Appendix 4.2-A Bay Area Air Quality Management District CEQA Guidelines

BAAQMD CEQA GUIDELINES
Assessing the Air Quality Impacts of Projects and Plans

Prepared by the Planning and Research Division of the
Bay Area Air Quality Management District
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This document is intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The GUIDELINES include information on legal requirements, BAAQMD rules, plans and procedures, methods of analyzing air quality impacts, thresholds of significance, mitigation measures, and background air quality information. Copies and updates are available from the BAAQMD Public Information Office at (415) 749-4900. Questions on content may be addressed to the BAAQMD's Planning and Transportation Section at (415) 749-4995.

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project or plan can be identified in the Initial Study (i.e., none of the significance thresholds are exceeded), the District recommends the Lead Agency either prepare a Negative Declaration or include in an EIR a statement indicating the reasons why potential air quality impacts were determined not to be significant.

Sources of air pollutant emissions complying with all applicable District regulations generally will not be considered to have a significant air quality impact.[2] Stationary sources that are exempt from District permit requirements because they fall below emission thresholds for permitting will not be considered to have a significant air quality impact (unless it is demonstrated that they may have a significant cumulative impact). The Lead Agency can and should make exception to this determination if special circumstances suggest that the emissions from the permitted or exempt source may cause a significant air quality impact. For example, if a permitted or exempt source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact.

2.3 Thresholds of Significance

This section describes the District's recommended thresholds of significance to be used by a Lead Agency when preparing an Initial Study. If, during the preparation of the Initial Study, the Lead Agency finds that any of the following thresholds may be exceeded, then an EIR should be prepared in order to more accurately evaluate project impacts and identify mitigation measures. These thresholds also may be used when preparing an EIR. If the more detailed analysis in an EIR indicates that any of these thresholds would be exceeded, the document should identify the impact as a significant air quality impact and propose mitigation measures. Chapter 3 explains how to calculate emissions to determine whether the thresholds have been exceeded. The following thresholds address impacts associated with: 1) project construction, 2) project operations, and 3) plans.

Threshold of Significance for Construction Impacts

Construction-related emissions are generally short-term in duration, but may still cause adverse air quality impacts. Fine particulate matter (PM_{10}) is the pollutant of greatest concern with respect to construction activities.[3] PM_{10} emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle and equipment exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM_{10}. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces.

Construction emissions of PM_{10} can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions and other factors. Despite this variability in emissions, experience has shown that there are a number of

[2]CEQA Guidelines, Section 15064(i).

[3] Construction equipment emits carbon monoxide and ozone precursors. However, these emissions are included in the emission inventory that is the basis for regional air quality plans, and are not expected to impede attainment or maintenance of ozone and carbon monoxide standards in the Bay Area.

feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction. The District's approach to CEQA analyses of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions.

The District has identified a set of feasible PM_{10} control measures for construction activities. These control measures are listed in Table 2. As noted in the table, some measures ("Basic Measures") should be implemented at all construction sites, regardless of size. Additional measures ("Enhanced Measures") should be implemented at larger construction sites (greater than 4 acres) where PM_{10} emissions generally will be higher. Table 2 also lists other PM_{10} controls ("Optional Measures") that may be implemented if further emission reductions are deemed necessary by the Lead Agency.

The determination of significance with respect to construction emissions should be based on a consideration of the control measures to be implemented. From the District's perspective, quantification of construction emissions is not necessary (although a Lead Agency may elect to do so - see Section 3.3 of these Guidelines, "Calculating Construction Emissions," for guidance). The Lead Agency should review Table 2. If all of the control measures indicated in Table 2 (as appropriate, depending on the size of the project area) will be implemented, then air pollutant emissions from construction activities would be considered a less than significant impact. If all of the appropriate measures in Table 2 will not be implemented, then construction impacts would be considered to be significant (unless the Lead Agency provides a detailed explanation as to why a specific measure is unnecessary or not feasible).

Project construction sometimes requires the demolition of existing buildings at the project site. Buildings constructed prior to 1980 often include building materials containing asbestos. Airborne asbestos fibers pose a serious health threat. The demolition, renovation or removal of asbestos-containing building materials is subject to the limitations of District Regulation 11, Rule 2: Hazardous Materials; Asbestos Demolition, Renovation and Manufacturing. The District's Enforcement Division should be consulted prior to commencing demolition of a building containing asbestos building materials. Any demolition activity subject to but not complying with the requirements of District Regulation 11, Rule 2 would be considered to have a significant impact.

TABLE 2
FEASIBLE CONTROL MEASURES FOR CONSTRUCTION EMISSIONS OF PM_{10}

Basic Control Measures. - The following controls should be implemented at all construction sites.
• Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials *or* require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. • Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
Enhanced Control Measures. - The following measures should be implemented at construction sites greater than four acres in area.
• All "Basic" control measures listed above. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). • Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.) • Limit traffic speeds on unpaved roads to 15 mph. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible.
Optional Control Measures. - The following control measures are strongly encouraged at construction sites that are large in area, located near sensitive receptors or which for any other reason may warrant additional emissions reductions.
• Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site. • Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas. • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. • Limit the area subject to excavation, grading and other construction activity at any one time.

Thresholds of Significance for Impacts From Project Operations

For many types of land use development, such as office parks, shopping centers, residential subdivisions and other "indirect sources", motor vehicles traveling to and from the projects represent the primary source of air pollutant emissions associated with project operations. Significance thresholds discussed below address the impacts of these indirect source emissions on local and regional air quality. Thresholds are also provided for other potential impacts related to project operations, such as odors and toxic air contaminants.

(Lead Agencies may refer to Section 2.4, Project Screening, for guidance on determining whether significance thresholds for project operations may be exceeded, and thus whether more detailed air quality analysis may be needed.)

1. Local Carbon Monoxide Concentrations. Localized carbon monoxide concentrations should be estimated for projects in which: 1) vehicle emissions of CO would exceed 550 lb./day, 2) project traffic would impact intersections or roadway links operating at Level of Service (LOS) D, E or F or would cause LOS to decline to D, E or F, or 3) project traffic would increase traffic volumes on nearby roadways by 10% or more.[4] A project contributing to CO concentrations exceeding the State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for 1 hour would be considered to have a significant impact.

2. Total Emissions. Total emissions from project operations should be compared to the thresholds provided in Table 3.[5] Total operational emissions evaluated under this threshold should include all emissions from motor vehicle use associated with the project. A project that generates criteria air pollutant emissions in excess of the annual *or* daily thresholds in Table 3 would be considered to have a significant air quality impact.

TABLE 3
THRESHOLDS OF SIGNIFICANCE
FOR PROJECT OPERATIONS

Pollutant	ton/yr	lb/day	kgm/day
ROG	15	80	36
NO_X	15	80	36
PM_{10}	15	80	36

3. Odors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the District. Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant

[4] Unless the increase in traffic volume is less than 100 vehicles per hour.

[5] The thresholds for ROG and NOx are equivalent to the District offset requirement threshold (15 tons per year) for stationary sources (Regulation 2-2-302). The threshold for PM_{10} is based on the District's definition of a major modification to a major facility (Regulation 2-2-221).

impact. Odor impacts on residential areas and other sensitive receptors warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites and commercial areas. Analysis of potential odor impacts should be conducted for both of the following situations: 1) sources of odorous emissions locating near existing receptors, *and* 2) receptors locating near existing odor sources.[6]

Determining the significance of potential odor impacts involves a two-step process. *First*, determine whether the project would result in an odor source and receptors being located within the distances indicated in Table 4. Table 4 lists types of facilities known to emit objectionable odors. The Lead Agency should evaluate facilities not included in Table 4 or projects separated by greater distances than indicated in Table 4 if warranted by local conditions or special circumstances. *Second*, if the proposed project would result in an odor source and receptors being located closer than the screening level distances indicated in Table 4, a more detailed analysis, as described in Chapter 3, should be conducted.

After reviewing District enforcement records as described in Chapter 3, a determination of significance should be made. For a project locating near an existing source of odors, the project should be identified as having a significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there has been:

a) more than one confirmed complaint per year averaged over a three year period, or
b) three unconfirmed complaints per year averaged over a three year period.

For projects locating near a source of odors where there is currently no nearby development *and* for odor sources locating near existing receptors, the determination of significance should be based on the distance and frequency at which odor complaints from the public have occurred in the vicinity of a similar facility.

If a proposed project is determined to result in potential odor problems, mitigation measures should be identified. For some projects, add-on controls or process changes, such as carbon absorption, incineration or relocation of stacks/vents, can reduce odorous emissions. In many cases, however, the most effective mitigation strategy is the provision of a sufficient distance, or buffer zone, between the source and the receptor(s).

TABLE 4

[6] In a January, 1995 decision (*Baird v. County of Contra Costa*, 32 Cal. App. 4th 1464), a California appellate court held that the effects of a contaminated pre-existing environment upon the residents of a proposed project were beyond the scope of CEQA.

Notwithstanding this decision, the District believes that the Legislature generally did intend that CEQA documents should consider the effects of the pre-existing environment on a proposed project, and that the ruling in the *Baird* case should be limited to the factual particulars of the decision (which involved a neighborhood group's attempt to set aside the approval of an addiction treatment facility).

In the District's view, Lead Agencies therefore should not rely on the *Baird* decision and should analyze the impacts of existing sources of air pollution on occupants or residents of proposed projects. Such impacts include, but are not limited to, those from toxic air contaminants, odors and dust.

PROJECT SCREENING TRIGGER LEVELS FOR POTENTIAL ODOR SOURCES

Type of Operation	Project Screening Distance
Wastewater Treatment Plant	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Rendering Plant	1 mile
Coffee Roaster	1 mile

4. Toxic Air Contaminants. Any project with the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants would be deemed to have a significant impact. This applies to receptors locating near existing sources of toxic air contaminants, as well as sources of toxic air contaminants locating near existing receptors.

Proposed development projects that have the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact. These thresholds are based on the District's Risk Management Policy.

Thresholds of Significance for Toxic Air Contaminants

1. Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million.
2. Ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index greater than 1 for the MEI.

5. Accidental Releases/Acutely Hazardous Air Emissions. The determination of significance for potential impacts from accidental releases of acutely hazardous materials should be made in consultation with the local administering agency of the Risk Management Prevention Program (RMPP). The county health department is usually the administering agency. A determination of significance regarding accidental releases of acutely hazardous materials (AHMs) should be made for: 1) projects using or storing AHMs locating near existing receptors, and 2) development projects resulting in receptors locating near existing facilities using or storing AHMs.

The District recommends, at a minimum, that the Lead Agency, in consultation with the administering agency of the RMPP, find that any project resulting in receptors being within the Emergency Response Planning Guidelines (ERPG) exposure level 2 for a facility has a significant air quality impact. ERPG exposure level 2 is defined as "the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action".[7]

6. Cumulative Impacts. Any proposed project that would individually have a significant air quality impact (see Thresholds of Significance for Impacts from Project Operations, above) would also be considered to have a significant cumulative air quality impact.

For any project that does not individually have significant operational air quality impacts, the determination of significant cumulative impact should be based on an evaluation of the consistency of the project with the local general plan *and* of the general plan with the regional air quality plan. (The appropriate regional air quality plan for the Bay Area is the most recently adopted Clean Air Plan.) See Thresholds of Significance for Plan Impacts, below, for guidance on evaluating the consistency of a local general plan with the Clean Air Plan. Figure 2 provides a flow chart depicting the process for evaluating cumulative impacts.

Projects in Jurisdictions with Local Plans Consistent with the Clean Air Plan

If a project is proposed in a city or county with a general plan that is consistent with the Clean Air Plan (see below) *and* the project is consistent with that general plan (i.e., it does not require a general plan amendment), then the project will not have a significant cumulative impact (provided, of course, the project does not individually have any significant impacts). No further analysis regarding cumulative impacts is necessary.

In a jurisdiction with a general plan consistent with the Clean Air Plan, a project may be proposed that is not consistent with that general plan because it requires a general plan amendment (GPA). In such instances, the cumulative impact analysis should consider the difference(s) between the project and the original (pre-GPA) land use designation for the site with respect to motor vehicle use and potential land use conflicts. A project would not have a significant cumulative impact if: VMT from the project would not be greater than the VMT that would be anticipated under the original land use designation, and 2) the project would not result in sensitive receptors being in close proximity to sources of objectionable odors, toxics or accidental releases of hazardous materials.

[7] State of California Guidance for the Preparation of a Risk Management and Prevention Program, California Office of Emergency Services, November 1989, pg. D-2.

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