Climate Change Action Plan
GHG CEQA Technical Workgroup--Level of Significance Subcommittee
February 18, 2009

CEQA GHG Guidance
Level of Significance Subcommittee

February 18, 2009

The District has actively sought input from the ad hoc committee and the following document is still under development. The District is still receiving comments from the committee, which will be considered before finalizing this draft document.

Ad Hoc Committee Members
Bettina Arrigoni, Daniel Barber, John Beckman, David Campbell, Donna Carpenter, Dennis J. Champion, Tin Cheung, Dawn S. Chianese, Casey Creamer, Caroline Farrell, Jerry Frost, Wendy Garcia, Issac A. George, Spencer Hammond, Erin Burg Hupp, Sarah Jackson, Bob Keenan, Julia Lester, John Ludwick, Arnaud Marjollet, Michael B. McCormick, Mark Montelongo, Gordon Nipp, Elena Nuno, Tonya Short, Patia Siong, David Smith, Lee Smith, Dennis Tristao, Tom Umenhofer, Lisa Van De Water, and Nicole Vermilion.

See Appendix A

Climate Change Action Plan
GHG CEQA Technical Workgroup--Level of Significance Subcommittee
February 18, 2009

Introduction

During the Greenhouse Gas (GHG) CEQA Guidance Technical Workgroup meeting an ad hoc committee was formed to provide guidance/recommendations to be applied when determining the significance project specific GHG emissions during the CEQA environmental review process.

Key tasks for the subcommittee include:

- Review of current CEQA requirements/guidelines for determining significance, including lead agency authority and responsibilities for determining significance
- Review actions by the following agencies that are to be developing GHG significance thresholds: Office of Planning and Research (OPR), California Energy Commission (CEC), Caltrans, Air Resources Board (ARB), South Coast Air Quality Management District (SCAQMD), Council of Governments (COG), and California Air Pollution Control Officers Association (CAPCOA)
- Discuss committee views on establishing GHG significance thresholds. In support of the discussion, the subcommittee identified the following key questions to be addressed:

1. Zero Threshold:
   - What are the pros and cons of implementing a zero significance threshold?
   - What are the pros and cons of implementing a zero versus a non-zero significance threshold?
2. If a non-zero threshold would be recommended, should the metric for determining significance consist of a numerical threshold, a qualitative assessment, or are both approaches valid?
3. If there is a dual path (qualitative and quantitative), is it necessary to demonstrate equivalency, if so, how?
4. If a numeric value is established, is the value specific to a project type, or does the same value apply to all project types?
5. What metrics should be considered in establishing a quantitative threshold?
6. What metrics should be considered in establishing a qualitative significance threshold?

Several discussions were coordinated on these key objectives over four conference calls that were held on January 15, 23, 28, February 2, 6, and 10, 2009. Written comments received by the District are presented in Appendix K. The following summarizes the committee's progress.

Review of Lead Agency Authority and Responsibilities

To establish a common understanding, the subcommittee reviewed current CEQA requirements/guidelines for determining significance, including lead agency authority and responsibilities for determining significance. Subsequently, the subcommittee reviewed OPR's draft amended CEQA Guidelines for addressing GHG impacts during the CEQA process. The committee concludes that most of OPR's draft provisions are logical extensions of the CEQA and the provisions do not functionally change lead agency authority and responsibility under CEQA. The following are the main factors of OPR's proposed amendments to CEQA Guidelines addressing GHG impacts, (See *Appendix B* for more detail):

1) Exceedance of thresholds;
2) Emissions calculated and compared to a threshold, qualitative, or performance-based standards [for editorial additions, see reference 15064.4 (b) (4)];
3) Other agency thresholds can be used to set levels;
4) Increase or decrease in energy use/efficiency (not clear whether local or regional); and
5) Projects impact on attainment to AB 32 goals.

Review of Other Agencies Approaches to Determine GHG Significance

The group reviewed approaches proposed or adopted by the following agencies:

- Office of Planning and Research (OPR), (*Appendix B*)
- California Energy Commission (CEC), (*Appendix C*)
- Caltrans,
- Air Resources Board (ARB), (*Appendix D*)
- South Coast Air Quality Management District (SCAQMD),
- Council of Governments (COG), and
- California Air Pollution Control Officers Association (CAPCOA) (*Appendix E*)

Views on Determining GHG Significance

To provide for stakeholder input the District encouraged subcommittee members to discuss their views on various approaches for determining significance of project related GHG. To facilitate the discussion, the subcommittee is working through the key questions identified above. The following discussion summarized the subcommittee's progress.

Zero Threshold

1. *Zero Threshold:*
   - *What are the pros and cons of implementing a zero significance threshold?*
   - *What are the pros and cons of implementing a zero versus a non-zero significance threshold?*

There are two fundamental approaches; establish a zero threshold, meaning that any project that emits GHG emissions has a significant impact, or establish a non-zero threshold, meaning that projects below a threshold would be determined to have a less than significant impact. There was considerable discussion and strong opinions on this issue.

The underlying concept of a zero threshold is that there is no level below which project specific GHG emissions would be considered to have a less than significant impact. Those recommending adoption of a zero threshold cite the following reasons:

- Would accelerate attainment of AB32 emission reduction targets
- Mitigating to zero would ensure that a project would not have a significant cumulative impact
- Very easy to understand if a project would be considered significant
- Projects with GHG emissions would require preparation of an environmental impact report (EIR), thus requiring lead agencies to require all feasible mitigation measures
- No scientific basis to conclude that any level, other than zero, would not have a significant impact on global climatic change

The underlying concept of a non-zero threshold is that there is a level below which it is reasonable to conclude that project specific GHG emissions would have a less than significant impact. Those in favor of adopting a non-zero threshold cite the following reasons:

- Adopting a zero threshold would result in all projects with GHG emissions being determined to have a significant impact, thus requiring preparation of an EIR for every project with GHG emissions
- CEQA does not require mitigating project related impacts to less than significant and since it is not technically or economically feasible to mitigate to zero, most likely, projects would be approved by adopting overriding considerations
- To mitigate project related GHG emissions to less than significant would require mitigation of 100 percent of all GHG emissions
- Not technically feasible to mitigate <u>all</u> projects with GHG emissions to zero, without stopping growth within the District and perhaps, California
- No scientific basis to conclude that a specific project would have a measurable impact on global climatic change

Non-Zero Threshold

2. *If a non-zero threshold would be recommended, should the metric for determining significance consist of a numerical threshold, a qualitative assessment, or are both approaches valid?*

There was considerable discussion surrounding these two questions with little resolution at this time. The major theme is that there is no scientific information available at this time to support a numeric value. The subcommittee acknowledges that ARB and South Coast AQMD both have proposed establishing thresholds based on percentages of the emission inventory for industrial sources. The subcommittee also acknowledges that OPR in drafting amendments to CEQA Guidelines provide for significance determinations based on either quantitative or qualitative assessments. The subcommittee further acknowledges that guidance being developed by ARB and South Coast includes provisions for both qualitative and quantitative determinations. The majority opinion is that if a non-zero approach is adopted, there should be flexibility to use both quantitative and qualitative approaches.

Qualitative Versus Quantitative Significance Determination

3. *If there is a dual path (qualitative and quantitative), is it necessary to demonstrate equivalency, if so, how?*
4. *If a numeric value is established, is the value specific to a project type, or does the same value apply to all project types?*

The District diagrammed four possible approaches illustrating how quantitative and qualitative standards could be used for assessing project related GHG impacts, (*Appendix* F – J). One approach is to evaluate significance based on whether or not a project is consistent with a quantitative standard OR is below some qualitative standard. Another approach presented is to evaluate significance based on whether a project is consistent with a qualitative standard AND is below some quantitative standard. The third and fourth approaches would evaluate significance based on a tiered or "Waterfall" approach, which could be a combination of quantitative and qualitative standards. It was recognized that regardless of the approach used, projects determined to be exempt under CEQA would be considered to have a less than significant impact.

The pros and cons of each approach were explored and the following common themes emerged:

- Other than if a single numerical value were to be applied across all projects, qualitative and quantitative significance standards should be developed for each type of emission source (sectors). Identified sectors included development projects, transportation projects, energy production, and industrial projects.

- It will take time to develop qualitative standards and there is reasonable probability that the standards will be controversial and subject to litigation. In the interim, lead agencies and project proponents still have to assess project impacts on a case by case basis.
- There is a lack of information to establish numerical thresholds based on scientific information.
- Qualitative assessments should be, based in part, on compliance with established GHG emission reductions targets such as those established in AB32 or SB375, or approved performance standards.
- Because a project is not subject to CEQA does not necessarily means that it is not subject to AB32.
- A qualitative approach could be fashioned similar to the Indirect Source Review (ISR) approach.

Metrics to Consider in Establishing a Quantitative or Qualitative Threshold

5. *What metrics should be considered in establishing a quantitative threshold?*
6. *What metrics should be considered in establishing a qualitative significance threshold?*

In addition to the above concepts, the subcommittee discussed establishing a quantitative threshold for residential developments in which project related GHG emissions would be compared to a per capita threshold, or other unit to be determined, i.e. square foot, etc. This concept could be consistent with implementation of SB375.

The subcommittee gave significant time to discussing the availability of validated scientific information that could be used to establish project specific quantitative thresholds. Certain committee members share the opinion that there is compelling information demonstrating that any increase in GHG emissions has a significant impact on global climatic change. However, other committee members share the opinion that the existing scientific information is insufficient to support establishing project specific significance thresholds.

Appendix A

Ad hoc Subcommittee Members:

Name	Affiliation
Bettina Arrigoni	Global Energy Partners, LLC
Dan Barber	SJVAPCD
John Beckman	Building Industry Assoc. of the Delta
David Campbell	Tricor
Donna Carpenter	Sikand Engineering
Dennis Champion	Occidental of Elk Hills
Dawn S. Chianese	Environ
Tin Cheung	The Planning Center
Casey Creamer	California Cotton Ginners
Caroline Farrell	Center on Race, Poverty & Environment
Jerry Frost	Kern Oil
Wendy Garcia	Constellation Wines
Issac A. George	City of Arvin
Spencer Hammond	Chevron
Erin Burg Hupp	Attorney at Law-Meyers Nave
Sarah Jackson	Earth Justice
Bob Keenan	HBATK
Julia Lester	Environ
John Ludwick	Berry Petroleum Company
Arnaud Marjollet	SJVAPCD
Michael B. McCormick	PMC
Mark Montelongo	SJVAPCD
Gordon Nipp	Kern-Kaweah Chapter of Sierra Club
Elena Nuno	Michael Brandman Assoc.
Tonya Short	HBA of Kern County
Patia Siong	SJVAPCD
David Smith	DMD Associates
Lee Smith	Attorney-Stoel Rives
Dennis Tristao	J.G. Boswell Company
Tom Umenhofer	Western States Petroleum Association
Lisa Van de Water	SJVAPCD
Nicole Vermilion	The Planning Center

Appendix B

Agency Review & Activities:

Office of Planning and Research

This memorandum summarizes the relevant OPR CEQA guideline revisions that may impact the District's quest to define significant GHG impacts. Of most importance is the new Guideline section 15064.4 that describes significant GHG impacts, section 15126.4 concerning mitigating GHG impacts and the minor changes to Appendix G the initial study form.

In summary (these are set out in more detail below), the following are the main factors that the OPR draft uses to measure significance:

1) Exceedance of thresholds;
2) Emissions calculated and compared to a threshold, qualitative, or performance-based standards [for editorial additions, see reference 15064.4 (b) (4)];
3) Other agency thresholds can be used to set levels;
4) Increase or decrease in energy use/efficiency (not clear whether local or regional); and
5) Projects impact on attainment to AB 32 goals.

The OPR document consists of some introductory comments and draft revisions to the guidelines that relate to Greenhouse gases. This Summary just discusses the more significant sections.

1. The document indicates in the introduction that OPR intends to rely on CARB to recommend a method for setting significance thresholds.
2. The draft guidelines add a new section 15064.4 titled "Determining the Significance of GHG Emissions", and it includes a suggestion of situations that might be considered significant. A project may be significant to the extent that it:
   a. Helps or hinders the attainment of GHG emission goals;
   b. The extent to an increase or decrease in consumption of fuels or other energy resources (especially fossil fuels);
   c. May result in increased efficiency with respect to GHG emissions;
   d. Exceeds a threshold of significance;
   e. This section also includes a provision that the Lead agency must make its own "good faith" effort to actually calculate the level of GHG emissions "including emissions associated with energy consumption"; using a model or methodology; and relies on qualitative or other performance based standards for estimating the significance of greenhouse gas emissions.

Other relevant sections:

1. 15064.7(c) which offers little guidance in setting thresholds of significance, but notes that lead agencies may consider thresholds set by other agencies;
2. 15093(d) which discusses overriding consideration indicates that local projects can be approved with significant effects if there are region-wide or statewide benefits;
3. 15126.4(c) which adds "Mitigation Measures Related to Greenhouse Gases" including energy consumption mitigation measures;
4. 15150(b)(1)(B) which encourages reliance on other EIRs that discuss greenhouse gases;
5. 15152(i) which encourages tiering from other EIRs;
6. 15130(b)(1)(B) which allows agency to use summary of projections in cumulative impacts discussion based on EIRs for other local and regional plans; and
7. 15130(f) whose cumulative impacts may be significant.
8. Adds to Appendix – which identifies potential significant effects and whether an EIR is required, contains sections regarding GHG impacts on forestry, emphasizes Vehicle Miles Traveled (VMT) and de-emphasizes Level of Service (LOS) in the Transportation/Traffic section, and adds general greenhouse gas impacts that would trigger the potential to be significant as follows:

   GREENHOUSE GAS EMISSIONS
   Would the project:
   1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?
   2. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

   CONCLUSION
   Most of these provisions are logical extensions of the CEQA process. The difficulty will be determining emissions and setting numerical thresholds which are not resolved herein.

Appendix C

Agency Review & Activities:

California Energy Commission

The California Energy Commission (CEC) is the lead agency for power plant siting under California law, and has licensing authority for all thermal power plants with capacity of 50 MW or more that are proposed for construction within the state. The CEC's licensing process, which includes extensive environmental impact review, has been certified as the functional equivalent of the CEQA environmental impact review (EIR) process. Traditionally, the CEC EIR has used a "no cumulative impact" argument in response to GHG emissions. CEC staff feel confident in this assessment in light of the fact that new, cleaner power plants will displace energy needed from marginal, older, "dirtier" power plants, causing a net decrease in the system-wide GHG emissions. So, as long as there are "dirty" plants and plants that run less efficiently than new plants, the displacement argument holds.

However, in response to ARB's Scoping Plan and anticipated implementation of AB 32, CEC staff and the CEC are taking a closer look at how they deal with GHG in their EIR findings. The Siting Committee held two workshops[1] in October and November in and accepted subsequent written comment, to discuss conceptual interim approaches for evaluating GHG emissions from new power plants. Potential threshold approaches were discussed amongst committee members, staff, industry representatives and environmental representatives including:

Zero threshold - mitigation for all projects;
System threshold - mitigation for some projects;
System/local-reliability-areas (LRA) threshold - mitigation based on LRA; and
"Best available control technology" - mitigation by technology.

Most of the discussion bounced between the zero-threshold (environmental representatives) and the system-threshold (industry representatives). Several of the industry representatives stated that they are already mitigating by applying best available control technology whenever possible. By the end of the discussion, the Siting Committee directed staff to conduct (actually, a consultant will conduct) a Generic System Analysis to understand the implications of changes to the energy system upon the addition of a new power plant. This analysis is due back to staff in February or March for internal review. It is possible that this general analysis may be used programmatically for future EIR analyses for new power plants, but at this point it is unclear.

[1] The transcript and other documents from this workshop are available at http://www.energy.ca.gov/ghg_powerplants/documents/

Appendix D

Agency Review & Activities:

ARB Preliminary Guidelines Significance Standards

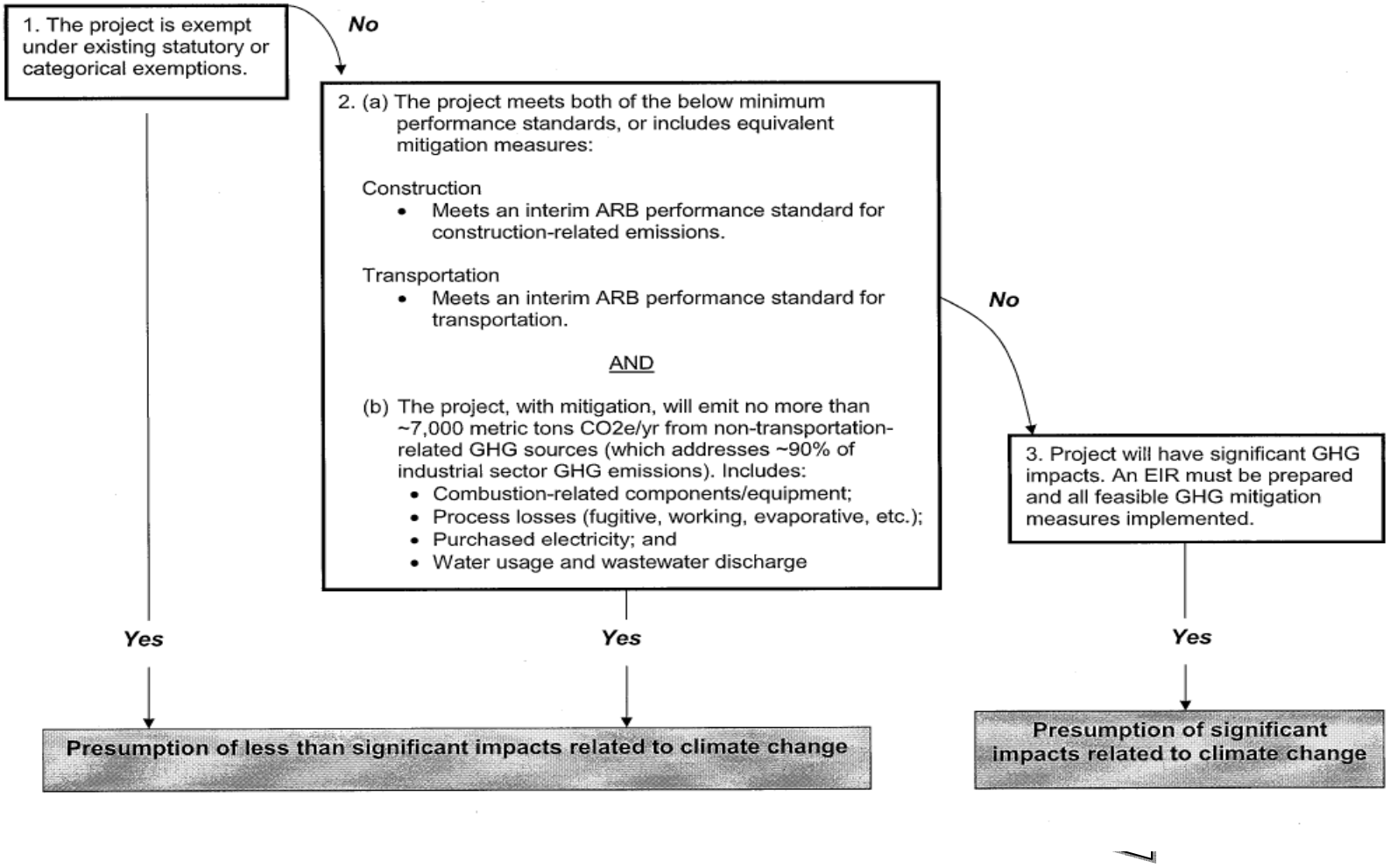
Framework of ARB's Preliminary Proposal for GHG Significance Levels

The Preliminary Proposal proposes guidelines for residential, commercial and industrial projects. A residential or commercial project is categorized as a project that is either: 1) statutorily or categorically exempt; 2) less than significant because it complies with either a previously approved CEQA-compliant programmatic document or a combination of quantitative and performance standards; or 3) significant and requiring preparation of an EIR. An industrial project may also be either 1) categorically or statutorily exempt, or; 2) meet a combination of quantitative and performance standard thresholds to achieve a less than significant CEQA status.

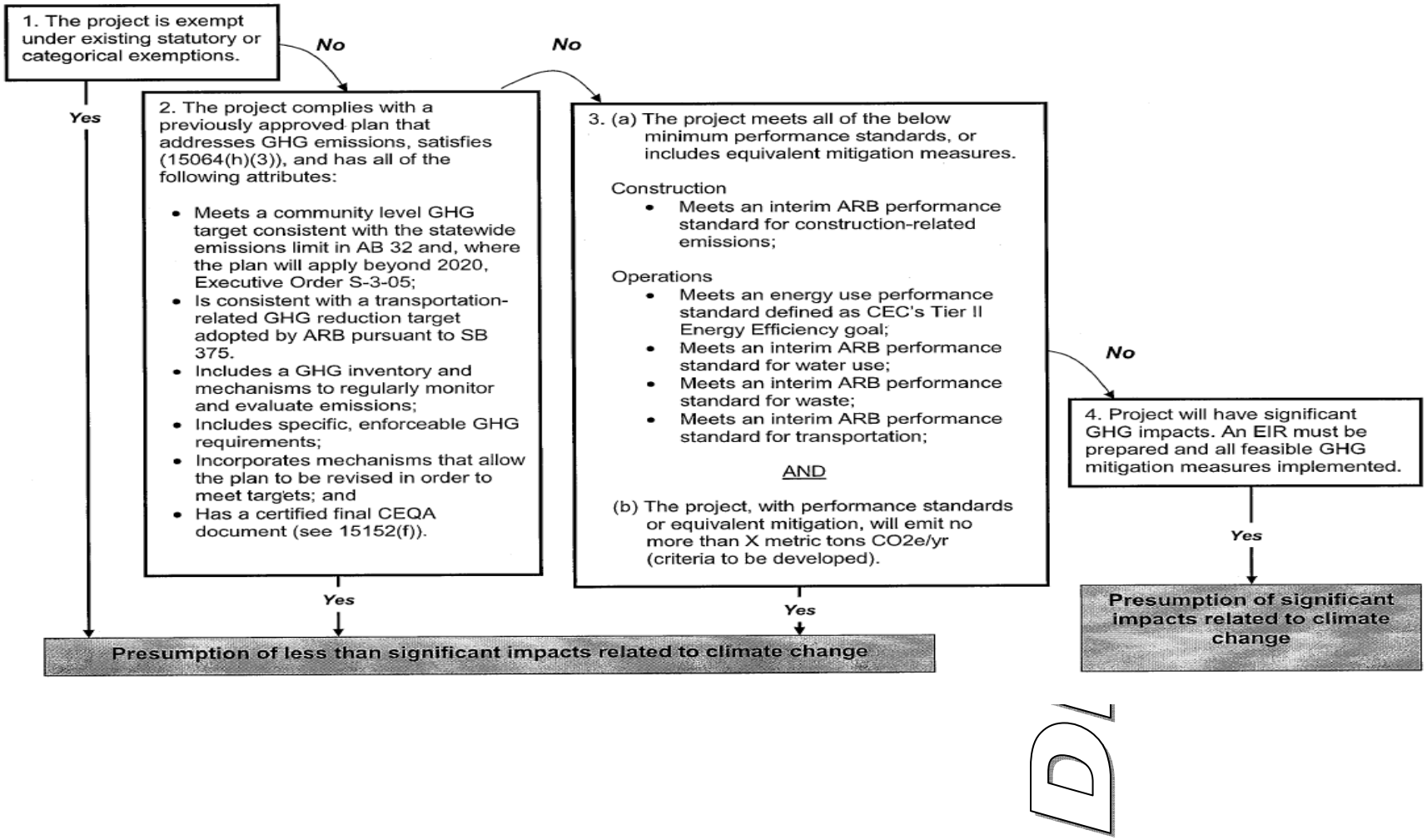
Please see attached flow charts from ARB's preliminary proposal.

For more information (including a power point that expands on performance standards):
http://www.arb.ca.gov/cc/localgov/ceqa/meetings/meetings.htm

ATTACHMENT A
Preliminary Draft Proposal for Industrial Projects



ATTACHMENT B
Preliminary Draft Proposal for Residential and Commercial Projects



Appendix E

Agency Review & Activities:

CAPCOA Recommendations

Industrial Sources

CAPCOA supports a bifurcated approach to CEQA review and mitigation for industrial emission sources, as follows:

1. Require all new industrial sources of GHG emissions to meet specific GHG performance standards established for each equipment type or source category of emissions. Additionally, any new industrial source exceeding 25,000 tons of CO_2e per year after meeting the specified performance standards would be deemed to have a potentially significant adverse impact on the environment and would be analyzed and mitigated as required under CEQA.

OR

2. A jurisdiction could establish a CEQA significance threshold for industrial sources designed to capture and mitigate 90% of industrial source emissions. All new industrial sources exceeding the established threshold would be considered significant and subject to CEQA review and mitigation. Industrial sources with GHG emissions below the threshold would not be subject to performance standards and would not require mitigation or CEQA review for GHG impacts.

CAPCOA believes each option would be functionally equivalent in the level of GHG emission reductions achieved from new industrial source projects. The bifurcated approach allows lead agencies the flexibility to choose the type of CEQA threshold best suited to their local review process for industrial projects proposed within their jurisdiction.

Residential and Commercial Projects:

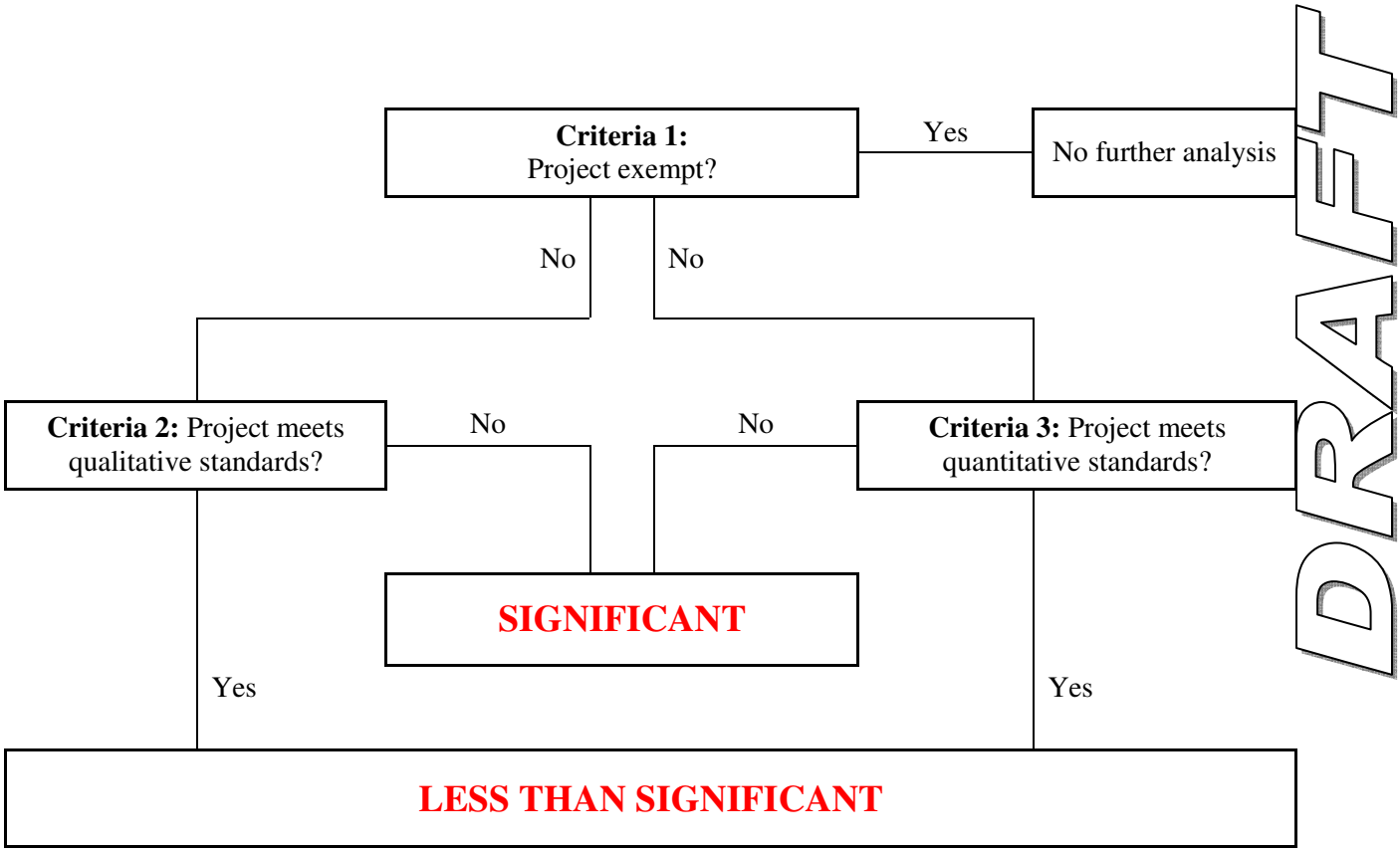
CAPCOA has not yet reached consensus on a recommended approach regarding CEQA thresholds for residential and commercial projects.

Appendix F

Qualitative OR Quantitative Significance Determination

Qualitative **OR** Quantitative Approach

*(Criteria 2 **OR** Criteria 3)*

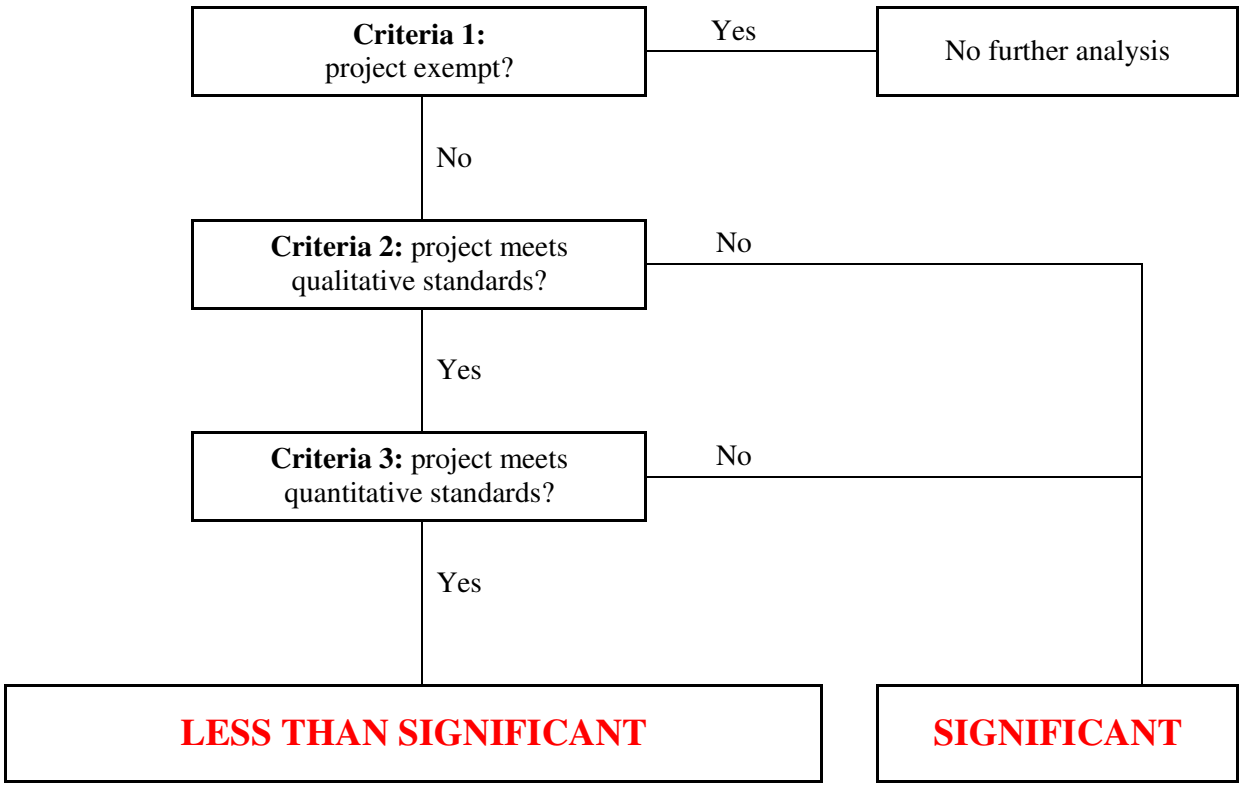


Appendix G

Qualitative AND Quantitative Significance Determination

Qualitative **AND** Quantitative Approach

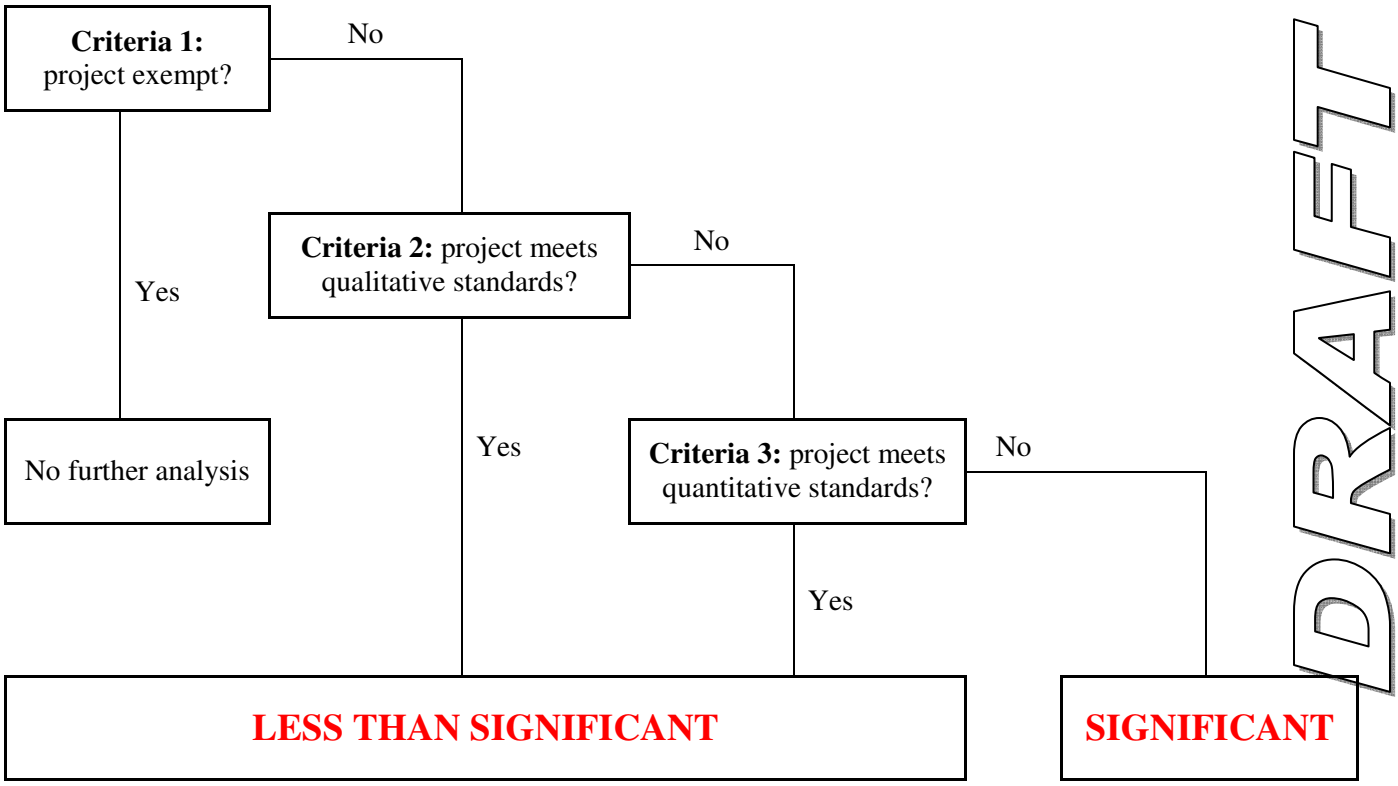
*(Criteria 2 **AND** Criteria 3)*



Appendix H

Cascade Significance Determination
Method 1

MIXED 1: Qualitative / Quantitative CASCADE Approach (OR)

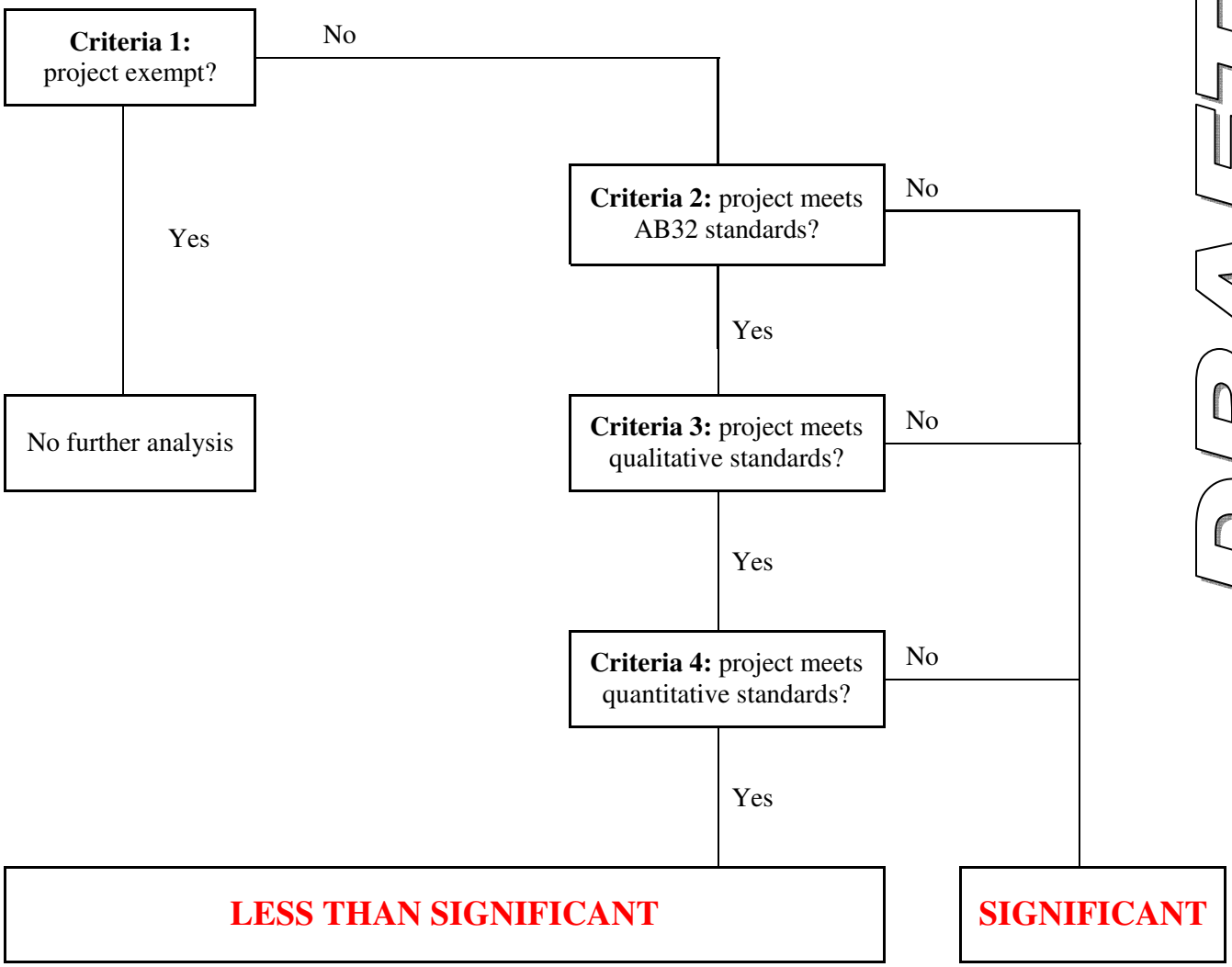


Appendix I

Cascade Significance Determination
Method 2

MIXED 2: Qualitative / Quantitative CASCADE Approach (AND)

(Criteria 2) ***OR*** *(Criterias 3 and 4)*

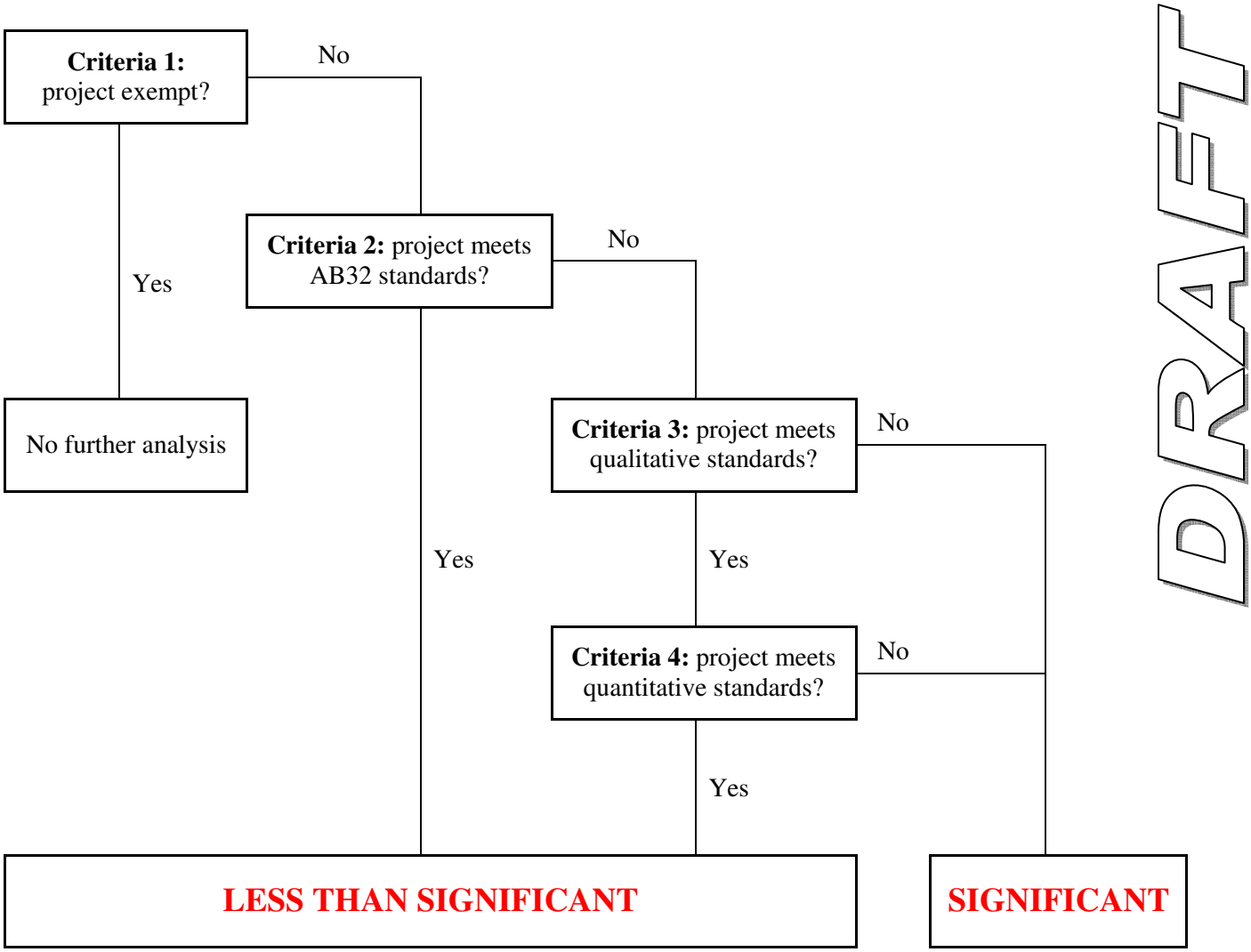


Appendix J

Cascade Significance Determination
Method 3

MIXED 2: Qualitative / Quantitative CASCADE Approach (OR / AND Mixed)

(Criteria 2) ***OR*** *(Criterias 3 and 4)*



Appendix K

Summary of Written Comments

Written comments pertaining to significance levels are summarized below.

1. Gordon Nipp (Kern-Kaweah Chapter of Sierra)

I attach the papers by James Hansen that I see as authoritative. While they won't give the Air District specific guidance on what number to set as a significance threshold under CEQA, they speak to the seriousness of the problem. Of course, under CEQA, the more serious the problem, the lower the threshold. Global warming is perhaps the most serious problem our species has ever faced - hence the call for a zero threshold.

Attachment 1:

Hansen, J., Mki. Sato, P. Kharecha, D. Beerling, R. Berner, V. Masson-Delmotte, M. Pagani, M. Raymo, D.L. Royer, and J.C. Zachos, 2008: Target atmospheric CO_2: Where should humanity aim? *Open Atmos. Sci. J.*, **2**, 217-231, doi:10.2174/1874282300802010217.

http://arxiv.org/abs/0804.1126

http://arxiv.org/abs/0804.1135

Attachment 2:

Testimony by James Hansen: Global Warming Twenty Years Later: Tipping Points Near

www.columbia.edu/~jeh1/2008/**TwentyYearsLater**_20080623.pdf

(Note: a link to this document is also available on the District website under the section "Documents" at http://www.valleyair.org/Programs/CCAP/CCAP_idx.htm)