8. GENERAL CONFORMITY

8.1 INTRODUCTION

Section 176(c) of the federal Clean Air Act (CAA) states that federal agencies cannot carry out, fund, or approve any project unless the project conforms to the applicable State Implementation Plan's (SIP) purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of these standards. A SIP is a compilation of all of a state's air quality plans and rules that have been approved by the U.S. Environmental Protection Agency (U.S. EPA). The applicable SIP in Ventura County is the most recent *Ventura County Air Quality Management Plan* (AQMP) approved by the U.S. EPA plus all Ventura County Air Pollution Control District (APCD) rules and regulations approved by the U.S. EPA.

There are two types of federal conformity actions: general (non-transportation) and transportation. Pursuant to CAA requirements, the U.S. EPA developed general and transportation conformity regulations that implement Section 176(c). U.S. EPA promulgated the general conformity criteria and procedures (Title 40 of the Code of Federal Regulations (CFR) Part 6; Part 51, Subpart W; and Part 93, Subpart B) on November 30, 1993. U.S. EPA promulgated the transportation conformity criteria and procedures (Title 40 of the CFR, Part 51, Subpart T; and Part 93, Subpart A) on November 24, 1993, and last revised them August 15, 1997. Transportation conformity, which is not discussed in these Guidelines, applies to federal actions related to transportation plans, programs, and projects under Title 23 U.S. Code or the Federal Transit Act.

The criteria and procedures required the District to adopt a general conformity rule and submit it to the U.S. EPA by November 30, 1994. The Ventura County Air Pollution Control Board adopted Rule 220, General Conformity, on May 9, 1995. Rule 220 incorporates U.S. EPA's general conformity criteria and procedures by reference. The U.S. EPA approved Rule 220 on April 23, 1999, and the rule became effective June 22, 1999.

8.2 RESPONSIBILITY FOR CONFORMITY DETERMINATIONS

Federal agencies are responsible for making conformity determinations for projects that require a federal action, as described below. The federal agency responsible for issuing the permit, approval, or funding should be contacted if an individual, group, or local agency thinks that a project might be subject to the general conformity regulation. The individual, group, or local agency can contact the District if the federal agency is unfamiliar with the federal general conformity requirement.

The APCD recommends that conformity analyses be conducted concurrently with any environmental review for the project required pursuant to CEQA.

8.3 APPLICABILITY

The CAA defines a federal action as any activity engaged in by a department, agency, or instrumentality of the federal government; or any activity that a department, agency or instrumentality of the federal government supports in any way, provides financial assistance for, licenses, permits, or approves. For general conformity, this definition excludes activities related to transportation plans, programs, and projects (including highway and transit actions) developed, funded or approved under Title 23 U.S.C. or the Federal Transit Act, which are subject to the transportation conformity rule. The federal transportation conformity rule is incorporated largely by reference into District Rule 221, Transportation Conformity.

The federal general conformity criteria and procedures contain provisions for making conformity determinations for federal health-based air quality standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter 10 microns or less in diameter, and lead. The criteria and procedures apply in areas designated nonattainment for any federal air quality standard and to all air quality maintenance areas. Since Ventura County is nonattainment only for the federal one-hour ozone standard, conformity determinations apply only to reactive organic compounds (ROC) and oxides of nitrogen (NOx) emissions.

The rule specifies *de minimis* thresholds, based on the severity of the nonattainment problem, under which conformity determinations are not needed. If the total of direct and indirect emissions from an activity are projected to equal or exceed the *de minimis* thresholds, and if it is not an exempt activity or an activity that is presumed to conform under the federal rule, then the federal agency must conduct a general conformity analysis. Since Ventura County is designated a federal severe ozone nonattainment area, the applicable *de minimis* threshold is 25 tons per year of ROC or NOx.

Calculation of emissions from a federal activity includes direct and indirect emissions. Direct emissions are emissions of a criteria pollutant or its precursors that are caused or initiated by the federal action and occur at the same time and place as the action. Indirect emissions are emissions of a criteria pollutant or its precursors that: 1) are caused by the federal action, but may occur later in time and/or may be further removed in distance from the action itself, but are still reasonably foreseeable; and 2) the federal agency can practicably control and will maintain a control over due to a continuing program responsibility. The federal general conformity rule does not specify examples of indirect emissions, as it is up to the federal agency to make that determination.

The general preamble to the federal general conformity rule states that the following types of federal actions, among others, are likely to be subject to conformity review:

- Prescribed burning activities by federal agencies or on federal lands.

- Private actions taking place on federal land under an approval, permit, or leasing agreement, such as mineral extraction, timber harvesting, or ski resort construction.
- Direct emissions from Corps of Engineers (COE) permit actions.
- Wastewater treatment plant construction or expansion actions.
- Federal construction projects such as buildings, laboratories, and reservoirs on federal land.
- Project-level minerals management leasing activities.
- New airports or airport expansion actions.
- Actions taking place on federal lands or in federal facilities.

The general preamble to the federal general conformity rule states that the following types of federal actions are not covered by the conformity rule:

- Activities associated with property disposal at military closure and realignment bases through sale or other transfer of title.
- Leasing agreements associated with military base closure and realignment, where transfer of title is required to be conveyed upon satisfaction of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requirements, and where the military service leases the property without retaining continuing authority to control the property except as necessary to assure satisfaction of CERCLA requirements.
- Certain indirect emissions related to COE permits for discharging dredged or fill material.
- National Pollutant Discharge Elimination System (NPDES) permit actions since many of these actions are taken under State rules and, as such, are not federal actions.

8.4 SUMMARY OF CRITERIA FOR MAKING A POSITIVE CONFORMITY DETERMINATION

A federal agency can make a positive conformity determination by meeting any of several criteria in the rule. Criteria that relate to ozone conformity analyses are summarized below. For specific information about the requirements of the general conformity rule, see Title 40 of the CFR, Part 51, Subpart W; and Part 93, Subpart B.

- Emissions from the action are fully offset within the same area through a revision to the applicable SIP or a similarly enforceable measure that creates emissions reductions so that there is no net increase in emissions of that pollutant.
- Emissions for the project are specifically identified and accounted for in the applicable SIP attainment or maintenance demonstration (1995 Ventura County Air Quality Management Plan, Appendix E-95, *Emission Forecast Documentation*).

- The action (or portion thereof) is specifically included in a current transportation plan and transportation improvement program that have been found to conform to the applicable SIP under the transportation conformity regulation.
- Where a SIP has not been approved since 1990, the baseline emissions reflect historic activity levels that occurred in the geographic area.
- Regional water and/or wastewater projects are sized to meet only the needs of population projections that are in the applicable SIP.

8.5 REPORTING REQUIREMENTS AND PUBLIC PARTICIPATION

A federal agency conducting a conformity analysis must provide a 30-day notice describing the proposed action and a copy of the federal agency's draft conformity determination to the appropriate U.S. EPA Regional Office (Region IX), Land Managers, State and local air quality agencies (California Air Resource Board and the APCD), and the Metropolitan Planning Organization (i.e., Southern California Association of Governments (SCAG) and the Ventura Council of Governments (VCOG) or otherwise designated agency).

After making a final conformity determination, a federal agency must notify, within 30 days, the appropriate U.S. EPA Regional Office (Region IX), Land Managers, State and local air quality agencies (ARB and the APCD), and the Metropolitan Planning Organization (i.e., SCAG, VCOG, or otherwise designated agency).

Additionally, a federal agency must:

- Make draft conformity determinations and supporting materials available for public review.
- Place an advertisement in a daily newspaper in the area that would be affected by a proposed action before acting on a draft conformity determination.
- Provide opportunity for written public comments.
- Respond to comments received, making comments and responses available upon request.
- Place an advertisement in a daily newspaper in the area that would be affected by the action after making a final conformity determination.

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APPENDIX A
GLOSSARY AND ACRONYMS

This appendix defines terms and acronyms used in these Guidelines.

Glossary

Aerosol - a particle of solid or liquid matter that can remain suspended in the air because of its small size (generally under one micron).

Air Basin - an area of the state designated by the ARB pursuant to Subdivision (a) of Section 39606 of the California Health and Safety Code (CH&SC).

Air Monitoring - the periodic or continuous sampling and analysis of air pollutants in ambient air or from individual pollutant sources.

Air Pollutants - substances that are foreign to the atmosphere or are present in the natural atmosphere to the extent that they may result in adverse effects on humans, animals, vegetation, and materials. Common air pollutants are ozone, nitrogen dioxide, particulate matter, sulfur dioxide, and carbon monoxide. Air pollution is defined in the CH&SC as any discharge, release, or other propagation into the atmosphere, and includes, but is not limited to, smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matter, acids, or any combination thereof.

Air Pollution Control District (APCD) - a local agency with authority to regulate stationary sources of air pollution (such as refineries, manufacturing facilities, and power plants) within a given county, and governed by a District Air Pollution Control Board composed of the elected county supervisors and city representatives.

Air Pollution Control Officer (APCO) - the executive officer of the Air Pollution Control District appointed by the Air Pollution Control Board.

Air Quality Management Plan (AQMP) - a plan prepared by an air pollution control district or agency to comply with either the federal Clean Air Act or the California Clean Air Act. An AQMP contains measures that will be taken to attain and maintain federal and state ambient air quality standards. In California, air districts prepare air quality management plans that are included in the state's SIP that is required by the federal Clean Air Act. Such plans are also referred to as Clean Air Plans or Clean Air Attainment Plans.

Alternative Fuels - fuels such as methanol, ethanol, natural gas, and liquid petroleum gas that are cleaner burning with lower air emissions.

Ambient Air - air present at a particular time and place outside of structures. Often used interchangeably with outdoor air.

Anthropogenic - of, relating to, influenced, or caused by humans.

Area Sources - also known as "area-wide" sources, these include multiple stationary emission sources such as water heaters, gas furnaces, fireplaces, and woodstoves. The CCAA requires districts to include these area sources in AQMPs.

Attainment - achieving and maintaining the air quality standards (both state and federal) for a given air pollutant.

Attainment Area - an area that is in compliance with the National and/or California Ambient Air Quality Standards.

California Ambient Air Quality Standards (CAAQS) - specified concentrations of air pollutants, recommended by the California Department of Health Services and adopted into regulation by the Air Resources Board, which relate the intensity and composition of air pollution to undesirable effects. CAAQS are the standards that must be met per the requirements of the California Clean Air Act.

California Clean Air Act (CCAA) - a California law passed in 1988 that provides the basis for air quality planning and regulation independent of federal regulations, and which establishes new authority for attaining and maintaining California's air quality standards by the earliest practicable date. A major element of the Act is the requirement that local APCDs in violation of the CAAQS must prepare attainment plans that identify air quality problems, causes, trends, and actions to be taken for attainment.

California Air Resources Board (ARB) - California's lead air quality agency, consisting of a nine-member Governor-appointed board, responsible for motor vehicle air pollution control, and having oversight authority over California's air pollution management program.

California Department of Transportation (Caltrans) - a state department that oversees the state's transportation intrastructure.

California Environmental Quality Act (CEQA) - a state law intended to protect the environment of California. It is also known as the CEQA statutes, and is codified in Sections 21000 through 21177 of the Public Resources Code. CEQA establishes mandatory ways by which governmental (public agency) decision makers are informed about the potential significant environmental effects of proposed projects. CEQA also mandates the identification of ways to avoid or significantly reduce damage to the environment. After preliminary review or the completion of an Initial Study, the Lead Agency may decide to prepare an Environmental Impact Report (EIR) for a project.

CEQA Guidelines - regulations prescribed by the Secretary for Resources to be followed by all state and local agencies in California in the implementation of CEQA, beginning at Sec. 15000, California Code of Regulations (CCR).

CALINE4 - a California Department of Transportation air quality model for estimating pollutant concentrations (primarily carbon monoxide, nitrogen dioxide, and particulates) near a roadway.

Carbon Monoxide (CO) - a colorless, odorless gas resulting from the incomplete combustion of fossil fuels. Over 80 percent of the CO emitted in urban areas is contributed by motor vehicles. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects. CO is a criteria air pollutant.

CO Hot Spots - an area, usually an intersection or congested segment of a highway, that exceeds the federal or state carbon monoxide standard.

Clean Air Act (CAA) - federal law passed in 1970 and amended in 1977 and 1990 that sets primary and secondary National Ambient Air Quality Standards for major air pollutants and thus forms the basis for the national air pollution control effort.

Concentration - the amount of an air pollutant present in a unit sample, usually measured in parts per million (ppm) or micrograms per cubic meter.

Conformity - a requirement in the federal Clean Air Act that no department, agency, or instrumentality of the federal government shall engage in, support in any way, or provide financial assistance for, license, permit, or approve any activity that does not conform with the State Implementation Plan (SIP) by causing or contributing to an increase in air pollutant emissions, or violation of an air pollutant standard, or frequency of violating that standard.

Consistency - a term used in CEQA to determine if a project is consistent by furthering the goals and objectives of, and will not interfere with the implementation of, applicable regional plans.

Criteria Air Pollutant - an air pollutant for which acceptable levels of exposure can be determined and for which a federal or state Ambient Air Quality Standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM_{10} (see individual pollutant definitions).

District - the Ventura County Air Pollution Control District is an air pollution control district as defined by the CH&SC Section 40150. The District encompasses all of Ventura County.

EMFAC - an ARB program of emission factors used for most California motor vehicle emissions models.

Emission Factor - the amount of a specific pollutant emitted from a specified polluting source per unit quantity of material handled, processed, or burned.

Emission - an air contaminant released to the atmosphere.

Emissions Inventory - an estimate of the quantity of pollutants emitted into the atmosphere over a specific period such as a day or a year. Considerations that go into an inventory include type and location of sources, the processes involved, and the level of activity.

Emission Standards - as used in these Guidelines, means United States Federal (EPA), State of California (ARB), or Ventura County Air Pollution Control District standards or limits for air contaminant emissions.

Environmental Impact Report (EIR) - a detailed report prepared under CEQA describing and analyzing the significant effects of a project and discussing ways to mitigate or avoid the effects [CCR §15362].

Environmental Protection Agency (EPA) - the federal agency charged with setting policy and guidelines, and carrying out legal mandates, for the protection of national environmental resources in the United States.

Exceedance - a monitored level of concentration of any air contaminant higher than the national or state ambient air quality standards.

Growth Area - a geographic subarea used in Ventura County population forecasts to refer to an area where urban development has already taken place or is expected to take place.

Indirect Source - facilities, buildings, structures, properties, and/or roads which, through their construction to their operation, indirectly contribute to air pollution. This includes projects and facilities that attract or generate mobile sources activity (autos and trucks) such as shopping centers, employment sites, schools, and housing developments, that result in emissions of any regulated air pollutant.

Level of Service (LOS) - a scale that is used to rate the service (i.e., speed and maneuverability) on roadways. An LOS of "A" means that traffic is flowing freely, while "F" refers to severely congested conditions.

Mitigated Negative Declaration (MND) - a type of negative declaration prepared for a project when the initial study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to

by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment [Public Resources Code §21064.5].

Mitigation - measures taken to avoid or reduce a significant effect including:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments [California Code of Regulations §15370].

National Ambient Air Quality Standards (NAAQS) - standards set by the EPA for the maximum levels of air pollutants that can exist in the ambient air without unacceptable effects on human health or public welfare.

New Source Review (NSR) - the mechanism to assure that new and modified stationary sources will not interfere with the attainment or maintenance of any ambient air quality standard, or prevent reasonable further progress towards the attainment or maintenance of any ambient air quality standard. A program used in a nonattainment area to permit or site new industrial facilities, or modifications to existing industrial facilities, that emit nonattainrnent criteria air pollutants. The two major requirements of NSR are best available control technology and emission offsets.

Negative Declaration - a written statement briefly describing the reasons that a proposed project will not have a significant effect on the environment and does not require the preparation of an environmental impact report [Public Resources Code §21064].

Nonattainment Area - an area identified by the EPA or ARB as not meeting the NAAQS or CAAQS for a given pollutant.

Non-growth Area - a geographic subarea used in Ventura County population forecasts to refer to an area where urban development is not expected to occur.

Ojai Planning Area - an area defined as the "Ojai Valley" in the Ventura County Non-Coastal Zoning Ordinance, Article 12, Section 8112-2 (Ojai Growth and Non-growth areas) plus the Ventura (Ojai) NGA.

Ojai Valley - an area defined as the "Ojai Valley" in the Ventura County Non-Coastal Zoning Ordinance, Article 12, Section 8112-2 (Ojai Growth and Non-growth Areas).

Oxides of Nitrogen - a reddish-brown gas with an odor similar to bleach. The major source of this pollutant is the high temperature combustion of fossil fuels. Health effects include irritation and damage to the lungs and lower resistance to respiratory infections.

Ozone - a pungent, pale blue (but often invisible), reactive, toxic gas consisting of three oxygen atoms. In the atmosphere, it is a product of the photochemical processes involving the solar radiation. Ozone exists in the stratosphere, as well as at the earth's surface. Ozone in the stratosphere protects living organisms near the earth's surface from ultraviolet rays from the Sun. Ozone at the earth's surface is a criteria air pollutant and causes numerous adverse health effects.

Ozone Precursors - compounds such as reactive organic compounds and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, the principal component of smog.

Particulate Matter - Fine ($PM_{2.5}$) - $PM_{2.5}$ is a mixture of very small particles with an aerodynamic diameter equal to or less than 2.5 microns. $PM_{2.5}$ consists of particles directly emitted into the air and particles formed in the air from the chemical transformation of gaseous pollutants. $PM_{2.5}$ particles are emitted from activities such as industrial and residential combustion, and from vehicle exhaust. Particles 2.5 microns or smaller infiltrate deepest portions of the lungs, increasing the risks of long-term disease, including chronic respiratory disease, cancer, and increased and premature death.

Particulate Matter - Respirable (PM_{10}) - any particulate matter with an aerodynamic diameter equal to or less than 10 microns. PM_{10} consists of particles directly emitted into the air and particles formed in the air from chemical transformations of gaseous pollutants. PM_{10} particles are emitted from activities such as industrial and residential combustion, and from vehicle exhaust. PM_{10} causes adverse health effects, atmospheric visibility reduction, and is a criteria air pollutant.

Pedestrian Oriented Development (POD) - any of a number of design strategies that emphasize pedestrian access over automobile access. They typically provide pedestrian amenities such as sidewalks, street trees, commercial at-street frontage, safe street crossings, etc.

Permit - written authorization from the Air Pollution Control District for the construction or operation of equipment that may create or control regulated air emissions.

Project - an activity that may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following:

- An activity directly undertaken by a public agency.
- An activity undertaken by a person that is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies [Public Resources Code §21065].

Reactive Organic Compounds (ROC) - any organic compound containing at least one carbon atom except for specific exempt compounds (see District Rule 2) found to be non-photochemically reactive and thus not participating in smog formation. Sometimes referred to as reactive organic gases, non-methane organic compounds, or volatile organic compounds.

Sensitive Receptors - facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and daycare centers.

Significant Effect on the Environment - a phrase used to indicate that an environmental effect of a project is at a level requiring the detailed analysis of an EIR and that the effect is severe enough to consider disapproving or changing the project to avoid the effect. The terms "significant effect" and "significant impact" are interchangeable under CEQA [CCR §15382].

Soil stabilizers - chemical or other agents that are applied to soil surfaces to stabilize and mitigate PM_{10} fugitive dust emissions by creating a wind-resistant crust. Typically applied to disturbed surface areas next to roadways, base ground areas, dirt parking lots and roadway shoulders, and exposed construction areas.

Southern California Association of Governments (SCAG) - the organization, known in federal law as the Council of Governments and Metropolitan Planning Organization, representing Los Angeles, Ventura, San Bernardino, Riverside, Orange, and Imperial Counties and the cities within those six counties. As the designated Metropolitan Planning Organization, the Association of Governments is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the state level.

Statement of Overriding Considerations - a written statement by a lead agency giving reasons for approving a project having environmental impacts that have not been mitigated to a level of insignificance.

State Implementation Plan (SIP) - a document prepared by each state, and subject to EPA approval, describing existing air quality conditions and measures that will be taken to attain and maintain National Ambient Air Quality Standards. A SIP is a compilation of all of a state's air quality plans and rules that have been approved by the U.S. Environmental Protection Agency (EPA). In California, air districts prepare nonattainment area plans that are included in the state's SIP. The applicable SIP in Ventura County is the most recent Ventura County Air Quality Management Plan (AQMP) approved by the U.S. EPA plus all Ventura County Air Pollution Control District (APCD) rules and regulations approved by the EPA.

Sulfur Dioxide - a colorless, extremely irritating gas or liquid whose chemical formula is SO_2. Sulfur dioxide enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. National Ambient Air Quality Standards and California State Air Quality Standards have been established for sulfur dioxide.

Telecommute - a work mode where individuals perform job requirements for part or all of the work week at off-site facilities, such as private residences or satellite work centers (rather than commuting to the primary worksite). This reduces vehicle trips (if telecommuting from a residence) or vehicle miles traveled (if telecommuting from a satellite center) and associated air emissions.

Toxic Air Contaminant - air pollutants (excluding ozone, carbon monoxide, PM_{10}, sulfur dioxide, nitrogen dioxide) that may reasonably be anticipated to cause cancer, developmental effects, reproductive dysfunctions, neurological disorders, heritable gene mutations or other serious or irreversible acute or chronic health effects in humans. Toxic air pollutants are regulated under different federal and state regulatory processes than ozone and the other criteria air pollutants. Health effects from exposure to toxic air pollutants may occur at extremely low levels.

Transit Oriented Development (TOD) - mixed-use neighborhoods, up to 160 acres in size, which are developed around a transit stop and core commercial area. The entire TOD must be within an average of a 2,000 foot walking distance of a transit stop. Secondary areas of lower density housing, schools, parks, and commercial and employment uses, surround TODs for up to one mile.

Transportation Control Measures (TCM) - air pollutant control measures in the AQMP that are directed at reducing air emissions by reducing vehicle travel. Both the federal and state law specify requirements for TCMs.

URBEMIS - a computer program used to estimate indirect source emissions from new and modified land uses (e.g., shopping centers, housing developments, and offices).

Ventura Council of Governments (VCOG) - a governmental organization comprised of the County of Ventura, and the ten cities in Ventura County. The purpose of VCOG is to provide a vehicle for the member entities and other interested persons, public and private, to engage in regional, cooperative, and comprehensive planning. VCOG has historically been under contract to the Southern California Association of Governments to idenfity and refine regionally significant transportation problems, needs, investments, and programs related to the development of the Regional Transportation Plan.

Volatile Organic Compounds (VOCs) - any organic compound containing at least one carbon atom except for specific exempt compounds (see District Rule 2) found to be non-photochemically reactive and thus not participating in smog formation. In this document, VOC is synonymous with reactive organic gases and reactive organic compounts.

Acronyms

ADT	average daily (motor vehicle) trips
APCB	Air Pollution Control Board
APCO	Air Pollution Control Officer
APCD	Air Pollution Control District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
CAA	federal Clean Air Act
CAAQS	California Ambient Air Quality Standard(s)
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CH&SC	California Health and Safety Code
CO	carbon monoxide
District	Ventura County Air Pollution Control District
DTIM	Direct Travel Impact Model
EIR	Environmental Impact Report
EMFAC	ARB's On-Road Motor Vehicle Emissions Model
EPA	United States Environmental Protection Agency
GUIDELINES	Ventura County Air Quality Assessment Guidelines
ISR	indirect source review
ITE	Institution of Transportation Engineers
LOS	level of service

MND	Mitigated Negative Declaration
ND	Negative Declaration
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO	nitrogen oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	oxides of nitrogen
O_3	ozone
$PM_{2.5}$	fine particulate matter of 2.5 microns in diameter or smaller
PM_{10}	particulate matter of 10 microns in diameter or smaller
Pb	lead
Plan	Air Quality Management Plan
PPM	parts per million
PRC	Public Resources Code
ROC	reactive organic compounds
ROG	reactive organic gases
SCAG	Southern California Association of Government
SIP	State Implementation Plan
SO_2	sulfur dioxide
SOx	oxides of sulfur
TAC	toxic air pollutant
TCM	transportation control measures
$\mu g/m^3$	microgram per cubic meter
URBEMIS	Urban Emissions Model
VCOG	Ventura Council of Governments
VMT	vehicle miles traveled
VOC	volatile organic compounds (see ROC)

APPENDIX B
COMMON EQUIPMENT AND PROCESSES REQUIRING A VENTURA COUNTY APCD PERMIT TO OPERATE

This appendix contains a document available through the APCD Engineering and Enforcement Divisions of the Ventura County APCD that provides guidance for determining whether or not equipment and processes will require an APCD Permit to Operate.

COMMON EQUIPMENT AND PROCESSES REQUIRING A VENTURA COUNTY APCD PERMIT TO OPERATE

Disclaimer: This list is intended to be used only as general guidance in determining equipment that requires an APCD Permit to Operate. For more detailed information, refer to APCD Rule 10, "Permits Required", and APCD Rule 23, "Exemptions from Permit", or call the APCD Engineering Section at 805/645-1401.

Combustion Equipment

- Boilers or process heaters with a maximum rated heat input of 1.0 MMBTU/Hr or greater
- Engines which are 50 HP or greater including but not limited to the following:
  -Oil well and water well drilling rigs
  -Portable electrical generators
  -Portable wood chippers
  -Portable air compressors
  Note: Vehicle engines for autos, trucks, bulldozers, forklifts, etc. are exempt. Emergency electrical generators and emergency water pumps are exempt. Portable engines registered with the state PERP are exempt.
- Gas turbines
- Incinerators, including crematories
- Ovens and furnaces
  Note: Restaurant barbecue equipment is exempt. Ovens or furnaces used in residential units are exempt.
- Burn-off ovens for auto engine parts
- Waste gas flares

Equipment Which Emits Dust or Other Particulate Matter

- Concrete batch plants
- Asphalt concrete plants
- Rock, sand, and aggregate plants
- Abrasive blasting and sand blasting operations
  Note: Water blasting equipment using engines less than 50 HP is exempt.
- Metal melting furnaces

Equipment and Processes Which Emit Solvents or Other Reactive Organic Compounds

- Drycleaning machines using organic solvents
- Gasoline tanks and dispensing facilities
  Note: Diesel tanks and waste oil tanks are exempt. Gasoline tanks less than 250 gallons in capacity are exempt.
- Contaminated soil or groundwater remediation systems including air stripping towers
- General painting and coating equipment if more than 200 pounds of solvents are emitted in a year (roughly 25 gallons)
- Any painting of automobiles, trucks, or mobile equipment
- Printing operations if more than 200 pounds of solvents are emitted in a year
- Use of adhesives or sealants if more than 200 pounds of solvents are emitted in a year
- Cold degreasers and vapor degreasers
- Cleaning operations if more than 200 pounds of solvents are emitted in a year
- Oil wells and oilfield storage and process tanks
- Other organic liquid storage tanks with a capacity of more than 5,000 gallons
- Semiconductor or electronic component manufacturing
- Expandable polystyrene foam manufacturing

Equipment and Processes Which Emit Air Toxics or May Cause a Nuisance

- Chrome plating operations
- Operations such as spa, bathtub or counter-top manufacturing which use polyester resins
- Wood stripping operations using methylene chloride
- Agricultural produce fumigation chambers using organic gases
- Ethylene oxide sterilizers (used in hospitals or food processing)

COMMON EQUIPMENT FOR WHICH AN APCD PERMIT TO OPERATE IS <u>NOT</u> REQUIRED IS LISTED BELOW:

- *Heating, air conditioning and ventilation (HVAC) equipment that is not used for air pollution control. The boilers or engines used with HVAC equipment must be evaluated separately using the combustion equipment information listed above.*
- *Vacuum cleaning systems for housekeeping purposes*
- *Refrigeration units not used for air pollution control*
- *Equipment for cutting, grinding or drilling metals or plastics*
- *Equipment for sawing, sanding or drilling wood*

IMPORTANT: Equipment and processes exempt from obtaining an APCD Permit to Operate may still need to be considered in an environmental document prepared pursuant to CEQA.

(Revised 03/00)

APPENDIX C
SECTIONS OF CEQA AND THE CEQA GUIDELINES RELEVANT TO AIR QUALITY IMPACT ANALYSIS

This appendix contains sections of CEQA and the CEQA Guidelines that are relevant to air quality impact analysis. The complete text of CEQA and the CEQA Guidelines can be found on the CERES website at: http://ceres.ca.gov/topic/env_law/ceqq/.

Section 21000 - State agencies shall regulate to prevent environmental damage

Declares that the maintenance of a quality environment for the people of California now and in the future is a matter of statewide concern. Further declares that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

Section 15063 - Initial Study

(1) If the agency determines that there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect is adverse or beneficial, the lead agency shall do one of the following:

(A) Prepare an EIR, or

(B) Use a previously prepared EIR that the lead agency determines would adequately analyze the project at hand.

(2) The lead agency shall prepare a Negative Declaration if there is no substantial evidence that the project or any of its aspects may cause a significant effect on the environment.

Section 15064 - Determining the Significance of the Environmental Effects Caused by a Project and Section 15358 - Effects

Provides guidance as to whether an effect is significant or not. In evaluating the significance of the environmental effect of a project, the lead agency shall consider the direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment caused by the project. Effects analyzed under CEQA must be related to a physical change.

Section 15065 - Mandatory Findings of Significance

Establishes criteria for the lead agency in determining whether a project may have a significant effect on the environment. If a project meets the criteria set forth in this section, an EIR should be prepared.

Section 15070 - Decision to Prepare a Negative Declaration or Mitigated Negative Declaration

Provides discussion of under what circumstances a public agency shall prepare or have prepared a ND or an MND. If an applicant can modify the project in such a manner that would avoid significant effects identified after submitting the application, an EIR may be avoided by preparation of an MND.

Section 15091 - Findings

(a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

(1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(b) The findings required by subsection (a) shall be supported by substantial evidence in the record.

(c) The finding in subsection (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subsection (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subsection (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

Section 15092 - Approval

(a) After considering the final EIR and in conjunction with making findings under Section 15091, the lead agency may decide whether or how to approve or carry out the project.

(b) A public agency shall not decide to approve or carry out a project for which an EIR was prepared unless either:

(1) The project as approved will not have a significant effect on the environment, or

(2) The agency has:

(A) Eliminated or substantially lessened all significant effects on the environment where feasible as shown in findings under Section 15091, and

(B) Determined that any remaining significant effects on the environment found to be unavoidable under Section 15091 are acceptable due to overriding concerns as described in Section 15093.

(c) With respect to a project which includes housing development, the public agency shall not reduce the proposed number of housing units as a mitigation measure if it determines that there is another feasible specific mitigation measure available that will provide a comparable level of mitigation.

Section 15093 - Statement of Overriding Considerations

The Statement of Overriding Considerations requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." The statement of overriding considerations shall be supported by substantial evidence in the record.

Section 15097 - Mitigation Monitoring or Reporting

This section applies when a public agency has made the findings required under paragraph (1) of subdivision (a) of Section 15091 relative to an EIR or adopted a MND in conjunction with approving a project. The public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects.

Section 15125 - Environmental Setting

States that, "An EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective." An EIR "shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans," such as the applicable air quality attainment or maintenance plan or State Implementation Plan.

Section 15126 - Consideration and Discussion of Environmental Impacts

Requires that, "All phases of a project must be considered when evaluating its impact on the environment: planning, acquisition, development, and operation." Also requires that the following subjects be discussed in the EIR:

(a) Significant environmental effects of the proposed project.

(b) Significant environmental effects which cannot be avoided if the proposed project is implemented.

(c) Significant irreversible environmental changes which would be involved in the proposed project should it be implemented.

(d) Growth-inducing impact of the proposed project.

(e) The mitigation measures proposed to minimize the significant effects.

(f) Alternatives to the proposed project.

Section 15130 - Discussion of Cumulative Impacts

Cumulative impacts shall be discussed in an EIR when the project's incremental effect is cumulatively considerable, as defined in Section 15065(c). The elements necessary to provide an adequate discussion of cumulative impacts include:

(1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

(B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency;

(2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and

(3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects. Previously approved land-use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis.

Section 15355 - Cumulative Impacts

Defines "cumulative impacts" as "two or more individual impacts which, when considered together, are considerable or which compound or increase other environmental impacts." States that the individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Section 15370 - Mitigation

"Mitigation" includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environment.

Section 15382 - Significant Effect on the Environment

'Significant effect on the environment' means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Appendix G - Environmental Checklist Form

With respect to air quality, a project may be deemed to have a significant effect on the environment if it will:

(a) Conflict with or obstruct implementation of the applicable air quality plan.

(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

(d) Expose sensitive receptors to substantial pollutant concentrations.

(e) Create objectionable odors affecting a substantial number of people.

According to Appendix G, a "potentially significant impact" finding is appropriate if there is substantial evidence that an effect may be significant.

APPENDIX D
MAJOR TOXIC AIR CONTAMINANT REGULATIONS AND COMMON TOXIC AIR CONTAMINANT SOURCES AND SUBSTANCES

Appendix D presents the major federal and state programs and regulations to reduce toxic air contaminant (TAC) emissions. Appendix D also presents a list of common TAC sources and substances that may be encountered in Ventura County.

Table D-1, Common Sources of Toxic Air Contaminants, lists common land uses that may emit TACs. Table D-1 also lists the most common TACs associated with each listed land use. It should be noted that, because of the large number of land uses that may emit TACs, and the large number of TACs, Table D-1 is only a guide and, as such, is not all-inclusive. It does not list all land uses that may emit TACs. Moreover, not all listed land uses emit all of the listed toxic substances. Conversely, the listed land uses may emit TACs that are not included in Table D-1.

Table D-2, Toxic Air Contaminants, lists substances that the California Air Resources Board (ARB) has found to present a chronic or acute threat to public health when found in the ambient air.

Further information regarding TACs and the State of California's Air Toxics Program is available at the ARB's website (http://www.arb.ca.gov/html/brochure/airtoxic.htm). Further information about the District's Air Toxics Program can be found at the District website (http://www.vcapcd.org/air_toxics.htm). The District also publishes annual reports that summarize the District's TAC program. These reports rank facilities according to the cancer risk posed, identify the facilities posing non-cancer health risks, and describe the status of the development of control measures. These reports are available from the District's Air Toxics section. The District's 1999 TAC program report also can be downloaded from the District webpage.

Federal Clean Air Act Amendments of 1990

The federal Clean Air Act Amendments of 1990 (Title III, Section 112) mandate that the United States Environmental Protection Agency (U.S. EPA) issue emission standards on a specified schedule for certain categories of sources that emit one or more of the 188 TACs listed in Title III. The emission standards are being issued in two phases. In the first phase (1992 - 2000), the U.S. EPA is required to develop technology-based emission standards, called Maximum Achievable Control Technology (MACT). In the second phase, (2001 - 2008) the U.S. EPA is required to issue health risk-based emission standards to address risks remaining after implementation of the MACT standards.

The Tanner Toxic Act (Assembly Bill 1807)

The Tanner Act (Health & Safety Code §39650 et seq.) is a California law that established the framework for California's TAC identification and control program. The Tanner Act became effective in 1984 and requires the ARB to identify TACs and the appropriate measures to limit emissions of those substances. The ARB then adopts the appropriate degree of regulation and adopts Air Toxics Control Measures (ATCMs). The control measures are the minimum regulations that must be imposed by each air district in the state. The air districts must adopt rules that are at least as stringent as the ATCMs.

Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill 2588)

The Air Toxics "Hot Spots" Information and Assessment Act (Health & Safety Code §44300 et seq.) was adopted by the California Legislature in 1987 in response to increasing public concern about emissions of toxic chemicals in the air. It was known at that time that the majority of the United States population lived near at least one facility that released toxic chemicals into the air on a routine basis. Existing federal, state, and local air toxics programs looked at new sources only, or looked at existing sources one industry and one chemical at a time. Under AB 2588, stationary sources must submit a comprehensive inventory of routine releases of over 600 toxic compounds to the air from their facilities to the District. Based on the results of the inventories, the District requires facility owners to perform health risk assessments for the subject toxic emissions. If the emissions from a facility are determined through the risk assessment to pose a significant risk, the District requires the facility to notify people who are exposed of the results of the health risk assessment. Owners of facilities that pose a significant health risk also have to develop and implement a plan to reduce the risks to below significance levels. Further information regarding TACs and the State of California's AB 2588 Air Toxics Program is available at the ARB's website (http://www.arb.ca.gov/html/brochure/airtoxic.htm). Further information about the District's AB 2588 air toxics program can be found at the District website (http://www.vcapcd.org/air_toxics.htm). The District also publishes annual reports that summarize the District's AB 2588 TAC program. These reports rank facilities according to the cancer risk posed, identify the facilities posing non-cancer health risks, and describe the status of the development of control measures. These reports are available from the District's Air Toxics section. The Districts' 1999 AB 2588 program report also can be downloaded from the above District webpage.

Facility Toxic Air Contaminant Risk Reduction Audit and Plan (Senate Bill 1731)

Senate Bill 1731 (Health & Safety Code, §44390, et seq.) requires local air districts to establish a program to reduce risks from existing facilities in the AB 2588 air toxics program that are deemed by the District to pose a significant health risk.

Waters Bill (Assembly Bill 3205)

The Waters Bill (Health & Safety Code §§42301.6 - 42301.9) requires that an air district considering an application for a proposed new or modified source of TACs located within 1,000 feet of a school to prepare a public notice that fully describes the proposed project or modification. The air district must then distribute or mail the public notice to the parents or guardians of students enrolled in any school located within one-quarter mile of the proposed project and to each address within a 1,000 foot radius of the proposed project.

Air Monitoring of Disposal Sites (Assembly Bill 3374)

Assembly Bill 3374 (Health & Safety Code §41805.5, et seq.) requires owners of solid waste disposal sites, including inactive sites, to submit to local air pollution control districts a solid waste air quality assessment test report.

Ventura County Air Pollution Control District Toxic Air Contaminant Rules

In addition to the preceding federal and state air toxic programs, the District regulates TACs through several District rules: Rule 36, New Source Review - Hazardous Air Pollutants; Rule 62, Hazardous Materials and Airborne Toxics; Rule 62.1, Hazardous Materials; Rule 62.3, Hexavalent Chromium; Rule 62.5, Dioxins - Medical Waste Incinerators; Rule 62.6, Ethylene Oxide - Sterilization and Aeration; and Rule 62.7, Asbestos - Demolition and Renovation.

TABLE D-1

COMMON SOURCES OF TOXIC AIR CONTAMINANTS

Product, Process, or Facility	Substance
Acoustic Ceiling, Asbestos Products, Caulk, and Gasket Manufacturing	Asbestos
Aerospace Manufacturing	Hexavalent Chromium
Autobody Shop	Benzene, Toluene, Xylene
Auto Machine Shop	Asbestos
Biomedical Research Laboratory	Benzene, Carbon Tetrachloride, Chloroform, Formaldehyde, Methylene Chloride, Phenol, Xylenes
Boat Yard	Epoxy Resins, Toluene, Xylenes
Brake Realignment & Manufacturing	Asbestos
Brake Shoe Rebuilders and Recyclers	Asbestos
Chemical Manufacturing	Various
Chrome Plating	Hexavalent Chromium, Cadmium
College/University	Cadmium, Hexavalent Chromium, Ethylene Oxide
Electrical Equipment Manufacturing	Cadmium, Chromium, Nickel, PCBs, Trichloroethylene, 1,4-Dioxane
Electronic Equipment Manufacturing	1,4-Dioxane, Cadmium, Chromium, Nickel, Trichloroethylene
Fiberglass Manufacturing	Styrene
Gasoline Station	Benzene, Methyl-tertiary butyl ether, Toluene, Xylene
Graphite Manufacturing	Dioxins, Dibenzofurans

Product, Process, or Facility	Substance
Groundwater Clean-up	Benzene, Percholorethylene, Trichloroethylene
Hospital	Dioxins, Debenzofurans, Cadmium, Ethylene Oxide
Industrial Heating and Steam Needs	Cadmium, Hexavalent Chromium
Landfill	Benzene, Vinyl Choride
Medical Clinic & Laboratory	Ethylene Oxide
Medical Equipment Sterilization	Ethylene Oxide
Natural Gas Plant	Acetaldehyde, Benzene, Formaldehyde, Propylene, Toluene, Xylene
Medical Equipment Sterilization	Ethylene Oxide
Natural Gas Plant	Acetaldehyde, Benzene, Formaldehyde, Propylene, Toluene, Xylene
Petroleum Refinery	Benzene, Cadmium
Oil Production Facility	Acetaldehyde, Benzene, Formaldehyde, Propylene
Petroleum Tank	Benzene
Printing Services	1,2,4-Tri-methylbenzene, Ethyl Benzene, Ethylene glycol monobutyl ether, Methylene chloride, Propylene, Xylenes
Wastewater Treatment	Benzene, Carbon Tetrachloride, Ethylene Dichloride, Ethylene Dibromide, Chloroform, Perchloroethylene, Trichloroethylene,

TABLE D-2
COMMON TOXIC AIR CONTAMINANTS

Substance	CAS Number**
Acenaphthene [PAH,POM]	83329
Acenaphthylene [PAH,POM]	208968
Acetaldehyde	75070
Acetamide	60355
Acetonitrile	75058
Acetophenone	98862
2-Acetylaminofluorene [PAH-Derivative, POM]	53963
Acrolein	107028
Acrylamide	79061
Acrylic Acid	79107
Acrylonitrile	107131
Allyl chloride	107051
Aluminum	7429905
Aluminum oxide (fibrous forms)	1344281
2-Aminoanthraquinone [PAH-Derivative, POM]	117793
4-Aminobiphenyl [POM]	92671
Amitrole	61825
Ammonia	7664417
Ammonium nitrate	6484522
Ammonium sulfate	7783202
Aniline	62533
o-Anisidine	90040
Anthracene [PAH, POM]	120127
Antimony	7440360
Antimony Compounds, not elsewhere listed.	----
Antimony trioxide	1309644
Arsenic	7440382
Arsenic Compounds (inorganic)	1016
Arsenic Compounds (other than inorganic)	1017
Arsine	7784421
Asbestos	1332214
Barium	7440393
Barium chromate	10294403
Barium Compounds	----
Benz[a]anthracene [PAH, POM]	56553

Substance	CAS Number**
Benzene	71432
Benzidine (and its salts) [POM]	92875
Benzidene-based dyes	1020
Benzo[a]pyrene [PAH, POM]	50328
Benzo[b]fluoranthene [PAH, POM]	205992
Benzo[e]pyrene [PAH,POM]	192972
Benzo[g,h,i]perylene	191242
Benzo[j]fluoranthene [PAH, POM]	205823
Benzo[k]fluoranthene [PAH, POM]	207089
Benzofuran	271896
Benzoic trichloride {Benzotrichloride}	98077
Benzoyl chloride	98884
Benzoyl peroxide	94360
Benzyl chloride	100447
Beryllium	7440417
Beryllium Compounds	----
Biphenyl [POM]	92524
Bis(2-chloroethyl)ether {DCEE}	111444
Bis (chloromethyl) ether	542881
Bis(2-ethlyhexyl) adipate	103231
Bromine	7726956
Bromine Compounds (inorganic)	----
Bromine pentaflourid	7789302
Bromoform	75252
1,3-Butadiene	106990
Butyl acrylate	141322
n-Butyl alcohol	71363
sec-Butyl alcohol	78922
tert-Butyl alcohol	75650
Butyl benzyl phthalate	85687
Cadmium	7440439
Cadmium Compounds	----
Calcium chromate	13765190
Calcium cyanamide	156627
Caprolactam	105602

Substance	CAS Number**
Captafol	2425061
Captan	133062
Carbaryl [PAH-Derivative, POM]	63252
Carbon black extracts	1050
Carbon disulfide	75150
Carbon monoxide (A-II)	630080
Carbon tetrachloride	56235
Carbonyl sulfide	463581
Carrageenan (degraded)	1055
Catechol	120809
Chloramben	133904
Chlordane	57749
Chlorinated fluorocarbon 113 {CFC 113}	76131
Chlorinated paraffins (avg chain length C12)	108171262
Chlorine	7782505
Chlorine dioxide	10049044
Chloroacetic acid	79118
2-Chloroacetophenone	532274
p-Chloroaniline	106478
Chlorobenzene	108907
Chlorobenzenes, not elsewhere listed:	1058
Chlorobenzilate {Ethyl-4,4'-dichlorobenzilate}	510156
Chlorodifluoromethane {Freon 22}	75456
Chloroform	67663
Chloromethyl methyl ether (technical grade)	107302
Chlorophenols, not elsewhere listed.	1060
4-Chloro-o-phenylenediamine	95830
2-Chlorophenol	-----
Chloropicrin	76062
Chloroprene	126998
p-Chloro-o-toluidine	95692
Chromium	7440473
Chromium (hexavalent)	18540299
Chromium Compds. (other than hexavalent)	-----
Chromium trioxide	1333820
Chrysene [PAH, POM]	218019
Cobalt	7440484

Substance	CAS Number**
Cobalt Compounds	-----
Coke oven emissions	1066
Copper	7440508
Copper Compounds	-----
Creosotes	1070
p-Cresidine	120718
Cresols (mixtures of) {Cresylic acid}	1319773
m-Cresol	108394
o-Cresol	95487
p-Cresol	106445
Crotonaldehyde	4170303
Cumene	98828
Cumene hydroperoxide	80159
Cupferron	135206
Cyanide compounds, not elsewhere listed.	1073
Cyclohexane	110827
Cyclohexanol	108930
Cycloheximide	66819
Decabromodiphenyl oxide [POM]	1163195
Dialkylnitrosamines	1075
2,4-Diaminoanisole	615054
Diaminotoluenes (mixed isomers)	1078
2,4-Diaminotoluene {2,4-Toluenediamine}	95807
Diazomethane	334883
Dibenz[a,h]acridine [POM]	226368
Dibenz[a,h]anthracene [PAH, PAM]	53703
Dibenz[a,j]acridine [POM]	224420
7H-Dibenzo[c,g]carbazole	194592
Dibenzo[a,e]pyrene [PAH, POM]	192654
Dibenzo[a,h]pyrene [PAH, POM]	189640
Dibenzo[a,i]pyrene [PAH, POM]	189559
Dibenzo[a,l]pyrene [PAH, POM]	191300
Dibenzofuran [POM]	132649
1,2-Dibromo-3-chloropropane	96128
2,3-Dibromo-1-propanol	96139
Dibutyl phthalate	84742
1,2-Dichlorobenzene	95501

Substance	CAS Number**
1,3-Dichlorobenzene	541731
p-Dichlorobenzene {1,4-Dichlorobenzene}	106467
Dichlorobenzenes (mixed isomers)	25321226
3,3'-Dichlorobenzidine	91941
Dichlorodiphenyldichloroethylene {DDE} [POM]	72559
1,1-Dichloroethane {Ethylidene dichloride}	75343
Dichlorofluoromethane {Freon 12}	75434
2,4-Dichlorophenol	120832
Dichlorophenoxyacetic acid, salts and esters	94757
1,2-Dichloropropane {Propylene dichloride}	78875
1,3-Dichloropropene	542756
Dichlorovos {DDVP}	62737
Dicofol [POM]	115322
Diesel engine exhaust, particulate matter	9901
Diesel engine exhaust, total organic gas	9902
Diesel fuel (marine)	----
Diethanolamine	111422
Di (2-ethylhexyl) phthalate	117817
Diethyl sulfate	64675
Diethylene glycol	111466
Diethylene glycol dimethyl ether	111966
Diethylene glycol monobutyl ether	112345
Diethylene glycol monoethyl ether	111900
Diethylene glycol monomethyl ether	111773
3,3'-Dimethoxybenzidine [POM]	119904
4-Dimethylaminoazobenzene [POM]	60117
N,N-Dimethylaniline	121697
7,12-Dimethylbenz[a]anthracene	57976
3,3'-Dimethylbenzidine {o-Tolidine} [POM]	119937
Dimethyl carbamoyl chloride	79447
N,N-Dimethyl formamide	68122
1,1-Dimethylhydrazine	57147
Dimethyl phthalate	131113
Dimethyl sulfate	77781
Dimethylamine	124403
4,6-Dinitro-o-cresol and salts	534521
2,4-Dinitrophenol	51285

Substance	CAS Number**
1,6-Dinitropyrene [PAH-Derivative, POM]	42397648
1,8-Dinitropyrene [PAH-Derivative, POM]	42397659
Dinitrotoluenes (mixed isomers)	25321146
2,4-Dinitrotoluene	121142
2,6-Dinitrotoluene	606202
1,4-Dioxane	123911
Dioxins/Dibenzofuran	----
Diphenylhydantoin [POM]	630933
1,2-Diphenylhydrazine {Hydrazobenzene}	122667
Dipropylene glycol	25265718
Dipropylene glycol monomethyl ether	34590948
Direct Black 38 [PAH-Derivative, POM]	1937377
Direct Blue 6 [PAH-Derivative, POM]	2602462
Direct Brown 95 (technical grade) [POM]	16071866
Environmental tobacco smoke	1090
Epichlorohydrin	106898
1,2-Epoxybutane	106887
Epoxy Resins	1091
Erionite	12510428
Ethyl acrylate	140885
Ethyl benzene	100414
Ethyl chloride {Chloroethane}	75003
Ethylene	74851
Ethylene dibromide {1,2-Dibromoethane}	106934
Ethylene dichloride {1,2-Dichloroethane}	107062
Ethylene glycol	107211
Ethylene glycol diethyl ether	629141
Ethylene glycol dimethyl ether	110714
Ethylene glycol monobutyl ether	111762
Ethylene glycol monoethyl ether	110805
Ethylene glycol monoethyl ether acetate	111159
Ethylene glycol monomethyl ether	109864
Ethylene glycol monomethyl ether acetate	110496
Ethylene glycol monopropyl ether	2807309
Ethylene oxide	75218
Ethylene thiourea	96457
Ethyleneimine {Aziridine}	151564

Substance	CAS Number**
Fluoranthene [PAH, POM]	206440
Fluorene [PAH, POM]	86737
Fluorides and compounds	1101
Fluorocarbons (brominated/chlorinated)	1104/1103
Formaldehyde	50000
Furan	110009
Gasoline Engine exhaust, particulate matter	9910
Gasoline Engine exhaust, total organic gas	9911
Gasoline vapors	1110
Glasswool fibers	1111
Glutaraldehyde	111308
Glycol ethers and their acetates	1115
Heptachlor	76448
Hexachlorobenzene	118741
Hexachlorobutadiene	87683
Hexachlorocyclohexane	1120
alpha-Hexachlorocyclohexane	319846
beta-Hexachlorocyclohexane	319857
Hexachlorocyclopentadiene	77474
Hexachloroethane	67721
Hexamethylene-1,6,-diisocyanate	822060
Hexamethylphosphoramide	680319
Hexane	110543
Hydrazine	302012
Hydrochloric acid	7647010
Hydrocyanic acid	74908
Hydrogen bromide	10035106
Hydrogen fluoride	7664393
Hydrogen Selenide	7783075
Hydrogen sulfide	7783064
Hydroquinone	123319
Indeno[1,2,3,-cd]pyrene [PAH, POM]	193395
Iodine-131	24267569
Iron pentacarbonyl	13463406
Isocyanates	1125
Isophorone	78591
Isoprene, ex. from vegetative emission sources	78795

Substance	CAS Number**
Isopropyl Alcohol	67630
4,4'-Isopropylidenediphenol [POM]	80057
Lead	7439921
Lead compounds (inorganic)	1128
Lead acetate	301042
Lead chromate	7758976
Lead phosphate	7446277
Lead subacetate	1335326
Lead compounds (other than inorganic)	1129
Lindane (gamma-Hexachlorocyclohexane)	58899
Maleic anhydride	108316
Manganese	7439965
Manganese compounds	—
Mercuric chloride	7487947
Mercury	7439976
Mercury compounds, not elsewhere listed:	—
Methanol	67561
Methoxychlor [POM]	72435
Methyl bromide {Bromomethane}	74839
Methyl chloride {Chloromethane}	74873
Methyl chloroform {1,1,1-Trichloroethane}	71556
Methyl ethyl ketone {2-Butanone}	78933
Methyl hydrazine	60344
Methyl iodide {Iodomethane}	74884
Methyl isobutyl ketone {Hexone}	108101
Methyl isocyanate	624839
Methyl mercury {Dimethylmercury}	593748
Methyl methacrylate	80626
2-Methyl naphthalene [PAH, POM]	91576
Methyl tert-butyl ether	1634044
2-Methylaziridine {1,2-Propyleneimine}	75558
3-Methylcholanthrene [PAH-Derivative, POM]	56495
5-Methylchrysene [PAH-Derivative, POM]	3697243
4,4-Methylene bis (2-Chloroaniline)	101144
Methylene chloride {Dichloromethane}	75092
Methylene diphenyl isocyanate	101688
4,4-Methylenedianiline	101779

Substance	CAS Number**
2-Methyllactonitrile {Acetone cyanohydrin}	75865
2-Methylpyridine	109068
Michler's ketone [POM]	90948
Mineral fibers (manmade/non-manmade)	1136/1135
Molybdenum trioxide	1313275
Naphthalene	91203
Nickel	7440020
Nickel compounds, not elsewhere listed:	----
Nickel acetate	373024
Nickel carbonate	3333393
Nickel carbonyl	13463393
Nickel hydroxide	12054487
Nickel Oxide	1313991
Nickel refinery dust from the pyrometallurgical	1146
Nickel subsulfide	12035722
Nickelocene	1271289
Nitric Acid	7697372
Nitrilotriacetic acid	139139
Nitrobenzene	98953
4-Nitrobiphenyl [POM]	92933
6-Nitrochrysene [PAH-Derivative, POM]	7496028
2-Nitrofluorene [PAH-Derivative, POM]	607578
Nitrogen dioxide	10102440
Nitrogen mustard N-oxide	302705
4-Nitrophenol	100027
2-Nitropropane	79469
1-Nitropyrene [PAH-Derivative, POM]	5522430
p-Nitrosodiphenylamine [POM]	156105
N-Nitroso-N-methylurea	684935
N-Nitrosodi-n-butylamine	924163
N-Nitrosodi-n-propylamine	621647
N-Nitrosodiethanolamine	1116547
N-Nitrosodiethylamine	55185
N-Nitrosodimethylamine	62759
N-Nitrosomethylethylamine	10595956
N-Nitrosomorpholine	59892
N-Nitrosopiperidine	100754

Substance	CAS Number**
N-Nitrosopyrrolidine	930552
Ozone	10028156
PAHs, total, w/ind components reported	1150
PAHs, total, w/o ind components reported	1151
Parathion	56382
Particulate matter	----
PCBs (Polychlorinated biphenyls) [POM]	1336363
Pentachloronitrobenzene {Quintobenzene}	82688
Pentachlorophenol	87865
Peracetic acid	79210
Perchloroethylene {Tetrachloroethene}	127184
Perylene [PAH,POM]	198550
Phenanthrene [PAH, POM]	85018
Phenol	108952
p-Phenylenediamine	106503
2-Phenylphenol [POM]	90437
Phosgene	75445
Phosphine	7803512
Phosphoric Acid	7664382
Phosphorus	7723140
Phosphorus oxychloride	10025873
Phosphorus pentachloride	10026138
Phosphorus pentoxide	1314563
Phosphorus trichloride	7719122
Phthalic anhydride	85449
Polychlorinated dibenzo-p-dioxins	1085/1086
2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD}	1746016
1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM]	40321764
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM]	39227286
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM]	57653857
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM]	19408743
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469
1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin	3268879
Total Heptachlorodibenzo-p-dioxin [POM]	37871004
Total Hexachlorodibenzo-p-dioxin [POM]	34465468
Total Pentachlorodibenzo-p-dioxin [POM]	36088229
Total Tetrachlorodibenzo-p-dioxin [POM]	41903575

Substance	CAS Number**
Polychlorinated dibenzofurans {PCDF)	1080
2,3,7,8-Tetrachlorodibenzofuran [POM]	51207319
1,2,3,7,8-Pentachlorodibenzofuran [POM]	57117416
2,3,4,7,8-Pentachlorodibenzofuran [POM]	57117314
1,2,3,4,7,8-Hexachlorodibenzofuran [POM]	70648269
1,2,3,6,7,8-Hexachlorodibenzofuran [POM]	57117449
1,2,3,7,8,9-Hexachlorodibenzofuran [POM]	72918219
2,3,4,6,7,8-Hexachlorodibenzofuran [POM]	60851345
1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM]	67562394
1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM]	55673897
1,2,3,4,5,6,7,8-Octachlorodibenzofuran [POM]	39001020
Total Heptachlorodibenzofuran [POM]	38998753
Total Hexachlorodibenzofuran [POM]	55684941
Total Pentachlorodibenzofuran [POM]	30402154
Total Tetrachlorodibenzofuran [POM]	55722275
Polycyclic aromatic hydrocarbons	----
Polycyclic organic matter	----
Potassium bromate	7758012
1,3-Propane sultone	1120714
beta-Propiolactone	57578
Propionaldehyde	123386
Propoxur {Baygon}	114261
Propylene	115071
Propylene glycol monomethy ether	107982
Propylene glycol monomethyl ether acetate	108656
Propylene oxide	75569
Pyrene [PAH, POM]	129000
Pyridine	110861
Quinoline	91225
Quinone	106514
Radionuclides	1165
Radon and its decay products	1166
Reserpine [POM]	50555
Residual (heavy) fuel oils	----
Rockwool fibers	1168
Selenium	7782492
Selenium compounds, not elsewhere listed:	----

Substance	CAS Number**
Selenium sulfide	7446346
Silica, crystalline	1175
Silver	7440224
Silver compounds	----
Slagwool fibers	1181
Sodium dichromate	10588019
Sodium hydroxide	1310732
Strontium chromate	7789062
Styrene	100425
Styrene oxide	96093
Sulfates	----
Sulfur dioxide	7446095
Sulfuric Acid	7664939
Talc containing asbestiform fibers	1190
Terephthalic acid	100210
1,1,2,2-Tetrachloroethane	79345
2,3,4,6-Tetrachlorophenol	58902
Tetrachlorophenols	----
Thallium	7440280
Thallium Compounds	----
Thioacetamide	62555
Thiourea	62566
Titanium tetrachloride	7550450
Toluene	108883
Toluene diisocyanates, not elsewhere listed:	1204
Toluene-2,4-diisocyanate	584849
Toluene-2,6-diisocyantes	91087
o-Toluidine	95534
Toxaphene {Polychlorinated camphenes}	8001352
Tributyl phosphate	126738
1,2,4-Trichlorobenzene	120821
1,1,2-Trichloroethane {Vinyl trichloride}	79005
Trichloroethylene	79016
Trichlorofluoromethane {Freon 11}	75694
2,4,5-Trichlorophenol	95954
2,4,6-Trichlorophenol	88062
1,2,3-Trichloropropane	96184

Substance	CAS Number**
Triethyl phosphine	78400
Triethylamine	121448
Triethylene glycol dimethyl ether	112492
Trifluralin	1582098
Trimethyl phosphate	512561
1,2,4-Trimethylbenzene	95636
2,2,4-Trimethylpentane	540841
Triorthocresyl phosphate [POM]	78308
Triphenyl phosphate [POM]	115866
Triphenyl phosphite [POM]	101020
Urethane {Ethyl carbamate}	51796
Vanadium (fume or dust)	7440622
Vanadium Pentoxide	1314621
Vinyl acetate	108054
Vinyl bromide	593602

Substance	CAS Number**
Vinyl chloride	75014
Vinyl fluoride	75025
4-Vinylcyclohexene	100403
Vinylidene chloride	75354
Wood preservatives (arsenic and chromate)	1206
Xylene	1210
m-Xylene	108383
o-Xylene	95476
p-Xylene	106423
Zinc	7440666
Zinc compounds, not elsewhere listed:	——
Zinc oxide	1314132

**CAS Registry Number: The Chemical Abstracts Service Registry Number (CAS) is designation assigned by the American Chemical Society's Chemical Abstract Service and uniquely identifies a specific compound regardless of the name or naming system used.

Source: Engineering Division, Ventura County APCD, May 2000.

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