strikes. The issue arose from review of the transcript from the Planning Commission hearing of September 2012. Planning Commissioner Ray Allard asked if facilities of this type (referring to the monopole) attract lightning strikes. While research demonstrates no exacerbation of risk, there was no analysis in the record that would have, for EIR purposes, allowed a finding for a mitigated negative declaration (MND).

The inclusion of the following questions and answers addressing the issue of lightning strikes in the vicinity of the monopole and the probable impact on the surrounding area would have satisfied the requirement.

Question:

Will the project result in an increase in the lightning activity in the area?

Answer:

*Lightning is an atmospheric phenomenon that occurs when air movement within certain clouds produce large discrepancies in electrical charges and become polarized. When the concentration of negative charges at the bottom of the clouds becomes strong enough to overcome the resistance of the air between the clouds and the positively charged ground, lightning can occur. These specific atmospheric conditions must be present to produce the potential for lightning. The presence of a tall object does not, by itself, induce lightning. Rather lightning will follow the path of least resistance. This can include tall trees as the lightning travels down the tree trunk through the water and sap.*

Question:

What is the likelihood that a lightning strike will result in an area wildfire?

Answer:

*If proper lightning protection measures are employed, the potential for fire will be greatly reduced if the lightning strikes a properly grounded protection system rather than the surrounding landscape.*

*The hazards associated with lightning can be mitigated by providing an efficient path for the lightning to travel down a conductor and ending in a properly grounded terminus.*

Question:

Do lightning protection systems attract lightning?

Answer:

*“No. This is a common misconception about lightning protection. Lightning protection systems and strike termination devices (rods) simply intercept a lightning strike and provide a safe and effective path that takes lightning’s harmful electricity to ground. Lightning will strike a location whether there is lightning protection in place or not.” - Lightning Protection Institute, [www.lightning.org/learn-more/faq/](http://www.lightning.org/learn-more/faq/)*

In less technical terms, the probability of ignition from a lightning strike is lessened if the monopole is struck rather than a nearby tree.

My experience as Fire Marshal for the County of Santa Barbara spanned two decades. During that period I would have approved this installation with the mitigations required. I reviewed this application with the current Fire Marshal and he concurred.

I have reviewed the County’s Administrative Draft EIR section on Fire Safety Hazards. I find that the analysis is thorough and appropriate and discloses the information necessary for decision makers to come to a conclusion regarding the significance of impacts related to fire

safety hazards that could result to the surrounding environment with implementation of the proposed project.

As cited in the CEQA Guidelines, an EIR provides objective planning and environmental information to guide and assist decision-makers, lead agency staff and the public in their evaluation of the potential environmental effects that may result from implementation of the project as proposed. The California Environmental Quality Act (CEQA) Guidelines Section 15151 contains the following standards of adequacy:

*“An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a Proposed Project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection; but for adequacy, completeness, and good faith effort at full disclosure.”*

San Bernardino County’s analysis as presented in the Administrative Draft EIR provides a full disclosure of known facts, summarizes the main points of argument as noted in the Court Decision, and in my professional opinion, is adequate for the County Board of Supervisors to make a finding of less than significant impacts related to fire safety with the incorporation of recommended mitigation measures.

Respectfully submitted,

A handwritten signature in black ink that reads "Don Oaks". The signature is written in a cursive, flowing style.

Don Oaks