

**FINAL ADDENDUM
TO THE
1991 CLEAN AIR PLAN ENVIRONMENTAL IMPACT REPORT
(Prepared for the 2000 CAP)**

December 20, 2000

INTRODUCTION

As required by Health and Safety Code Sections 40924 and 40925, the Bay Area Air Quality Management District (District) has prepared the Bay Area 2000 Clean Air Plan (2000 CAP). The 2000 CAP is a minor modification and update of the 1991 Clean Air Plan, a strategy to reduce emissions of ozone precursors in order to attain State ambient air quality standards for ground-level ozone in the San Francisco Bay Area. The 2000 CAP continues the air pollution reduction strategy established by the 1991 CAP. The 2000 CAP is the third triennial update to the 1991 CAP, following previous updates in 1994 and 1997.

The control measures in the 2000 CAP are divided among stationary source control measures, mobile source control measures and transportation control measures. The 2000 CAP includes: changes in the organization and scheduling of some existing control measures, some new stationary source control measures, revisions to previous stationary source measures, and deletion of some control measures no longer deemed feasible by District staff. The transportation control measures are unchanged from the 1997 CAP. The new and revised control measures are summarized below, under Project Description, and described more fully in Attachment A of the 2000 CAP.

One of the District's obligations in preparing this CAP update is to comply with the requirements of the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq.* For the purposes of CEQA, the 2000 CAP is a project consisting of the new and revised control measures.

REGULATORY BACKGROUND

In 1988, the California Legislature adopted the California Clean Air Act (CCAA), which added to existing law an extensive planning and regulatory process for control of air pollution. Under the CCAA, air districts not meeting California's ambient air quality standards for ozone, carbon monoxide (CO), sulfur dioxide (SO₂), or nitrogen dioxide (NO₂) were required to prepare attainment plans intended to improve air quality and attain the standards (Health and Safety Code Section 40910 *et seq.*). Under the CCAA, the California Air Resources Board (ARB) was given responsibility to determine which air districts had not attained the standards.

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ARB regulations (Title 17, California Code of Regulations, Section 70200) set forth the criteria for ARB decisions about the attainment status of air districts. Pursuant to these criteria, the Bay Area is an attainment area for SO₂ and NO₂. The region was briefly a nonattainment area for CO. CO is a sub-regional problem, and a few areas within the Bay Area exceeded the CO standard in the late 1980's. CO emissions and ambient concentrations have declined over the years. Based on the regulatory criteria, ARB redesignated the Bay Area to attainment status for CO in November 1994, and the Bay Area has remained an attainment area since that time.

In 1991, ARB designated the Bay Area as a nonattainment area for the state ozone standard (9 parts per hundred million). Ozone is a regional air pollution problem because ozone is not directly emitted by pollution sources. Ozone is instead formed in the lower atmosphere through complex chemical reactions between hydrocarbons (also referred to as reactive organic gases, ROG, or volatile organic compounds, VOC) and nitrogen oxides (NO_x) in the presence of sunlight. Emissions of hydrocarbons and NO_x throughout the Bay Area contribute to these reactions. Efforts to reduce ambient ozone concentrations focus on reducing emissions of these precursor pollutants.

High concentrations of ozone in the lower atmosphere can irritate the eyes and constrict the airways, as well as aggravate existing respiratory problems such as asthma, bronchitis and emphysema. Long term exposure can permanently damage lung tissue. Ozone also damages trees, agricultural crops and other plants, and accelerates deterioration of rubber, plastics, fabrics, paints and finishes. ARB has set ambient air quality standards for ozone to define the level considered safe for human health.

As a consequence of its designation as an ozone nonattainment area, the District was required to begin the planning process set forth in the CCAA. The types of measures that must be included in an attainment plan depends upon whether the air pollution in a district is classified as "moderate," "serious," or "severe." The Bay Area is classified as a "serious" nonattainment area for the state ozone standard. As a "serious" nonattainment area, the Bay Area is required to adopt, among other things, measures requiring best available retrofit control technology (BARCT) on existing sources of air pollution, and best available control technology (BACT) for new and modified sources with a potential to emit 10 pounds per day or more of ozone precursors. (See Health and Safety Code Section 40919.)

Although the CCAA states that attainment plans should achieve an annual 5% reduction in ozone precursors, it allows as an alternative the adoption of "all feasible measures." (Health and Safety Code Section 40918.5(a)(2)). No air district in California has been able to achieve an annual 5% reduction. The District and other nonattainment areas have used the "all feasible measures" approach to reduce emissions. ARB provides guidance in determining whether measures are "feasible".

Health and Safety Code Section 40925 requires that attainment plans be reviewed and updated every three years to correct for deficiencies. ARB has the authority to determine

whether comprehensive triennial updates are necessary. ARB is not requiring a comprehensive update for 2000. Based on guidance and direction from ARB, all updates to the 1991 plan have been minor updates, with new measures added as they are determined to be feasible and existing measures dropped when they prove to be infeasible.

1991 CLEAN AIR PLAN AND SUBSEQUENT REVISIONS

The 2000 CAP is an update of the San Francisco Bay Area ozone attainment plan required by Health and Safety Code Section 40925, pursuant to the California Clean Air Act of 1988. The plan sets forth a strategy to reduce emissions of the air pollutants that form ground-level ozone, or smog, in order to attain the State 1-hour ozone standard.

The original CAP, prepared in cooperation with the Metropolitan Transportation Commission and Association of Bay Area Governments, was adopted by the District Board of Directors in 1991. The 1991 CAP proposed 48 stationary source control measures and 2 mobile source control measures to be adopted over the period from 1991 to “2000+.” In addition, the plan proposed a set of 23 transportation control measures (TCMs).

In 1994 and 1997, the District prepared updates to the 1991 CAP. The 1994 update added three new stationary source measures and modified existing stationary source measures by deleting three measures and revising five others. It also added five new mobile source measures. The 1994 update deleted two TCMs and combined two pairs of TCMs into single TCMs.

The 1997 update added six new stationary source measures and modified the existing stationary source measures by deleting two measures and revising three others. It also modified two existing mobile source measures. The 1997 update added two new TCMs and revised six existing TCMs.

This 2000 CAP is the third triennial update to the District’s 1991 CAP as required by Health and Safety Code Section 40925. The 2000 CAP includes the addition of four new stationary source control measures and the revision of two existing stationary source measures. The update also deletes 12 stationary source measures that District staff have researched and found to be infeasible. It also deletes a mobile source credit measure.

With the 2000 CAP, nine stationary source measures are scheduled for rule development between 2001 and 2003, as indicated in the CAP’s Annual Regulatory Agenda. The control measures on the Annual Regulatory Agenda represent the CAP control strategy. Six other stationary source measures are proposed for further study, to determine whether significant additional emission reductions could be achieved and whether implementation is feasible. Currently, these measures are not included in the CAP control strategy or Annual Regulatory Agenda. If further study shows that any of these six measures are

feasible, they may be added to the control strategy and rule development schedule in future CAP revisions.

The 2000 CAP does not affect the TCMs in the plan in any way. The TCMs are not set forth in detail here because no change is included in the 2000 CAP. The CAP TCMs have been implemented over time, with various implementation steps being taken during each of the three-year periods following plan adoption.

The stationary source and mobile source control measures and TCMs are described in detail in the 1991 CAP, the 1994 and 1997 CAP updates, and the 2000 CAP.

PROJECT DESCRIPTION

The 2000 CAP is a modification to an existing plan – the 1991 CAP - that provides for the general improvement of environmental conditions, i.e., the reduction of ambient ozone levels in the San Francisco Bay Area. As noted above, some of the measures in the 2000 update were previously described in the 1991 CAP or subsequent updates, while other measures are new or have been revised. The purpose of this Addendum is to evaluate the potential environmental impacts associated with the new and revised control measures in the 2000 update. Below is a summary of all control measures in the 2000 update that are new or have undergone significant revision since 1997.

Proposed Control Measure Descriptions

A1 Improved Architectural Coatings Rule

Various types of architectural coatings (paints, varnishes, lacquers, industrial maintenance coatings) emit volatile organic compounds (VOC) as they evaporate. District Regulation 8, Rule 3 limits the VOC content of various architectural coatings. Other California air districts also regulate architectural coatings. From 1998-2000 ARB, with local district and industry representation, reviewed architectural coatings and currently applicable VOC limits in order to develop a Suggested Control Measure (SCM) to provide guidance to districts throughout the state. ARB adopted the SCM in June 2000. The SCM reduces allowable VOC content in various categories of architectural coatings. The 1991 CAP included control measure A1 to reduce allowable VOC content in certain coatings and eliminate a small container exemption. In the 2000 CAP, A1 is revised to propose the adoption of the SCM into Rule 3.

A5 Surface Preparation and Cleanup Standards for Metal Parts Coating

The manufacture of large appliances and miscellaneous metal parts often includes the application of paints, sealers and other coatings, which result in VOC emissions as these coatings evaporate. The 1991 CAP control measure A5 proposed lower VOC limits for these coatings and transfer efficiency requirements. Accordingly, Regulation 8, Rules 14 and 19 limit the VOC content for metal parts coatings. Neither rule includes limits on

VOC content for solvents used in surface preparation and cleanup. In the 2000 CAP, A5 is revised to include VOC limits for surface preparation and cleanup solvents.

A21 Improved Automobile Refinish Coatings Rule

Paints and other coatings applied to automobiles emit VOCs as they evaporate. Regulation 8, Rule 45 limits VOC content for motor vehicle and mobile equipment coatings. This control measure A21 would lower the allowable VOC limits for automobile refinishing operations.

A22 Improved Wood Products Coating Rule

Paints, varnishes and other coatings applied to wood products emit VOCs as they evaporate. 1991 CAP control measure A4 proposed lowering the allowable VOC content of these coatings. Regulation 8, Rule 32 sets VOC limits for coatings used in cabinet and wood furniture manufacturing. This control measure A22 proposes to further lower the allowable VOC content of these coatings.

A23 VOC Limits for Concrete Coating Operations

Paints and other coatings applied to concrete emit VOCs as they evaporate. Regulation 8, Rule 3 regulates the coating of concrete as part of a structure when coated at the site of installation. Other concrete product operations, such as construction of concrete piles, traffic barriers and underground vaults, do not involve coating at the site of installation and are thus subject to the higher VOC limits of Regulation 8, Rule 4. This control measure A23 proposes to lower the allowable VOC content for coatings and other production materials at such operations.

D8 Improved Residential Water Heater Rule

Natural gas fired water heaters emit NO_x as a combustion product. 1991 CAP control measure D7 proposed NO_x standards for new residential and commercial water heaters. Regulation 9, Rule 6 sets emission standards for new water heaters. New burner technologies are expected to achieve lower NO_x emissions. This control measure D8 proposes to lower the NO_x standard for new water heaters.

PREVIOUS ENVIRONMENTAL ANALYSIS

Pursuant to the requirements of the California Environmental Quality Act (CEQA), the District Board of Directors in October 1991 certified an environmental impact report (EIR) for the 1991 CAP. This EIR was a program EIR, according to CEQA Guidelines Section 15168. A program EIR is an EIR evaluating a series of actions that can be characterized as one large project and are related either:

- As logical parts in the chain of contemplated actions,

- In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways. (CEQA Guidelines Section 15168(a)(2)-(4)).

Accordingly, the 1991 CAP Program EIR was intended to apply to the entire CAP and to be used to describe the potential environmental impacts of the plan overall. The 1991 CAP Program EIR concluded that while implementation of the CAP would result in numerous benefits to public health and safety through improved air quality, reduced motor vehicle use and other impacts, the CAP also could have some secondary adverse environmental impacts. The 1991 CAP Program EIR identified mitigation measures to eliminate or lessen the severity of these potential adverse environmental impacts.

In December 1994 and December 1997 the District adopted addenda to the 1991 CAP Program EIR. The 1994 and 1997 addenda evaluated the environmental impacts of the new and revised control measures in the 1994 and 1997 CAP updates, respectively. The 1994 and 1997 addenda concluded that the new and revised control measures in the 1994 and 1997 CAP updates would not result in any new environmental impacts nor require mitigation measures not previously identified in the 1991 CAP Program EIR.

The District also evaluates potential environmental impacts of individual rules and regulations. For stationary source control measures that require the District to adopt or amend a rule, potential environmental impacts are examined at both the plan level and during rule development. In addition to the EIR and EIR addenda prepared for the 1991 CAP and subsequent updates, each time the District adopts or amends a rule pursuant to a control measure proposed in the CAP, the District analyzes potential environmental impacts of the specific provisions of the proposed rule in a CEQA document included as part of the rule development staff report.

2000 ADDENDUM TO THE 1991 CAP PROGRAM EIR

This Addendum to the 1991 CAP Program EIR examines the potential environmental impacts of the new and revised control measures included in the 2000 CAP. This Addendum has been prepared pursuant to the requirements of CEQA (Public Resources Code Sections 21093 and 21094) and in accordance with the State CEQA Guidelines (Sections 15152, 15164 and 15168). This Addendum is intended to inform the public and the District Board of Directors regarding potential environmental impacts that may occur with the implementation of the new and revised control measures included in the 2000 CAP. The new and revised control measures are summarized above under Project Description and described in greater detail in Attachment A of the 2000 CAP.

Sections 15162 – 15164 of the State CEQA Guidelines provide direction on what type of CEQA document is appropriate for the 2000 CAP. According to CEQA Guidelines Section 15164, an addendum to a previously certified EIR shall be prepared if some

changes or additions are necessary but none of the conditions described in Sections 15162 and 15163 calling for preparation of a subsequent or supplemental EIR, respectively, have occurred. According to Sections 15162 and 15163, a subsequent or supplemental EIR shall not be prepared for this project unless the District determines, based on substantial evidence in light of the whole record, one or more of the following:

- Substantial changes included in the 2000 CAP would require major revisions to the 1991 CAP Program EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes with respect to the circumstances under which the 2000 CAP is undertaken will require major revisions to the 1991 CAP Program EIR due to the involvement of new significant effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance, which was not known and could not have been known with reasonable diligence at the time the 1991 CAP Program EIR was certified, shows any of the following:
 - The 2000 CAP will have one or more significant environmental effects not discussed in the 1991 CAP Program EIR;
 - Significant effects previously examined in the 1991 CAP Program EIR will be substantially more severe than shown in the 1991 CAP Program EIR;
 - Mitigation measures or project alternatives previously found not to be feasible would in fact now be feasible and would substantially reduce or mitigate one or more significant effects of the CAP, but the District declined to adopt the mitigation measure or alternative; or
 - Mitigation measures or project alternatives which are considerably different from those analyzed in the 1991 CAP Program EIR would substantially reduce one or more significant effects on the environment, but the District declined to adopt the mitigation measure or alternative.

District staff reviewed information from various sources, including: the 1991 CAP Program EIR, other District CEQA documents and related technical studies prepared for previous CAP updates and rules, CEQA documents prepared by ARB and other California air districts for measures similar to those included in the 2000 CAP, and various technical documents used in the development of the proposed control measures.

The attached table, “Summary of Potential Environmental Impacts Associated with New or Revised Control Measures Included in the 2000 CAP,” summarizes the potential environmental impacts of the new and revised measures included in the 2000 CAP. The

information in the table is based on an Initial Study prepared by District staff for the 2000 CAP. The table lists each new and revised control measure, describes potential adverse impacts and mitigation measures previously identified in the 1991 CAP EIR, and indicates the significance of these impacts before and after mitigation. (The 1991 CAP EIR describes the criteria used to determine the significance of potential impacts.) The table also lists potential impacts not identified in the 1991 CAP EIR but addressed elsewhere (particularly in ARB's EIR for the Architectural Coatings Suggested Control Measure). In each case where a potential impact is identified, District staff analysis concludes that the evidence clearly indicates that the impacts will be less than significant (or, in the case of D8 – Improved Residential Water Heater Rule, that while the measure could contribute to a potentially significant impact identified in the 1991 CAP EIR, D8's impact will be no more severe than, and most likely much less severe than, the impact as previously identified). Therefore, District staff analysis concludes that the new and revised control measures included in the 2000 CAP will not result in any new significant impacts, make previously identified significant impacts more severe, or require new mitigation measures.

Based on the environmental analysis summarized in the attached table, the District has concluded that the new and revised control measures included in the 2000 CAP do not meet the conditions set forth in CEQA Guidelines Sections 15162 and 15163 such that the District should prepare a subsequent or supplemental EIR, and thus an Addendum to the 1991 CAP EIR is the appropriate type of CEQA document for the 2000 CAP. Specifically, the District has concluded that:

- 1) The new and revised control measures included in the 2000 CAP do not result in new significant environmental effects not previously considered, nor increase the severity of previously identified significant effects. The 2000 CAP includes six new or revised control measures. District staff analyzed potential adverse environmental impacts of the new and revised measures and concluded that, with one exception (Control Measure D8), the impacts would be less than significant. D8 could potentially contribute to a significant impact identified in the 1991 CAP Program EIR, but the evidence indicates that any such impact would be no more severe than previously identified and most likely would be much less severe.

The 1991 CAP Program EIR found that implementation of NO_x controls could lead to localized areas with higher ozone levels due to the complex photochemical reactions that characterize ozone formation. Pursuant to the 1991 CAP Program EIR, the District conducted modeling studies to evaluate this impact prior to adopting NO_x control measures. Studies in 1992 and 1993 for two major NO_x rules (utility and non-utility boilers, respectively) confirmed a potential for slight increases in ozone levels near the NO_x sources and slight decreases downwind. This potential impact was associated with NO_x controls at major point sources. D8 proposes NO_x controls on minor area sources. Emission reductions for D8 will be much smaller and spread throughout the region, rather than concentrated at large point sources. Therefore, D8 will not have an impact beyond

that identified in the 1991 CAP Program EIR, and most likely will have much less of an impact.

2) There are no substantial changes to the circumstances under which the project will be undertaken which would result in new significant environmental effects or significantly increase the severity of previously identified significant effects. Despite hot weather and high ozone levels in 1995, 1996 and 1998, monitoring data show a general downward trend in ozone concentrations since the late 1980's. Peak ozone concentrations have declined 1.4 percent per year, on average, since the 1986-88 base period. Since 1986, population exposure to ozone, as a weighted average for the region, has been reduced by 68 percent. Implementation of the 2000 CAP will continue to reduce ozone precursor emissions through the adoption of all feasible measures on an expeditious schedule.

3) There is no new information of substantial importance which shows that the new and revised control measures will result in significant environmental effects not previously discussed in the 1991 CAP Program EIR nor increase the severity of any previously identified significant effects. Nor is there any new information which shows that mitigation measures or project alternatives previously found to be not feasible would now be feasible and would substantially reduce significant effects of the CAP, or that new mitigation measures or project alternatives not analyzed in the 1991 CAP EIR would substantially reduce any significant environmental effects. The preparation of the 2000 CAP and the associated environmental review included extensive analysis of recent research regarding air pollution control strategies and consideration of State regulatory requirements and guidance. The new and revised control measures included in the 2000 CAP reflect the District's conclusions regarding those strategies that would be most cost-effective, meet regulatory requirements and have no or the least adverse environmental effects.

**SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS
associated with
NEW OR REVISED CONTROL MEASURES
included in the
2000 CLEAN AIR PLAN**

Potential Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation	Reference
A1 Improved Architectural Coatings Rule				
An increase in emissions of stratospheric ozone depleting substances, toxic air contaminants, or substances contributing to global warming could occur if certain exempt solvents were used to reformulate coatings.	S	District would adopt a regulation to restrict the use of chemicals that are ozone depleting, toxic air contaminants or contribute to global warming in the reformulation of coatings. District's Stratospheric Ozone Policy provides that provisions for exempt solvents in new and amended rules shall not promote ozone depleting substances or toxic air contaminants. District staff also applies Policy to substances contributing to global warming. Additionally, there are alternatives to the use of exempt solvents that manufacturers can and do use to reduce VOC content of coatings.	LS	BAAQMD, Final Program EIR for 1991 CAP, October 1991; ARB, Final Program EIR for Suggested Control Measure for Architectural Coatings, June 2000
Lowering the VOC content of applicable coatings could increase VOC emissions for various reasons: increased coating thickness, more thinning, more topcoats, more touch-ups, more priming, more frequent recoating, more substitution with higher VOC coatings, and greater reactivity.	LS	ARB researched and analyzed each of these potential impacts in detail and concluded that the suggested control measure (SCM) will reduce VOC emissions. The District's rule will be based upon ARB's SCM. No mitigation is required.	LS	
Complying solvents (such as acetone) could have odor impacts.	LS	Acetone and other likely substitute solvents are equally or less odorous than currently allowable solvents. No mitigation required.	LS	
If affected coatings are reformulated with water, water consumption in their manufacturing and use could increase.	LS	ARB analyzed potential water consumption impacts using conservative assumptions and concluded that the SCM's impact on water supplies would be negligible.	LS	
Improper disposal of affected coatings (onto ground or storm drains) could adversely affect water quality.	LS	Most likely substitute solvents are less toxic than currently used solvents. Most currently available waterborne coatings contain non-hazardous solvents. No mitigation required.	LS	

LS = Less than Significant
S = Significant

Potential Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation	Reference
<p>A5 Surface Preparation and Cleanup Standards for Metal Parts Coating</p> <p>An increase in stratospheric ozone depleting substances, toxic air contaminants, or substances contributing to global warming could occur if certain exempt solvents were used to reformulate coatings.</p>	S	See A1.	LS	BAAQMD, Final Program EIR for 1991 CAP, October 1991
<p>A21 Improved Automobile Refinish Coatings Rule</p> <p>An increase in stratospheric ozone depleting substances, toxic air contaminants, or substances contributing to global warming could occur if certain exempt solvents were used to reformulate coatings.</p>	S	See A1.	LS	BAAQMD, Final Program EIR for 1991 CAP, October 1991
<p>A22 Improved Wood Products Coating Rule</p> <p>An increase in stratospheric ozone depleting substances, toxic air contaminants, or substances contributing to global warming could occur if certain exempt solvents were used to reformulate coatings.</p>	S	See A1.	LS	BAAQMD, Final Program EIR for 1991 CAP, October 1991
<p>A23 VOC Limits for Concrete Coating Operations</p> <p>An increase in stratospheric ozone depleting substances, toxic air contaminants, or substances contributing to global warming could occur if certain exempt solvents were used to reformulate coatings.</p>	S	See A1.	LS	BAAQMD, Final Program EIR for 1991 CAP, October 1991

Potential Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation	Reference
<p>D8 Improved Residential Water Heater Rule</p> <p>Implementation of NOx controls could lead to localized areas with higher ozone levels due to the complex photochemical reactions that characterize ozone formation.</p>	S	<p>Per the 1991 CAP EIR, District conducted modeling studies to evaluate this impact prior to adopting NOx control measures. Studies in 1992 and 1993 for two major NOx rules (utility and non-utility boilers) confirmed a potential for minor ozone hotspots. This potential impact was associated with NOx controls at major point sources. D8 proposes further controls on minor area sources. Emission reductions for D8 will be much smaller and spread throughout the region (rather than concentrated at large point sources). Therefore, D8 will not have an impact beyond that identified in the 1991 CAP EIR, and most likely much less of an impact.</p>	S	<p>BAAQMD, Final Program EIR for 1991 CAP, October 1991; BAAQMD Technical Memoranda 92004, 93001, December 1992, October 1993</p>