

(ff) **SMALL BUSINESS** means for BACT determination purposes only, any business which meets all of the following criteria:

- (1) the number of employees is 100 or less;
- (2) the total gross annual receipts are \$2,000,000 or less;
- (3) be privately held and not publicly traded;
- (4) not be a major stationary source;
- (5) be subject to Regulation XIII and not Rule 2005(RECLAIM); and
- (6) if legally affiliated with another business, the combined activities shall meet the above requirements

A facility is a major stationary source if it is subject to Regulation XXX - Title V Permits based on subdivision (a) of Rule 3001 - Applicability or is a major polluting facility as determined in this regulation.

(gg) **SOURCE** means any permitted individual unit, piece of equipment, article, machine, process, contrivance, or combination thereof, which may emit or control an air contaminant. This includes any permit unit at any non-RECLAIM facility and any device at a RECLAIM facility.

(hh) **SOUTHEAST DESERT AIR BASIN (SEDAB)** means that portion of the air basin containing specific desert portions of Los Angeles, Riverside and San Bernardino counties, as defined in Title 17, California Code of Regulations, Section 60109, within the jurisdiction of the District.

(ii) **VOLATILE ORGANIC COMPOUNDS (VOCs)** are as defined in Rule 102, means any volatile compound of carbon, excluding acetone, methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, ODCs, ethane, HFC-124, HFC-125, HFC-134, HFC-143a, HFC-152a and perfluorocarbons listed under 40 CFR 51.100 (c) and exempt compounds.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Environmental Assessment for:

- Proposed Amended Rules**
- 102 - Definition of Terms, Control of Perchloroethylene Emissions from Dry Cleaning Systems,
 - 1106.1 - Pleasure Craft Coating Operations,
 - 1151 - Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations,
 - 1171 - Solvent Cleaning Operations and
 - 1302 - Definitions (New Source Review)

June 1997

Deputy Executive Officer
Barry R. Wallerstein, D.Env.

AUTHORS: TARA TISOPULOS - AIR QUALITY SPECIALIST
MICHAEL KRAUSE - AIR QUALITY SPECIALIST

REVIEWED BY: JERI VOGE - DEPUTY DISTRICT COUNSEL
STEVE SMITH, PH.D. - PROGRAM SUPERVISOR
ANUPOM GANIGUL, PH.D. - SENIOR MANAGER

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT GOVERNING BOARD

Chairman: JON D. MIKELS
San Bernardino County Representative

Vice Chairman: WILLIAM A. BURKE, Ed D.
Speaker of the Assembly Appointee

MEMBERS:

MICHAEL D. ANTONOVICH
Los Angeles County Representative

MARVIN BRAUDE
Cities Representative, Los Angeles County, Western Region

CODY CLUFF
Governor's Appointee

NORMA J. GLOVER
Cities Representative, Orange County

MEE HAE LEE
Senate Rules Committee Appointee

RONALD O. LOVERIDGE
Cities Representative, Riverside County

LEONARD PAULITZ
Cities Representative, San Bernardino County

JAMES SIL VA
Orange County Representative

NELL SOTO
Cities Representative, Los Angeles County, Eastern Region

S. ROY WILSON
Riverside County Representative

EXECUTIVE OFFICER

JAMES M. LENTS, Ph.D.

TABLE OF CONTENTS

CHAPTER 1 - EXECUTIVE SUMMARY AND PROJECT DESCRIPTION

Introduction.....	1-1
Legislative Authority.....	1-1
Environmental Impact Analysis.....	1-1
Project Location.....	1-2
Project Description.....	1-3
Rule 102 - Definition of Terms.....	1-3
Rule 1302 - Definitions.....	1-6
Project Description Changes Since the Notice of Preparation and Initial Study.....	1-6
Rules 1106.1, 1151, and 1171.....	1-7

CHAPTER 2 - ENVIRONMENTAL CHECKLIST

Introduction.....	2-1
General Information.....	2-1
Potentially Significant Impact Areas.....	2-1
Determination.....	2-2
Environmental Checklist and Discussion.....	2-3

FIGURE 1 - 1: South Coast Air Quality Management District..... 1-3

APPENDIX A: Notice of Preparation and Initial Study

APPENDIX B: Responses to Comments Received on the Notice of Preparation and
Initial Study

APPENDIX C: Draft Rules 102, 1106.1, 1151, 1171 and 1302

APPENDIX D: Industries Contacted

APPENDIX E: Responses to Comments on the Draft EA

PREFACE

This document constitutes the Final EA for the proposed amendments to Rules 102, 1106.1, 1151, 1171 and 1302. The Draft EA was circulated for a 30-day public review and comment period. Two comment letters were received on the Draft EA and are included in Appendix E herein. Additions or deletions made between the Draft EA and the Final EA are noted using *italics* and *strikethrough*, respectively.

CHAPTER 1

EXECUTIVE SUMMARY AND PROJECT DESCRIPTION

- Introduction
- Legislative Authority
- Project Location
- Project Description
- Project Description Changes Since the Notice of Preparation/Initial Study

INTRODUCTION

Pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 *et seq.*), this document analyzes the potential environmental impacts of the proposed amendments to Rules 102 - Definition of Terms, 1106.1 - Pleasure Craft Coating Operations, 1151 - Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations, 1171 - Solvent Cleaning Operations, and 1302 - Definitions (New Source Review). Results of the analysis indicate that the proposed amendments are not expected to generate significant adverse impacts to any environmental areas.

This environmental assessment (EA) has been prepared pursuant to the South Coast Air Quality Management District's (SCAQMD) Certified Regulatory Program, Rule 110. Public Resources Code Section 21080.5 allows public agencies with certified regulatory programs to prepare an alternative document to an environmental impact report or negative declaration for the adoption of rules for use in a regulatory program. This environmental assessment (EA) was prepared in accordance with CEQA Guidelines Section 15252, and includes a description of the proposed activity, a determination that the project would not have any significant or potentially significant effects on the environment and an explanation of each environmental topic analyzed.

LEGISLATIVE AUTHORITY

Environmental Impact Analysis

The proposed amendments to Rules 102, 1106.1, 1151, 1171 and 1302 are a "project" as defined by CEQA. The SCAQMD is the lead agency for the project and has prepared the appropriate environmental analysis pursuant to its certified regulatory program (California Public Resources Code Section 21080.5). California Public Resources Code Section 21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report once the Secretary of the Resources Agency has certified the regulatory program. The SCAQMD's regulatory program, codified in Rule 110, was certified by the Secretary of the Resources Agency on March 1, 1989. Pursuant to Rule 110, the SCAQMD has prepared this Draft Environmental Assessment identifying no significant impacts for proposed amended Rules 102, 1106.1, 1151, 1171 and 1302.

CEQA requires that the potential environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, the

SCAQMD has prepared this Draft EA to address the potential environmental impacts associated with the proposed amendments to Rules 102, 1106.1, 1151, 1171, and 1302. Prior to making a decision on the proposed amendments, the SCAQMD Governing Board must review and certify the EA as providing adequate information on the potential adverse environmental impacts of the amended rule. Pursuant to state CEQA Guidelines Section 15252 (b)(2), no alternatives have been evaluated for the proposed project since there are no adverse impacts to avoid or minimize.

A Notice of Preparation and Initial Study was prepared pursuant to State CEQA Guidelines Section 15082 and released for the proposed amendments for a 30-day public review and comment period. The Notice of Preparation and Initial Study, along with comments received on these documents and written responses, are included as Appendix A. Since the release of the Notice of Preparation and Initial Study, information gathered by SCAQMD staff as well as public input received, suggests that there will not be any increased usage of perchloroethylene or HCFs as a result of the proposed amendments. Staff is, therefore, preparing this environmental assessment pursuant to these results.

PROJECT LOCATION

The South Coast Air Quality Management District (SCAQMD) has jurisdiction over an area of approximately 12,000 square miles (referred to hereafter as the district), consisting of the four-county South Coast Air Basin (Basin) and the Los Angeles County portion of the Mojave Desert Air Basin (MDAB) (formerly the Southeast Desert Air Basin (SEDAB)) and the Riverside County portions of the Salton Sea Air Basin (SSAB) (formerly part of the SEDAB). The Basin, which is a subarea of the district, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Los Angeles County portion of MDAB (known as the Antelope Valley) is bounded by the San Gabriel Mountains to the south and west, the Los Angeles/Kern county border to the north, and the Los Angeles/San Bernardino county border to the east. The Riverside county portion of the SSAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella-San Jacinto Planning Area) is a subregion of Riverside County and the SSAB that is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (see Figure 1).

In September 1996, the California Air Resources Board modified the geographical boundaries of several air districts, including the south coast district. A new south

coast district (currently titled Antelope Valley Air Pollution Control District) was formed as of January 1, 1997, and will become effective on July 1, 1997.

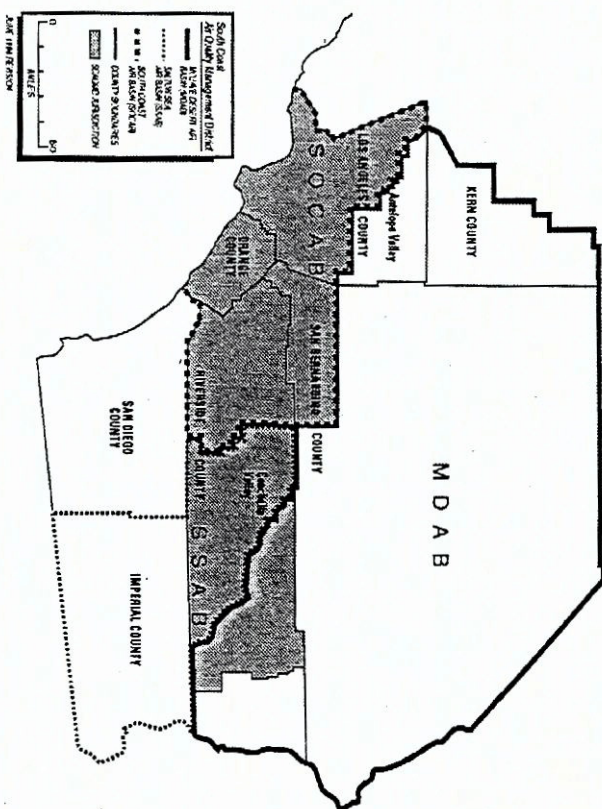


Figure 1
South Coast Air Quality Management District

PROJECT DESCRIPTION

Rule 102 - Definition of Terms

Rule 102 was first adopted in 1977 to define commonly used terms found in many AQMD Rules and Regulations. Rule 102 has been amended on several occasions to include additional pertinent terms or provisions or to revise existing definitions. The definitions in Rule 102 supersede all definitions found in any other SCAQMD Rules and Regulations. The addition of several compounds to the SCAQMD's definition of Exempt Compounds is now being proposed to incorporate federal changes made by

the U.S. EPA. EPA's exclusion of perchloroethylene as a volatile organic compound (VOC) was made March 8, 1996, because of the negligible photochemical reactivity associated with this compound. EPA's actions revised the VOC definition for purposes of preparing State Implementation Plans which demonstrate the attainment and maintenance of national ambient air quality standards (NAAQS) for ozone.

Perchloroethylene will be moved to SCAQMD's list of Group II Exempt Compounds. Inclusion in Group II means the compounds are not considered a VOC but that their usage "may be restricted in the future because they are either toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts." Exempting perchloroethylene as a VOC will not, therefore, limit SCAQMD's ability to regulate it under any other current or future rules or regulations. For example, the SCAQMD will continue to regulate perchloroethylene from dry cleaners under Rule 1421 - Control of Perchloroethylene Emissions from Dry Cleaners, and as a carcinogenic air contaminant under Rule 1402 - Control of Toxic Air Contaminants from Existing Sources.

Pursuant to the requirements of Rule 1171 (b)(5), a Clean Air Solvent (CAS) Certification Protocol has been developed. The protocol outlines the method of determining volatile organic compounds by gas chromatography, lists hazardous air pollutants and ozone depleting compounds, as well as compounds with global warming potentials. According to the protocol on how to obtain a clean air certificate, a clean air solvent will be 95% aqueous solution.

Perchloroethylene

Perchloroethylene (C_2Cl_4) is a colorless, nonflammable liquid at room temperature. It is commonly used in dry cleaning and degreasing operations, and as a maskant. It may also be used in paints and architectural coatings, adhesives, and has miscellaneous uses in the manufacture of aerosol spray paints and cleaners, pharmaceuticals, textiles, printing inks, and dielectric fluids for power transformers. Acute and chronic inhalation exposure to perchloroethylene results in central nervous system effects. Perchloroethylene is also classified as a *potential* carcinogen.

EPA conducted a laboratory testing program to investigate the ability of perchloroethylene to form photochemical smog. The study concluded that perchloroethylene was less reactive than equal concentrations of ethane. Ethane is the baseline or standard to which compounds are compared to determine their relative reactivity. The investigative details are contained in the EPA report "Photochemical Reactivity of Perchloroethylene" EPA-600/3-83-001, January 1983. This study led the Halogenated Solvents Industry Alliance (HSIA) to petition the EPA to include perchloroethylene in its definition of negligible photochemically reactive organic compounds.

EPA requested public input regarding the proposal to exempt perchloroethylene from the definition of VOC. The supporting EPA documents contained comments from eight entities, with most comments in support of the proposed action (61 FR 4588, No. 26, February 7, 1996). Two commentators suggested delaying or withdrawing the proposal until adequate protection of public health had been established through control of emissions of perchloroethylene from all sources. Perchloroethylene is listed as a Hazardous Air Pollutant (HAP) in section 112 of the Federal Clean Air Act and National Emission Standards for Hazardous Air Pollutants (NESHAPS) exist for perchloroethylene sources from dry cleaning (58 FR 49354, September 22, 1993), halogenated solvent cleaning (59 FR 61801, December 2, 1994), aerospace (60 FR 4548, September 1, 1995), and as a feedstock in the organic chemical manufacturing industry (59 FR 19402, April 22, 1994). Pursuant to the amended Clean Air Act Section 112(c), EPA will be issuing hazardous pollutant emissions standards for various other compounds including several other perchloroethylene sources through November 15, 2000.

The AQMD is currently regulating the usage of perchloroethylene through Rule 1421 - Perchloroethylene Emissions from Dry Cleaning Operations. In addition, since it is a *toxic air contaminant* ~~ethylene~~ it is regulated under Rule 1402 - Control of Toxic Air Contaminants from Existing Sources.

In addition, to perchloroethylene, EPA has also excluded 3,3-dichloro-1,1,2,2-pentafluoropropane (HCFC 225ca), 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC 225cb), and 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC-43-10mce) from the federal definition of volatile organic compound (VOC). These compounds are being excluded due to their low photochemical reactivity, similar to that of perchloroethylene.

HCFC 225 ca, HCFC 225 cb and HFC 43-10mce

HFC-43-10mce ($C_3H_2F_{10}$) is a colorless, nonflammable liquid, thermally stable up to 300°C (572 °F). HFC-43-10mce has a zero Ozone Depleting Potential (ODP) and a Global Warming Potential (GWP) of 0.25. This compound is considered a carcinogen with low-toxicity and an Acceptable Exposure Limit (AEL) of 200 ppm Time Weighted Average (TWA) concentration for 8 and 12 hour workdays and a 40-hour workweek. This compound causes slight skin and eye irritation and has a low acute inhalation toxicity. This compound is typically used as a cleaning and rinsing agent, drying fluid, lubricant, solvent, and heat transfer media.

EPA exempted these compounds from the definition of VOC in response to petitions made by two interested organizations. "In support of their petitions, these organizations supplied information on the photochemical reactivity of their individual compounds. This information consisted mainly of the rate constant for the reaction

of the compound with the hydroxyl (OH) radical. This rate constant $K_{OH}(\text{K-} \text{OH value})$ is commonly used as one measure of the photochemical reactivity of compounds. The petitioners compared the rate constants with that of other compounds which have already been listed as photochemically negligibly reactive (e.g., ethane which is the compound with the highest $K_{OH}(\text{K-} \text{OH value})$ that is currently reported as negligibly reactive)."¹

Based on information provided by the two organizations, EPA made the finding that HCFC 225ca, HCFC 225cb, and HFC-43-10mce are less photochemically reactive than ethane. On that basis EPA exempted these compounds from the federal VOC definition.

Based on EPA's findings regarding the photochemical reactivity of these compounds, the AQMD is proposing to list them under "exempt compounds" in Proposed Amended Rule 102. Listing *these compounds* as *an* exempt compounds would remove the products from the requirements associated with volatile organic compounds in AQMD Rules and Regulations. The reason being the low reactivity and reduced ability to form tropospheric ozone, which negatively affects public health and for which there is a National Ambient Air Quality Standard.

Rule 1302

Rule 1302 - Definitions, was originally adopted in 1979 to define commonly used terms specifically related to the SCAQMD's New Source Review Program. The change in the definition of Exempt Compounds discussed above will also be incorporated into Rule 1302 for the same reasons cited.

PROJECT DESCRIPTION CHANGES SINCE THE NOTICE OF PREPARATION/INITIAL STUDY

Several changes have been made to the proposed project since the release of the Notice of Preparation and Initial Study. In some cases, the changes were made as a result of suggestions received in public comment letters (see Appendix B), and other provisions were added for consistency between Rule 102 and other source-specific regulations.

The SCAQMD had originally proposed to remove the distinction between Group I and Group II compounds. The removal of this distinction would in essence remove the warning currently placed on Group II compounds that states the following: "The use of Group II compounds and/or carbon tetrachloride may be restricted in the future

¹ 61 Federal Register 52847 / Vol 61, No. 196 / Tuesday, October 8, 1996 / Rules and Regulation

because they are either toxic, potentially toxic, upper-atmosphere ozone depleters, or cause other environmental impacts." Staff is no longer proposing to remove the distinction between Group I and Group II exempt compounds because of the potential for significant adverse human health effects that could result.

Rules 1106.1, 1151 and 1171

The amendments proposed for these three rules will allow the use of cyclic branched, or linear, completely methylated siloxanes (VMS), and perchlorobenzotrifluoride (PCBT). These compounds were excluded from the federal definition of VOC in December 1994. These compounds were then listed by the SCAQMD as Group II Exempt Compounds in November 1995 due to the compounds' suspected toxicity. Since no data are currently available to refute the toxicity determination, these compounds will remain in Group II but their usage restriction will be lifted from the three source specific rules only. Rule 1171 is being amended to allow the use of perchloroethylene but it will be listed as a Group II compound as well.

These rule changes have been added since the release of the Notice of Preparation and Initial Study. Please refer to the Staff Report for Rule 102 for a complete description of these compounds. They are evaluated in Chapter 2 - Environmental Impacts, for any potential adverse impacts they may create.

CHAPTER 2

ENVIRONMENTAL CHECKLIST

- Introduction
- General Information
- Potentially Significant Impact Areas
- Determination
- Environmental Checklist and Discussion

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Name of Proponent: South Coast Air Quality Management District
 Address of Proponent: 21865 E. Copley Drive
 Diamond Bar, CA 91765
 Lead Agency: South Coast Air Quality Management District
 Contact Person: Tara Trisopulos (909) 396-3102
 Name of Project: Proposed Amended Rules 102, 1106.1, 1151, 1171, and 1302

POTENTIALLY SIGNIFICANT IMPACT AREAS

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

☐ Land Use and Planning	☐ Transp./Circ.	☒ Public Services
☐ Pop./Housing	☐ Biological Resources	☐ Solid Waste/Hazardous Waste
☐ Geophysical	☐ Energy/Mineral Resources	☐ Aesthetics
☒ Water	☒ Hazards	☐ Cultural Resources
☒ Air Quality	☐ Noise	☐ Recreation
	☒ Mandatory Findings	

2-1

071

May 1997

DETERMINATION

On the basis of this initial evaluation:

- ☒ I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline Section 15252, could NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because the mitigation measures described on an attached sheet have been added to the project. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.
- ☐ I find that the project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.

Date: April 11, 1997

Signature: Steve SmithSteve Smith, Ph.D.
Program Supervisor

2-2

072

May 1997

ENVIRONMENTAL CHECKLIST AND DISCUSSION

I. LAND USE AND PLANNING. *Would the proposal:*

	Potentially Significant Impact	No Impact
a) Conflict with general plan designation or zoning?	☐	☒
b) Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	☐	☒
c) Affect agricultural resources or operations (e.g. impacts to soils or farmlands, or impacts from incompatible land uses)?	☐	☒
d) Disrupt or divide the physical arrangements of an established community (including a low-income or minority community)?	☐	☒

Present or planned land uses in the jurisdiction of the SCAQMD will not be affected as a result of the proposed amendments. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered or affected by the proposed amended rules.

II. POPULATION AND HOUSING. *Would the proposal:*

	Potentially Significant Impact	No Impact
a) Cumulatively exceed official regional or local population projections?	☐	☒
b) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure)?	☐	☒
c) Displace existing housing, especially affordable housing?	☐	☒

Human population within the jurisdiction of the SCAQMD is anticipated to grow regardless of implementing the proposed amended rules. Further, the proposed amended rules are not expected to result in the creation of any industry that would affect population growth or distribution, or directly or indirectly induce the construction of single- or multiple-family units because the proposed amended rules would de-list from the definition of VOC several compounds that have been determined to be non-photochemically reactive and they would allow the usage of two Group II compounds that were previously restricted from three source specific rules only. No population relocation or growth inducement is expected from the proposed amended rule's implementation.

III. GEOPHYSICAL. *Would the proposal result in or expose people to potential impacts involving:*

	Potentially Significant Impact	No Impact
a) Seismicity: fault rupture, ground shaking, seiche or tsunami?	☐	☒
b) Landslides or mudslides?	☐	☒
c) Erosion, changes in topography or unstable soil conditions from excavation, grading or fill?	☐	☒
d) Subsidence of land?	☐	☒

The proposed amended rules would add perchloroethylene, and some HCFCs and HFC to the definition of Exempt Compounds, thereby exempting them from the definition of VOC. The amendments will also allow the usage of two Group II compounds that were previously restricted in three of SCAQMD's source specific rules only. The proposed amendments have no potential to disrupt or overcover soil, change topography or surface relief features, erode beach sand, or change existing siltation rates because the proposed actions will not necessitate changes or alterations to existing land uses or existing industrial or commercial facilities. In addition, the proposed amendments will not expose people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards.

IV. WATER. *Would the proposed result in:*

	Potentially Significant Impact	No Impact
a) Changes in adsorption rates, drainage patterns, or the rate and amount of surface runoff?	☐	☒
b) Exposure of people or property to water related hazards such as flooding?	☐	☒
c) Discharge into surface waters or other alteration of surface water quality (e.g. temperature, dissolved oxygen or turbidity)?	☐	☒
d) Changes in the amount of surface water in any water body?	☐	☒
e) Changes in currents, or the course or direction of water movements?	☐	☒
f) Change in the quantity of ground waters, either through direction additions or withdrawals, or through interception of an aquifer by cuts or excavations?	☐	☒
g) Altered direction or rate of flow of groundwater	☐	☒
h) Impacts to groundwater quality?	☐	☒
i) A need for new water treatment, distribution, sewer or storm water drainage systems?	☒	☐

The Notice of Preparation and Initial Study identified potential water quality impacts from the increased usage of perchloroethylene which could result in the disposal of this compound in the sewer system. Changes made to the proposed project since the release of the Notice of Preparation and Initial Study have rendered this potential impact insignificant. Potential impacts had previously been identified as a result of the possibility of increased usage of perchloroethylene upon it being exemplified as a VOC. By changing the date when de-halising perchloroethylene becomes effective to coincide with the effective date of the federal National Emission Standard for Hazardous Air Pollutants (NESHAPs) for degreasing operations, the largest source with the greatest potential for switching to perchloroethylene, are no longer expected to make this switch because of the stringent perchloroethylene control requirements in the NESHAP. Further, additional information has been identified indicating that other potential sources are not likely to increase perchloroethylene emissions. Please refer to the "Air Quality" section of this chapter for a more complete discussion

2-5

075

May 1997

regarding why there is no anticipated increased usage of perchloroethylene associated with the proposed amendments.

Local sanitation districts currently require that water entering the sewer system contain less than 5.0 milligrams per liter (mg/L) of perchloroethylene. Any discharge over this amount would not be accepted by local sanitation districts. Proper disposal of this wastewater, therefore, may be accomplished by use of a clarifier, incinerator, or by shipping it to a waste site which accepts hazardous materials. Facilities using perchloroethylene can contract with licensed waste handlers to remove any wastewater containing greater than 5.0 mg/L so that it can be treated and disposed of properly. Although not likely, even if there was increased usage of perchloroethylene associated with the proposed amendments, it is not expected that the wastewater would be disposed of in local sewer systems. Consequently, adverse impacts to local sanitation districts are not anticipated.

The proposed amendments will not alter existing discharge characteristics at affected facilities and are not expected to result in an increased amount of perchloroethylene being disposed of in the sewer systems. Therefore, water quality impacts associated with the proposed project remain insignificant with no mitigation necessary.

V. AIR QUALITY. *Would the proposal:*

	Potentially Significant Impact	No Impact
a) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☒
b) Expose sensitive receptors to pollutants?	☒	☐
c) Alter air movement, moisture, or temperature, or cause any change in climate?	☐	☒
d) Create objectionable odors?	☐	☒
e) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)	☐	☒

The Notice of Preparation and Initial Study prepared for the proposed project identified the increased usage of perchloroethylene and several HFCs as a potentially significant air quality impact associated with the proposed project. Since the release of the Notice of Preparation and Initial Study, however, several changes have been made to the project which alter this potential finding to insignificance. In addition, three rules have been added to the

2-6

076

May 1997

proposed project which will also be evaluated herein. The following paragraphs highlight the various amendments and why they will not result in a significant adverse air quality impacts.

De-listing of Perchloroethylene

The SCAQMD has evaluated the potential for increased usage of perchloroethylene as a result of the proposed amendments. Although the amendments will exempt perchloroethylene as a VOC, it will continue to be regulated as a toxic air contaminant (TAC) by the SCAQMD and other regulating authorities. In addition, there are many liability, safety and disposal issues surrounding the usage of perchloroethylene which preclude its usage by many sources contacted by the SCAQMD. The following discussion highlights the various source categories that can use perchloroethylene in their processes. Please refer to Appendix D for a complete listing of industries contacted regarding potential future usage of perchloroethylene.

Dry Cleaning Operations

Perchloroethylene is currently used in dry cleaning operations, degreasing operations, chemical milling operations, chemical maskant operations, and some consumer products. Dry cleaners are the biggest source of perchloroethylene usage and are currently regulated under SCAQMD Rule 1421 - Perchloroethylene Emissions From Dry Cleaning Operations, which is in the process of being amended for consistency with the federal NESHAPs. Due to the fact that perchloroethylene is already being used by dry cleaners, it is currently regulated by Rule 1421 and is regulated as a TAC under Rule 1402, it is not expected that perchloroethylene usage will increase as a result of the proposed project at this source category. Perchloroethylene is already being used at dry cleaning facilities so de-listing it as a VOC is not expected to result in increased usage from this source. Further, perchloroethylene is currently regulated under Rule 1421 - Control of Perchloroethylene Emissions from Dry Cleaning Systems, Rule 1402 - Control of Toxic Air Contaminants from Existing Sources and is subject to the Dry Cleaner NESHAPs (as of September 1996), therefore, perchloroethylene usage is controlled to the extent that adverse human health effects are not likely as a result of the proposed project.

Degreasing Operations

Degreasing operations are considered another large usage of perchloroethylene. The chemical is used to remove contaminants from various types of metal and plastic substrates. The U.S. EPA has promulgated a NESHAP for degreasing operations that went into effect for new facilities in 1993. In December 1997, the Degreasing NESHAPs for degreasing operations becomes effective for existing sources. The SCAQMD is currently working on

amendments to Rule 1122 - Solvent Degreasers, to incorporate the provisions of the federal NESHAPs in order to demonstrate equivalency.

Changes to the proposed project have been made subsequent to the release of the Notice of Preparation and Initial Study which directly impact this source category. The proposed project was previously intended to exempt perchloroethylene as a VOC effective immediately upon adoption. This implementation date, however, would have allowed degreasing operations to proceed without any equivalent regulations controlling perchloroethylene until December 1997. This means the perchloroethylene usage could have increased at this source category prior to the December 1997 date for the degreaser NESHAPs. The SCAQMD has, therefore, changed its project to include an implementation date of December 1997 for the de-listing of perchloroethylene. The change in implementation date is an air quality benefit in comparison to the previously proposed project in that it prevents this compound from being unregulated during the period of time between the proposed project's adoption and the implementation of the NESHAPs. In addition, it allows the SCAQMD the opportunity to extend its public outreach efforts in order to ensure that there is public awareness regarding the NESHAPs and that perchloroethylene will continue to be regulated as a TAC.

Since the SCAQMD has changed its implementation date for the de-listing of perchloroethylene as a VOC, there are no adverse air quality impacts anticipated from this source category.

Chemical Milling and Chemical Processing Maskants

SCAQMD Rule 1124 - Aerospace Assembly and Component Manufacturing Operations, currently exempts perchloroethylene as a VOC in its applications, which includes chemical processing maskants. Therefore, the de-listing of perchloroethylene will not encourage an increase in usage from this source category because perchloroethylene can already be used. There is currently a NESHAP for aerospace manufacturing and rework that will take effect in 1998. It is not expected that any applicable sources will choose to reformulate their processes as a result of the amendments as they would have very few months until they would be subject to the federal NESHAPs.

There are currently four chemical milling facilities operating in the district. Of these four, two have already installed add-on pollution control equipment consisting of carbon adsorption, so even if they did increase their usage of perchloroethylene, it would be effectively controlled. The other two facilities have already reformulated their processes to compliant water-based products that do not include perchloroethylene. There is no indication that these facilities would want to convert their processes back to perchloroethylene.

² Currently Rule 1421 is at least as stringent as the NESHAP.

Miscellaneous Perchloroethylene Source Categories

Several other source categories were identified by SCAQMD as potentially converting to perchloroethylene after its de-listing as a VOC. Categories examined include the following: various coating formulations, textiles, film processing, various printing inks, adhesive applications, electronic manufacturing, etc. Staff performed a phone survey of various coating manufacturers to determine whether or not these sources would formulate their products with perchloroethylene. In all cases, staff did not find any evidence to support an increase in usage of perchloroethylene due to its de-listing as a VOC. Most industries contacted stated that there were too many liability issues (worker safety, odor, liability, etc.) associated with the compound to make it a viable option for conversion. In many cases, industry contacts were either happy with their current formulations or had already installed add-on pollution control equipment. Please refer to Appendix B for a detailed list of industries contacted for this assessment.

Parachlorobenzotrifluoride (PCBTf)

PCBTf is slightly irritating to the eyes and barely irritating to the skin. Intended uses of PCBTf include industrial solvent cleaning, aerosols, adhesives, coatings and inks. Under these applications, the major routes of exposure are considered to be through the skin and by inhalation. The estimated oral LD50 for rats greater than 6.8 grams per kilogram (g/kg); the acute dermal toxicity (LD50) value is greater than 2.7 g/kg in rabbits. The acute inhalation toxicity LD50 is 4,479 ppm.

PCBTf is not absorbed into the body to any appreciable extent. Most of the material is either inhaled and immediately exhaled or excreted. Even the very small quantities that are assimilated are converted to non-toxic water soluble products and excreted. Only at very high concentration levels (>250 ppm) of prolonged exposures (>90 days) of PCBTf was slight liver damage observed. Animal studies indicate that PCBTf is not a reproductive toxin.

Neither CAPCOA nor the USEPA has developed non-cancer health standards for acute or chronic exposure to PCBTf. PCBTf is not listed by the State of California under Proposition 65 as a reproductive toxin. Neither IRAC nor the USEPA has classified PCBTf for carcinogenicity. PCBTf is not listed by the State of California under Proposition 65 as a carcinogen and have not been identified by the CARB as a TAC under AB 1807. PCBTf is not listed under AB 2588 "Air Toxics Hot Spots" Program. In spite of the fact that PCBTf is not on any lists, more evidence is needed to determine that PCBTf is a toxic. Until such information is submitted to the SCAQMD, PCBTf will remain in the Group II exempt compound category.

No increase usage of PCBTf is expected from the pleasure craft coating, motor vehicle coating or solvent cleaning operations which are the three specific source SCAQMD rules

2-9

079

May 1997

that the removal of the restriction will occur. Considering that the usage's of PCBTf are likely to be specialized and limited, as indicated in the above paragraph, the removal of the restriction on PCBTf is not likely to cause any adverse toxicological impacts.

Please refer to the October 1995 Final EA for Rule 102 for additional information regarding the usage of PCBTf.

Volatile Methyl Siloxanes (VMS)

VMS comprise a large family of compounds with a basic structure of alternating silicon and oxygen atoms with only methyl groups as functional groups, $\sim(\text{CH}_3)_2\text{SiO}\sim$. VMS can be linear, cyclical or branched compounds.

Of the VMS family, only octamethylcyclotetrasiloxane, a cyclical VMS, has been studied extensively. Direct contact with octamethylcyclotetrasiloxane may cause temporary skin discomfort with mild redness. A single prolonged exposure (24 to 48 hours) to octamethylcyclotetrasiloxane causes no known adverse effects. Prolonged vapor overexposure may cause increased liver size. The degree of change, if any, will depend on the concentration and duration of exposure. Repeated swallowing of large amounts may increase liver size.³

Laboratory rodents repeatedly exposed to octamethylcyclotetrasiloxane and decamethylcyclopentasiloxane by inhalation and ingestion developed increased liver weight compared with unexposed control animals. The effect was reversible when dosing was stopped after 90 days. No gross or histopathological liver effects were noted. Further studies indicated no liver effects with guinea pigs or rabbits and that the rodent liver enlargement by octamethylcyclotetrasiloxane was due to an increased number of liver cells that appeared to be normal.⁴

VMS is a potential replacement for ODC and VOC materials in paints, consumer products and cold solvent cleaners. VMS has not been shown to be carcinogenic or cause chronic health effects. Neither CAPCOA nor the USEPA has developed non-cancer health standards for acute or chronic exposure to VMS. VMS is not listed by the State of California under Proposition 65 as a carcinogen and has not been identified by the CARB as a TAC under AB 1807. VMS is not listed under AB 2588 "Air Toxics Hot Spots" Program.⁵

³ Petition for the Exemption of VMS from Regulation Under the Clean Air Act as Precursors to Tropospheric Ozone, submitted to the USEPA by Dow Corning Corporation, Vol. 2 of 3, Dec 11, 1993, Exhibit B, MSDS for Dow Corning® 244 Fluid.

⁴ Ibid.

⁵ Ibid.

2-10

080

May 1997