



# COUNTY OF SAN DIEGO

## AIR POLLUTION CONTROL DISTRICT

### AIR POLLUTION CONTROL BOARD

GREG COX

First District

DIANNE JACOB

Second District

PAM SLATER-PRICE

Third District

RON ROBERTS

Fourth District

BILL HORN

Fifth District

**DATE:** May 23, 2007

**TO:** San Diego County Air Pollution Control Board

**SUBJECT:** ADOPTION OF RULE 67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS AND RULE 67.6.2 – VAPOR DEGREASING OPERATIONS AND REPEAL OF EXISTING RULE 67.6 – SOLVENT CLEANING OPERATIONS (District: All)

### SUMMARY:

#### Overview

It is requested that the Air Pollution Control Board adopt proposed new Rules 67.6.1 – Cold Solvent Cleaning and Stripping Operations, 67.6.2 – Vapor Degreasing Operations and repeal existing Rule 67.6 – Solvent Cleaning Operations. Rule 67.6 regulates the use of organic compounds in solvent cleaning operations, including vapor degreasing, cold solvent degreasing and paint stripping operations. The Air Pollution Control District proposes to replace Rule 67.6 with two new rules, one for cold solvent degreasing and stripping operations (Rule 67.6.1) and another for vapor degreasing operations (Rule 67.6.2). Proposed Rule 67.6.1 will impose more stringent emission standards for cleaning materials for the majority of cold cleaning operations. Proposed Rule 67.6.2 will not introduce any new emission standards to vapor degreasing operations but will provide an additional option for compliance with the existing emission limits. The operational and equipment requirements of the new rules will remain similar to those of the existing Rule 67.6. Both new rules will also clarify and restructure existing requirements.

The new rules will apply to approximately 3,640 cold solvent cleaners, 10 stripping operations and 37 vapor degreasers in San Diego County located at just over 2,000 businesses. If implemented, the rules will result in a reduction of approximately 250 tons per year of volatile organic compounds emissions.

Proposed Rules 67.6.1 and 67.6.2 fulfill the District's commitment in the Regional Air Quality Strategy to implement all feasible control measures to reduce air pollution as required by State law. After adoption, the rules will be submitted to the Environmental Protection Agency for inclusion in the federal State Implementation Plan. Existing operations will have 12 months to comply with the new emission control requirements or additional compliance options of Rules 67.6.1 and 67.6.2. Current Rule 67.6 will be repealed 12 months after the adoption of new rules. Once Rules 67.6.1 and 67.6.2 become

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effective, Rule 67.6 will no longer apply to new solvent cleaning operations.

**Recommendation(s)**

**AIR POLLUTION CONTROL OFFICER**

1. Find, on the basis of the whole record, that there is no substantial evidence that the project will have a significant effect on the environment. Consider the Initial Study and Negative Declaration together with comments received during public review, and adopt it, finding that it reflects the independent judgment and analysis of the Air Pollution Control Board.
2. After adopting the Negative Declaration, adopt a resolution entitled Resolution Repealing Existing Rule 67.6 - Solvent Cleaning Operations and Adding New Rules 67.6.1 – Cold Solvent Cleaning and Stripping Operations and 67.6.2 – Vapor Degreasing Operations to Regulation IV of the Rules and Regulations of the San Diego County Air Pollution Control District, and make appropriate findings:
  - (i) of necessity, authority, clarity, consistency, non-duplication and reference as required by Section 40727 of the State Health and Safety Code;
  - (ii) that adopting Rule 67.6.1 and Rule 67.6.2 and repealing Rule 67.6 will alleviate a problem and will promote attainment of ambient air quality standards (Section 40001 of the State Health and Safety Code);
  - (iii) that an assessment of socioeconomic impacts of the proposed new Rule 67.6.1, as required by Section 40728.5 of the State Health and Safety Code, has been prepared and has been made available for public review and comment, and that the socioeconomic impacts of the proposed new rules have been actively considered and the District has made a good faith effort to minimize adverse socioeconomic impacts;
  - (iv) that an analysis comparing Rules 67.6.1 and 67.6.2 with applicable requirements of federal and local regulations has been prepared pursuant to the State Health and Safety Code Section 40727.2;
  - (v) that an analysis of the incremental cost-effectiveness of new Rule 67.6.1 including an analysis of the cost-effectiveness of the potential control options has been conducted pursuant to the State Health and Safety Code Section 40920.6, and that the proposed rule emission limits represent the most cost-effective option.
3. Approve the Certificate of Fee Exemption for No Impact Finding exempting the District from payment of fees to the California Department of Fish and Game.

**SUBJECT:** ADOPTION OF RULE 67.6.1 - SOLVENT CLEANING AND STRIPPING OPERATIONS AND RULE 67.6.2 – VAPOR DEGREASING OPERATIONS AND REPEAL OF RULE 67.6 - SOLVENT CLEANING OPERATIONS.(District: All)

**Fiscal Impact**

The recommended adoption of new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6 will not have a significant fiscal impact on the Air Pollution Control District. Proposed new rules will replace current Rule 67.6, and therefore will be enforced with existing staff. Full cost recovery is expected through the District’s Operational Permit Program.

**Business Impact Statement**

Proposed new Rule 67.6.1 will affect businesses that conduct cold solvent cleaning operations. The vast majority of these operations take place in auto repair shops (approximately 80% of the total sources) that are small businesses. The most affordable cleaning materials with a low volatile organic compound content are water-based, and using them requires replacement of existing solvent cleaning equipment because it is not water-compatible. To assess the impacts of proposed Rule 67.6.1 on businesses, the Air Pollution Control District has estimated the costs associated with the rule implementation and its cost-effectiveness and conducted a Socioeconomic Impact Assessment of the rule. It showed that the additional cost for affected businesses is between \$374 and \$620 per year. Therefore, the effect on all existing businesses in the County including small business will be minimal.

Proposed new Rule 67.6.2 will not have any impact on the business community because it has the same emission control standards and work practice requirements as current Rule 67.6. Only some exemptions and compliance options are added.

**Advisory Board Statement**

There was no quorum at the Air Pollution Control Advisory Committee meeting. The members present recommended adopting proposed new Rules 67.6.1 and 67.6.2 and repealing existing Rule 67.6 at the April 11, 2007, meeting.

**BACKGROUND:**

San Diego County does not attain the State air quality standards or the new federal eight-hour air quality standards for ozone. Volatile organic compounds (VOC) are ozone precursors. Current Rule 67.6 (Solvent cleaning Operations) regulates the use of VOCs and other organic compounds in solvent cleaning operations, such as vapor degreasing, cold solvent cleaning, and paint stripping operations. The rule was first adopted in 1979 and last revised in 1990. It controls VOC and exempt compound emissions including toxic air contaminants and VOC-exempt chlorinated fluorocarbons that deplete stratospheric ozone. The rule was approved by the Environmental Protection Agency (EPA) and is included in the State Implementation Plan.

While current Rule 67.6 minimizes VOC emissions by imposing equipment standards and work practice requirements, it does not reflect recent advances in low-emitting solvents, aqueous-based cleaners, and emission control systems that are being implemented in other California air districts. In addition, the San Diego County Regional Air Quality Strategy and State law require

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the Air Pollution Control District (District) to implement all feasible control measures to reduce VOC emissions.

Proposed new Rule 67.6.1 applies to all cold solvent cleaning or stripping operations conducted in a tank, drum or other container. It has several requirements and exemptions identical to current Rule 67.6. As in the current rule, the new rule exempts cleaning of coating application equipment, dry cleaning operations and stripping and wipe cleaning operations that are covered under other District rules. It also contains the current exemptions for small cold solvent cleaning or stripping operations and degreasers used exclusively for educational purposes. The operational and equipment requirements of Rule 67.6.1 are also similar to those of the existing rule.

However, proposed new Rule 67.6.1 will restrict the VOC content of cleaning materials for the majority of cold solvent cleaning operations to 50 grams/liter (g/l) and will remove exemptions for pre-1990 operations using exempt chlorinated fluorocarbons and toxic air pollutants. To comply with the new VOC limits, facilities may choose cleaning materials formulated with water or exempt compounds, or a combination of both. Facilities using water-based cleaning materials with a VOC content of 50 grams/liter or less will be exempt from all Rule 67.6.1 requirements and will only need to keep records of the VOC content of solvents they are using. Facilities using cleaning materials formulated with exempt compounds must also comply with equipment and work practice requirements. Cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components is exempt from the 50 g/l VOC content limit. However, facilities conducting these operations must also comply with the equipment and operational requirements of the rule.

Proposed new Rule 67.6.2 applies to vapor degreasing operations. The rule requirements are generally identical to those of current Rule 67.6 with a few additional exemptions. It exempts vapor degreasers using a water-based solvent with a VOC content of 50 g/l or less from all requirements. Vapor-phase solder reflow units will also be exempt because their design is substantially different from vapor degreasers. In addition to existing work practice requirements Rule 67.6.2 provides several control options to the operators of vapor degreasers such as an enclosed cover system, a freeboard ratio of 1.0, or a refrigerated freeboard chiller.

Both rules remove previously regulated equipment, such as conveyORIZED cold- and vapor degreasers and gas-path cleaners that do not presently operate in San Diego County. Any new such equipment operating in the future will be subject to the District's New Source Review Rules. Existing facilities conducting cold solvent cleaning or vapor degreasing operations must comply with new rule requirements within 12 months after the date of adoption. New facilities must comply with applicable rules at the time of installation and startup.

Representatives of United States Marine Corps' Camp Pendleton have contacted the District regarding the proposed rule requirement to use low VOC content cleaning materials. They stated that such materials while presently available and suitable for cleaning of small arms and

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weapons, do not comply with military specifications. They further stated that it can take between one and two years to develop a new military specification complying with Rule 67.6.1. Different strategies that could be used to comply with the new rule requirements were discussed with these representatives. It was agreed that Camp Pendleton will initiate a process as soon as possible to revise the military specification for the solvents used for cleaning small arms. If the specification is not approved by the date of the final rule compliance, Camp Pendleton will file a petition to the District Hearing Board for a variance from an applicable section of Rule 67.6.1. In such case, the District will consider all relevant information related to the revision of military specification for small arms and weapons cleaning and make a recommendation to the Hearing Board regarding the variance request.

Proposed new Rules 67.6.1 and 67.6.2 will be submitted to the Environmental Protection Agency for approval in the State Implementation Plan. Current Rule 67.6 will be repealed 12 months after adoption of new rules to provide affected facilities with sufficient time to comply with new emission standards.

On July 11, 2006, the District held a public workshop to discuss and receive comments on the proposed rules.

#### **Compliance with Board Policy on Adopting New Rules**

On February 2, 1993 (APCB #2), the Board directed that, with the exception of a regulation requested by business or a regulation for which a socioeconomic impact assessment is not required, no new or revised regulation shall be implemented unless specifically required by federal or State law. Proposed Rules 67.6.1 and 67.6.2 are required by state law. Therefore the proposed rule adoption is consistent with this Board directive.

#### **Socioeconomic Impact Assessment**

Section 40728.5 of the State Health and Safety Code requires the District to perform an assessment of the socioeconomic impacts when adopting, amending or repealing a rule that will significantly affect air quality or emission limitations.

New Rule 67.6.1 will affect emission limitations by introducing more stringent VOC emission standards for cold solvent cleaning operations. New Rule 67.6.2 does not revise emission standards for vapor degreasing operations specified by the existing rule and therefore is not subject to this requirement of the Health and Safety Code.

A Socioeconomic Impact Assessment was prepared for proposed Rule 67.6.1. It is expected that the majority of businesses conducting cold solvent cleaning operations will choose to comply with Rule 67.6.1 by replacing solvent-based cleaning materials with water-based materials. In most cases it will require the installation of new water-compatible cleaning equipment and some process adjustments such as heating of cleaning solutions. Several compliance scenarios and the cost of equipment and cleaning materials replacement were evaluated based on information from manufacturers and vendors of solvent cleaning equipment. It was shown that the additional cost

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of the proposed rule for affected businesses will be between \$374 and \$620 per year. It is expected that the businesses will pass the added costs of replacing existing equipment on to their customers. The financial impact on customers is expected to be minimal. Therefore, it is not anticipated that proposed Rule 67.6.1 will have any significant impacts on the regional economy or on small businesses in San Diego County.

### **Comparison to Existing Requirements**

Prior to adopting, amending, or repealing a rule or regulation, Section 40727 of the State Health and Safety Code requires findings of necessity, authority, clarity, consistency, non-duplication, and reference. As part of the consistency finding to ensure proposed new rule requirements do not conflict with or contradict other District or federal regulations, Health and Safety Code Section 40727.2 requires the District to perform a written analysis identifying and comparing the air pollution control standards and other provisions of proposed new Rules 67.6.1 and 67.6.2 with existing or proposed District rules and guidelines and existing federal rules, requirements, and guidelines applying to the same source category.

Currently, solvent cleaning operations are regulated by District Rule 67.6 - Solvent Cleaning Operations. There are no contradictions between this rule and new proposed rules. Once new Rules 67.6.1 and 67.6.2 become effective, Rule 67.6 will no longer apply to new solvent cleaning operations. Existing operations will have 12 months to comply with the new emission control requirements of Rules 67.6.1 and 67.6.2. Current Rule 67.6 will be repealed 12 months after the adoption of new rules.

The requirements of new Rules 67.6.1 and 67.6.2 have also been compared to the federal Control Technique Guideline (Control of Volatile Organic Emission from Solvent Metal Cleaning), federal National Emissions Standards for Hazardous Air Pollutants for Halogenated Solvent Cleaning and the District's New Source Review Best Available Control Technology requirements. It was shown that there are no contradictions between new proposed rules and the existing federal or District regulations.

### **Incremental Cost-Effectiveness Analysis**

Section 40920.6 of the State Health and Safety Code requires the District prior to adopting a rule or regulation reflecting all feasible emission control measures to consider alternative methods of complying with the rule requirements and identify one or more potential control options which achieves the emission reduction objectives of the proposed rule. Section 40920.6 also specifies that the District must calculate the incremental cost-effectiveness for the potential control options, and consider and review in a public meeting the effectiveness of the proposed control option and the incremental cost-effectiveness between the potential control options.

Rule 67.6.1 implements all feasible emission control measures to reduce emissions of air pollutants as mandated by the State Health and Safety Code. The rule requires the majority of cold solvent cleaning operations to use low VOC content solvents. It also includes two alternative control options that will achieve the same emission reduction objectives. These

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options would require installation of add-on emission control systems or airless/airtight degreasers in lieu of existing batch loaded cold solvent cleaners and remote reservoir cleaners. However, while both options achieve slightly higher VOC emission reductions they are very costly in terms of both absolute and incremental cost-effectiveness. The incremental cost analysis showed, for example, that an absolute cost-effectiveness and an incremental cost-effectiveness of replacing a batch loaded cold solvent cleaner by an airless degreaser are, correspondingly, \$59 and \$3,246 per pound of VOC reduced. This compares to \$3.32 per pound of VOC reduced for conversion from a solvent-based to a water-based batch loaded cold solvent operation.

Therefore, the emission reduction strategy proposed in Rule 67.6.1 can be considered the most cost-effective option for reducing VOC emissions from cold solvent cleaning operations.

### **Environmental Statement**

The District prepared an Initial Study pursuant to the California Environmental Quality Act to determine whether there is any evidence that adopting new Rules 67.6.1 and 67.6.2 and repealing existing Rule 67.6 may have a significant environmental impact. The Initial Study revealed no substantial evidence that such actions may have a significant effect on the environment, and based on initial findings, a proposed Negative Declaration was prepared. The District published the Notice of Intent to adopt the Negative Declaration and solicited comments during a 30-day review period. No public comments were received.

The California Environmental Quality Act requires the Board to review the Initial Study, Negative Declaration, and any comments received. The Board must certify that the Negative Declaration reflects the Board's independent judgment of potential environmental consequences resulting from the proposed adoption of new Rules 67.6.1 and 67.6.2 and repeal of Rule 67.6.

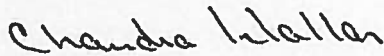
Additionally, the District has prepared a Certificate of Fee Exemption for No Impact Finding pursuant to California Code of Regulations, Title 14, Section 753.5(c). The District will be exempted from payment of fees to the California Department of Fish and Game for reviewing the Negative Declaration if the Board finds, after considering the Initial Study and the record as a whole, that the proposed adoption of new Rules 67.6.1 and 67.6.2 and repeal of Rule 67.6 will have no adverse effect on wildlife resources or the habitat on which the wildlife depends, and the Board finds, on the basis of substantial evidence, that the presumption of adverse effect in California Code of Regulations, Title 14, Section 753.5(d) has been rebutted. It is recommended that the Board make such findings.

### **Linkage to the County of San Diego's Strategic Plan**

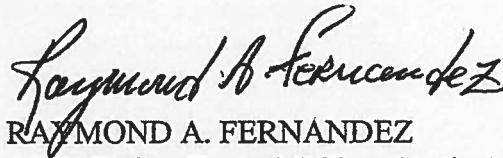
The County's five-year strategic plan includes an Environmental Initiative to ensure environmental preservation and enhance quality of life. New Rules 67.6.1 and 67.6.2 will reduce emissions of toxic air contaminants and volatile organic compounds that participate in smog formation and will fulfill the objective to improve air quality, thus protecting public health.

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Respectfully submitted,



CHANDRA L. WALLAR  
Deputy Chief Administrative Officer



RAYMOND A. FERNANDEZ  
Air Pollution Control Officer (Acting)

**ATTACHMENTS:**

- Attachment A - Negative Declaration and Initial Study prepared pursuant to the California Environmental Quality Act
- Attachment B - Resolution titled Resolution Adopting the Negative Declaration for repeal of existing Rule 67.6 – Solvent Cleaning Operations, and adding new Rule 67.6.1 – Cold Solvent Cleaning and Stripping Operations and new Rule 67.6.2 – Vapor Degreasing Operations
- Attachment C - Resolution titled Resolution repealing existing Rule 67.6 – Solvent Cleaning Operations, and adding new Rules 67.6.1 – Cold Solvent Cleaning and Stripping Operations and 67.6.2 – Vapor Degreasing Operations to Regulation IV of the Rules and Regulations of the San Diego County Air Pollution Control District
- Attachment D - Change Copy of Rule 67.6
- Attachment E - Workshop Report
- Attachment F - Socioeconomic Impact Assessment of new Rule 67.6.1
- Attachment G - Comparative Analysis for Rules 67.6.1 and 67.6.2
- Attachment H - Certificate of Fee Exemption for No Impact Finding



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**AGENDA ITEM INFORMATION SHEET**

**CONCURRENCE(S)**

<b>COUNTY COUNSEL REVIEW</b>	<input checked="" type="checkbox"/> Yes	11) 5/9/07
Written disclosure per County Charter		
Section 1000.1 required	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>GROUP/AGENCY FINANCE DIRECTOR</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> N/A
<b>CHIEF FINANCIAL OFFICER</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> N/A
Requires Four Votes	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<b>GROUP/AGENCY INFORMATION TECHNOLOGY DIRECTOR</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> N/A
<b>CHIEF TECHNOLOGY OFFICER</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> N/A
<b>DEPARTMENT OF HUMAN RESOURCES</b>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> N/A

**Other Concurrence(s):** N/A

**ORIGINATING DEPARTMENT:** Air Pollution Control District, County of San Diego

**CONTACT PERSON(S):**

Raymond A. Fernandez  
Name  
(858) 586-2700  
Phone  
(858) 586-2701  
Fax  
0176  
Mail Station  
Raymond.Fernandez@sdcounty.ca.gov  
E-mail

**AUTHORIZED REPRESENTATIVE:**

Raymond A. Fernandez  
Raymond A. Fernandez,  
Air Pollution Control Officer (Acting)

**SUBJECT:** ADOPTION OF RULE 67.6.1 - SOLVENT CLEANING AND STRIPPING OPERATIONS AND RULE 67.6.2 – VAPOR DEGREASING OPERATIONS AND REPEAL OF RULE 67.6 - SOLVENT CLEANING OPERATIONS.(District: All)

**AGENDA ITEM INFORMATION SHEET**

(continued)

**PREVIOUS RELEVANT BOARD ACTIONS:**

October 16, 1990 (APCB #6) Amendment of Rule 67.6 to correct deficiencies identified by the Environmental Protection Agency; February 2, 1993 (APCB #2), Delayed implementation of new or revised regulations unless requested by business, specifically ordered by federal or State law, or for which a socioeconomic impact assessment is not required; July 25, 1979 (APCB #1) Adoption of Rule 67.6 – Solvent Cleaning Operations.

**BOARD POLICIES APPLICABLE:**

N/A

**BOARD POLICY STATEMENTS:**

N/A

**CONTRACT AND/OR REQUISITION NUMBER(S):**

N/A



**Air Pollution Control Board**

Greg Cox	District 1
Dianne Jacob	District 2
Pam Slater-Price	District 3
Ron Roberts	District 4
Bill Horn	District 5

February 28, 2007

**PROPOSED NEGATIVE DECLARATION**

**1. PROJECT TITLE:**

Proposed Adoption of new Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations), new Rule 67.6.2 (Vapor Degreasing Operations) and Repeal of existing Rule 67.6 (Solvent Cleaning Operations)

**2. PROJECT PROPONENT:**

San Diego County Air Pollution Control District  
10124 Old Grove Road  
San Diego, California 92131

**3. PROJECT LOCATION:**

The project is applicable to the jurisdiction of the San Diego County Air Pollution Control District (hereafter referred to as the "District"), which covers the entire area within the incorporated and unincorporated portions of San Diego County, the southwestern-most county in the State of California. San Diego County encompasses 4,260 square miles and is bounded on the north by Orange and Riverside Counties, on the east by Imperial County, on the west by the Pacific Ocean, and on the south by the State of Baja California, Mexico.

**4. PROJECT DESCRIPTION:**

The District proposes to adopt new Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations) and new Rule 67.6.2 (Vapor Degreasing Operations) that include new emission reduction requirements for solvent cleaning operations. The proposed new rules will replace existing Rule 67.6 (Solvent Cleaning Operations), which regulates emissions from cold solvent cleaning and vapor degreasing operations. Rule 67.6 was first adopted in 1979 and last amended in 1990. Since then, advances have occurred in low-emitting solvent cleaning technologies and materials that are now being implemented in other California air districts. Such advances are reflected in proposed Rules 67.6.1 and 67.6.2 and would result in reduced emissions of volatile organic compounds and toxic air contaminants and improved air quality in the region.

**PROPOSED NEGATIVE DECLARATION:**

Proposed Adoption of New Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations), New Rule 67.6.2 (Vapor Degreasing Operations) and Repeal of Existing Rule 67.6 (Solvent Cleaning Operations)

**5. FINDING:**

The District, acting as lead agency, has completed and considered an Initial Study (attached) for the project pursuant to the California Environmental Quality Act. Based on the entire record before the District (including the Initial Study and any comments received), there is no substantial evidence that the project will have a significant adverse effect on the environment.

This Negative Declaration reflects the independent judgment and analysis of the decision-making authority.

**6. LOCATION AND CUSTODIAN OF RECORD:**

The documents and other materials on which the proposed decision to adopt the Negative Declaration is based are located at the San Diego County Air Pollution Control District, 10124 Old Grove Rd., San Diego, California 92131; the custodian is Robert C. Reider, Supervising Air Resources Specialist.

**Note:** This Negative Declaration becomes final upon approval by the Air Pollution Control District.

**Attachment:** Initial Study/Environmental Checklist.



**Air Pollution Control Board**

Greg Cox	District 1
Dianne Jacob	District 2
Pam Slater-Price	District 3
Ron Roberts	District 4
Bill Horn	District 5

February 28, 2007

**California Environmental Quality Act (CEQA) Initial Study  
Environmental Checklist Form  
(Based on the State CEQA Guidelines, Appendix G Rev. 12/98)**

**1. PROJECT TITLE:**

Proposed Adoption of New Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations), New Rule 67.6.2 (Vapor Degreasing Operations) and Repeal of Existing Rule 67.6 (Solvent Cleaning Operations)

**2. LEAD AGENCY NAME AND ADDRESS:**

San Diego County Air Pollution Control District  
10124 Old Grove Road  
San Diego, California 92131

**3. LEAD AGENCY CONTACT:**

Robert Reider  
Supervising Air Resources Specialist  
(858) 586-2640  
E-mail: Robert.Reider@sdcounty.ca.gov

**4. PARTICIPANTS IN THE PREPARATION OF THIS INITIAL STUDY:**

San Diego County Air Pollution Control District  
Robert Reider, Supervising Air Resources Specialist  
Natalie Yates, Senior Air Pollution Control Engineer  
Cara Bandera, Associate Air Resources Specialist  
Michael Watt, Associate Air Resources Specialist

San Diego County Office of County Counsel  
Terence Dutton, Senior Deputy County Counsel

**5. PROJECT LOCATION:**

The project is applicable to the jurisdiction of the San Diego County Air Pollution Control District (hereafter referred to as the "District"), which covers the entire area within the incorporated and unincorporated portions of San Diego County, the

**INITIAL STUDY:**

Proposed Adoption of New Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations), New Rule 67.6.2 (Vapor Degreasing Operations) and Repeal of Existing Rule 67.6 (Solvent Cleaning Operations)

southwestern-most county in the State of California (Figure 1). San Diego County encompasses 4,260 square miles and is bounded on the north by Orange and Riverside Counties, on the east by Imperial County, on the west by the Pacific Ocean, and on the south by the State of Baja California, Mexico.

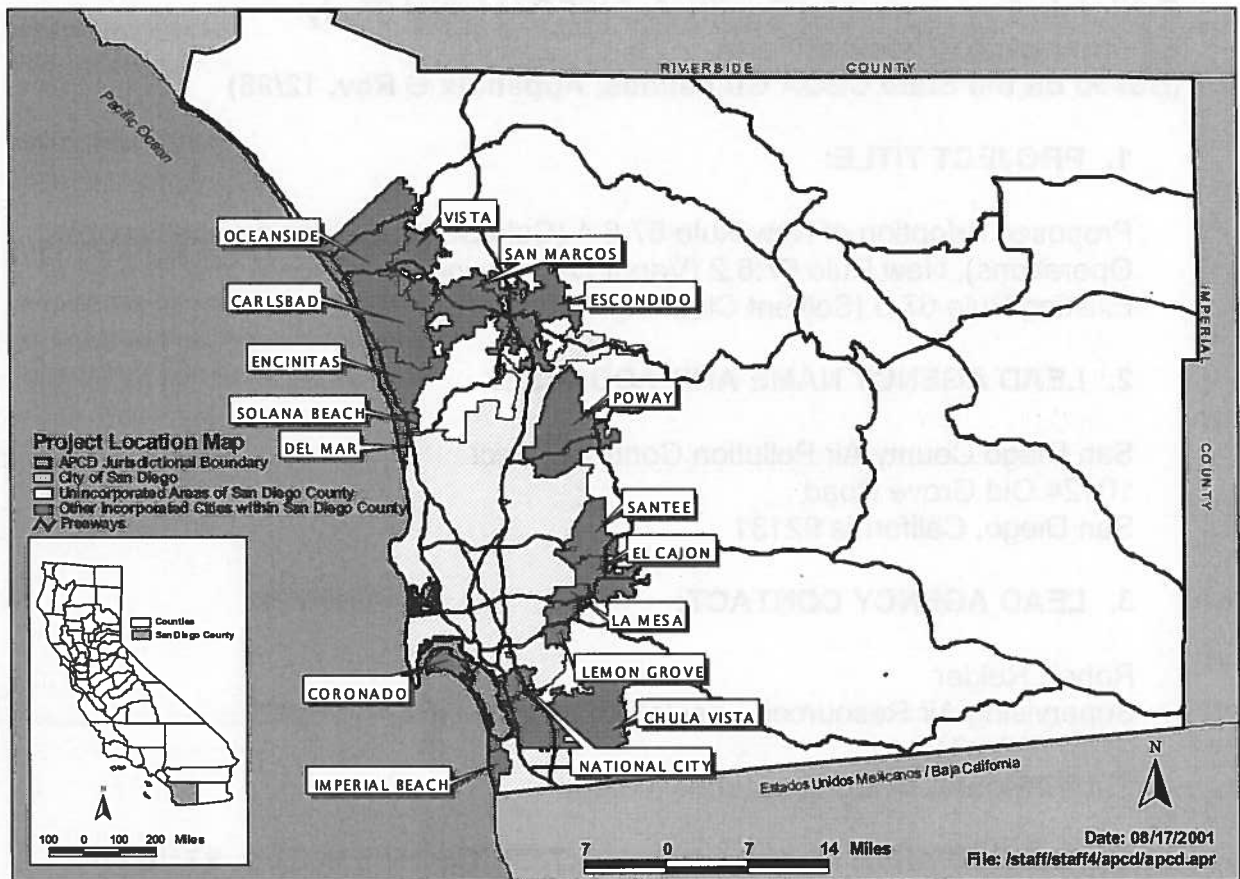


Figure 1. Project Location San Diego County

**6. PROJECT SPONSOR'S NAME AND ADDRESS:**

San Diego County Air Pollution Control District  
10124 Old Grove Road  
San Diego, CA 92131

**7. PROJECT DESCRIPTION:**

The District proposes to adopt new Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations) and new Rule 67.6.2 (Vapor Degreasing Operations) that include new emission reduction requirements for solvent cleaning operations. The proposed new rules will replace existing Rule 67.6 (Solvent Cleaning Operations), which regulates

## **INITIAL STUDY:**

Proposed Adoption of New Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations), New Rule 67.6.2 (Vapor Degreasing Operations) and Repeal of Existing Rule 67.6 (Solvent Cleaning Operations)

emissions from cold solvent cleaning and vapor degreasing operations. Rule 67.6 was first adopted in 1979 and last amended in 1990. Since then, advances have occurred in low-emitting solvent cleaning technologies and materials that are now being implemented in other California air districts. Such advances are reflected in proposed Rules 67.6.1 and 67.6.2 and would result in improved air quality in the region, including reduced emissions of volatile organic compounds (VOC) and toxic air contaminants (TAC).

### **Rule 67.6.1**

Rule 67.6.1 will regulate VOC and TAC emissions from organic solvents used in cold solvent cleaning and stripping operations. Cold solvent cleaning operations are performed by immersing objects into non-boiling solvent contained in a tank or drum to remove dirt, oil, and other impurities from parts, tools, machinery, and other equipment. Stripping operations are performed similarly to remove cured coatings, inks, resins, or adhesives. These operations are performed in a variety of industries including automotive repair and refinishing operations, furniture manufacturing, repair and coating operations, and aerospace, electronics, and optical industries.

Both cold solvent cleaning and stripping operations are significant sources of VOC emissions that result from solvent evaporation and solvent carry-over on the cleaned objects. These emissions contribute to the formation of ground-level ozone, the primary constituent of smog.

Proposed new Rule 67.6.1 applies to all cold solvent cleaning and stripping operations conducted in a tank, drum, or other container. The rule will limit the VOC content of cleaning solvent to 50 grams or less per liter (0.42 pounds or less per gallon) for the majority of cold solvent cleaning operations. To comply with the proposed rules, facilities may use cleaning materials formulated with water or exempt compounds, or a combination of both. Cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components are exempt from restrictions on the VOC content of cleaning solvents (similar to corresponding rules of other California air districts). However, facilities conducting these operations must comply with all equipment and operational requirements of the rule, which minimize VOC emissions. Stripping operations do not invoke the VOC content limits. However, in addition to complying with equipment and operational requirements, stripping must be performed using a sealing fluid or in equipment that has a freeboard ratio of at least 0.75.

Additionally, Rule 67.6.1 contains operational and equipment requirements and general exemptions that are identical to those in existing Rule 67.6.

## **INITIAL STUDY:**

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### **Rule 67.6.2**

Rule 67.6.2 will regulate VOC and TAC emissions from organic solvents used in vapor degreasing operations. Vapor degreasing operations are performed to remove dirt, oil and other impurities from parts, tools, machinery and other equipment. They are used in a variety of industries including, aerospace, electronics and optical industries.

Vapor degreasing is usually conducted by immersing parts, products, tools or other items in a boiling solvent or in solvent vapors generated by boiling solvent. Vapor degreasing operations are sources of VOC emissions that result from solvent evaporation and carry-over. These emissions contribute to the formation of ground-level ozone, the primary constituent of smog.

Proposed new Rule 67.6.2 applies to all vapor degreasing operations. The rule contains operational and equipment requirements and some general exemptions that are identical to those in existing Rule 67.6. Further, the proposed new rule will establish a more stringent applicability threshold for equipment-related requirements, providing additional emission reductions. Equipment owners and operators must choose from a variety of control options including an enclosed cover system, a freeboard ratio of at least 1.0, or a refrigerated freeboard chiller. Additionally, the rule will allow the use of control equipment or an airtight/airless vapor degreaser in lieu of complying with the equipment and operational standards.

Rule 67.6.2 will exempt vapor degreasers using a water-based solvent with a low-VOC content of 50 grams or less per liter (0.42 pounds or less per gallon) from all requirements. Vapor-phase solder reflow units will also be exempted because they are regulated by existing District Rule 66 (Organic Solvents) and because design and operation of these units is significantly different from that of vapor degreasers.

### **Education and Outreach**

The proposed project also includes District outreach, following adoption of the proposed new rules, to advise affected facilities of existing legal requirements for proper disposal of spent cleaning materials.

## **8. REGULATORY AND ENVIRONMENTAL ISSUES:**

The District is required to triennially update its air quality plan for meeting State ozone standards (the Regional Air Quality Strategy, or RAQS). The RAQS must include "every feasible control measure" to reduce ozone precursors (including VOC emissions), as required by State law. Rules 67.6.1 and 67.6.2 are proposed pursuant to commitments in the RAQS, as last amended in 2004, requiring the



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District to revise existing Rule 67.6 to incorporate recent advances in low-emitting solvent cleaning technology and materials. Project implementation will reduce VOC emissions by approximately 263 tons per year—continuing the region's progress toward attaining State ozone standards—and comply with State law requirements and RAQS commitments for expeditiously adopting every feasible control measure.

To comply with the proposed requirement for low-VOC solvents, facilities may use cleaning materials formulated with water or exempt compounds, or a combination of both. Conditions of use may cause some non-hazardous “sewer safe” cleaning materials to become hazardous waste if they contain materials such as dirt, oil, coatings, inks, resins, or adhesives that were removed from the part or component being cleaned.

The potential for improper disposal of spent cleaning materials and associated environmental impacts are evaluated herein (see Environmental Checklist, Section VII, Hazards/Hazardous Materials). In summary, existing laws and regulations prohibiting improper disposal of hazardous materials, coupled with the District's outreach to affected facilities regarding proper disposal of spent cleaning materials, will ensure there are no project-related adverse environmental impacts associated with hazardous materials.

## **9. ENVIRONMENTAL SETTING:**

### **Topography**

San Diego County is divided by the Laguna Mountain Range, which runs approximately parallel to the coast about 45 miles inland and separates the coastal area from the desert portion of the County. The Laguna Mountains reach peaks of over 6,000 feet with Hot Springs Mountain peak rising to 6,533 feet, the highest point in the County. The coastal region is made up of coastal terraces that rise from the ocean into wide mesas which then, moving farther east, transition into the Laguna Foothills. Farther east, the topography gradually rises to the rugged mountains. On the east side, the mountains drop off rapidly to the Anza-Borrego Desert, which is characterized by several broken mountain ranges with desert valleys in between. To the north of the County are the Santa Ana Mountains which run along the coast of Orange County, turning east to join with the Laguna Mountains near the San Diego-Orange County border.

### **Climatology**

The climate of San Diego County, as with all of Southern California, is largely dominated by the strength and position of the semi-permanent, high-pressure system over the Pacific Ocean (known as the Pacific High). This high-pressure ridge over the West Coast often creates a pattern of late-night and early-morning low

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clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The climatic classification for San Diego is a Mediterranean climate, with warm, dry summers and mild, wet winters. Average annual precipitation ranges from approximately 10 inches on the coast to over 30 inches in the mountains to the east (the desert regions of San Diego County generally receive between 4 and 6 inches per year).

The favorable climate of San Diego works to create air pollution problems. Sinking, or subsiding air from the Pacific High creates a temperature inversion (known as a subsidence inversion), which acts as a lid to vertical dispersion of pollutants. Weak summertime pressure gradients further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic (man made) emissions, combined with strong sunshine, lead to photochemical reactions, creating ozone in this surface layer.

Daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze) are quite common in Southern California. The sea breeze helps to moderate daytime temperatures in the western portion of San Diego County, which greatly adds to the climatic draw of the region. This also leads to emissions being blown out to sea at night and returning to land the following day. Under certain conditions, this atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County, which often results in high ozone concentrations being measured at San Diego County air pollution monitoring stations. Transport of air pollutants from Los Angeles to San Diego has also been shown to occur aloft within the stable layer of the elevated subsidence inversion. In this layer, removed from fresh emissions of oxides of nitrogen, which would scavenge and reduce ozone concentrations, high levels of ozone are transported into San Diego County.

### **Ambient Air Quality Standards**

National and State ambient air quality standards are established for criteria pollutants, which are widespread, common air contaminants known to be harmful to human health and welfare. The criteria pollutants are ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. Additional State standards have been established for sulfates and hydrogen sulfide.

The standards are set to protect the elderly, very young, and chronically sensitive portions of the population, and are required to include a reasonable margin of safety to protect against potential hazards which research has not yet identified. (In some cases, the State standards provide a wider margin of safety than the national standards.) An area that does not meet a particular standard is designated as a nonattainment area for that pollutant and must develop an air quality plan defining

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the combination of local, State, and federal actions and emission controls necessary for expeditious attainment in the area.

### Air Quality Status

The District operates an extensive ambient air monitoring network, continuously monitoring air pollution levels at numerous sites throughout San Diego County in compliance with federal and State requirements. Data generated at these monitors are used to define the nature and severity of air pollution in San Diego County and to determine attainment status.

San Diego County has generally experienced substantial improvement in ambient air quality over the past several years, demonstrating emission control measures are working. Of the six criteria air pollutants regulated by the Environmental Protection Agency (EPA), and the eight regulated by the Air Resources Board (ARB), only ozone and inhalable particulate matter occur in concentrations sufficient to violate either national or State standards in San Diego County.

**Toxic Air Contaminants.** Two of the District's air monitoring stations, in Chula Vista and El Cajon, measure toxic air contaminants as well as criteria pollutants. Toxic air pollutants are constituents of certain VOC, particulate matter, and other contaminants that are believed to be carcinogenic with no identified threshold below which no adverse health effects occur.

Excluding diesel particulates, since 1989 a 70% reduction in the ambient incremental cancer risk<sup>1</sup> from air toxics has been measured in Chula Vista and a 69% reduction in El Cajon. As discussed in Section 13 below, the proposed project will not result in any significant increase in toxic air contaminant emissions or health risks.

## 10. OTHER PUBLIC AGENCY INVOLVEMENT:

Other public agencies whose approvals are or may be required are identified below:

<u>Agency</u>	<u>Required Action</u>
ARB	Submit Rules 67.6.1 and 67.6.2 to EPA for approval into the San Diego portion of the State Implementation Plan (SIP), and request removal of existing Rule 67.6 from the SIP.
EPA	Approval of Rules 67.6.1 and 67.6.2 into the SIP. Removal of existing Rule 67.6 from the SIP.

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<sup>1</sup> "Incremental cancer risk" is a calculation of possible additional cases of cancer, over a lifetime of exposure to the various toxic air contaminants, for every one million people.

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**11. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below, if any, would be potentially affected by this project.

- Aesthetics
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology / Soils
- Hazards / Haz. Materials
- Hydrology/Water Quality
- Land Use / Planning
- Mineral Resources
- Noise
- Population / Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities / Service Systems
- Mandatory Findings of Significance
- No Potentially Significant Impacts

**12. DETERMINATION:**

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

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- I find that, although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.
  
- On the basis of this Initial Study, I believe the following: there are no new significant environmental effects and no substantial increase in severity of effects identified in an earlier NEGATIVE DECLARATION or ENVIRONMENTAL IMPACT REPORT for the proposed project or property are present as the result of either 1) changes in the project; 2) changes in circumstances under which the project is undertaken; or 3) new information which could not have been known without the exercise of reasonable diligence at the time the previous Negative Declaration was adopted or Environmental Impact Report was certified. Therefore, the previously adopted NEGATIVE DECLARATION or certified ENVIRONMENTAL IMPACT REPORT will be considered adequate upon completion of an ADDENDUM to reflect minor technical changes.
  
- On the basis of this Initial Study, I believe the following: new significant environmental effects or an substantial increase in severity of effects identified in an earlier Negative Declaration or Environmental Impact Report for the proposed project or property are present as the result of either 1) changes in the project; 2) changes in circumstances under which the project is undertaken; or 3) new information which could not have been known without the exercise of reasonable diligence at the time the original earlier Negative Declaration or Environmental Impact Report was adopted. Therefore, a SUBSEQUENT/SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT is required.

*RC Reider*

February 20, 2007

**Signature**

**Date**

Robert C. Reider

Supervising Air Resources Specialist

**Printed Name**

**Title**

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## 13. EVALUATION OF ENVIRONMENTAL IMPACTS:

### Instructions for Environmental Checklist Form<sup>2</sup>

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report is required.
4. Earlier analyses may be used where, pursuant to the tiering, program Environmental Impact Report, or other California Environmental Quality Act process, an effect has been adequately analyzed in an earlier EIR or negative declaration. In this case, a brief discussion should identify the following:
  - a. Earlier Analysis Used. Identify and State where they are available for review.
  - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
5. Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
6. The explanation of each issue should identify:
  - a. The significance criteria or threshold, if any, used to evaluate each question; and
  - b. The mitigation measure identified, if any, to reduce the impact to less than significance.

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<sup>2</sup> Based on Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (14 CCR, Section 15000 et seq.).

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**Environmental Checklist**

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>I. AESTHETICS. Would the project:</b>			
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (d): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve regionwide air quality. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not require the construction of any building, structure, or other visual obstruction; would not have a substantial adverse effect on a scenic vista; would not substantially damage scenic resources; would not substantially degrade the existing visual character or quality of the surroundings; and would not create a new source of light or glare adversely affecting day or nighttime views.

Based on the above discussion, it is expected that project implementation would have no adverse impact on aesthetics.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>II. AGRICULTURAL RESOURCES.</b> Would the project:			
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (c): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not require the taking of any land for construction of any building or structure; would not convert prime or unique farmland or farmland of statewide importance to non-agricultural use; would not conflict with existing zoning for agricultural use, or a Williamson contract; and would not involve other changes that might ultimately result in the conversion of farmland to non-agricultural use.

Based on the above discussion, it is expected that project implementation would have no adverse impact on agricultural resources.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>III. AIR QUALITY. Would the project:</b>			
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) State law requires all ozone non-attainment areas, including San Diego County, to adopt "every feasible control measure" to reduce emissions of ozone precursors (including VOC emissions). Rules 67.6.1 and 67.6.2 are proposed for adoption pursuant to commitments identified in the San Diego County RAQS, as amended in 2004. The RAQS requires the District to revise existing Rule 67.6 (Solvent Cleaning Operations)—which currently does not limit the VOC content of cleaning materials—by reflecting the latest development in low-emitting solvent cleaning technology for cold solvent cleaning and stripping operations and vapor degreasing operations. Project adoption and implementation would reduce VOC emissions by approximately 263 tons per year and help fulfill State law requirements and RAQS commitments for adopting every feasible control measure. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plan (the RAQS) for meeting State ambient air quality standards.

Further, the applicable air quality plan for meeting federal ambient air quality standards is the San Diego portion of the SIP. The proposed rules are anticipated to be readily approvable by EPA for inclusion into the SIP. Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plan for meeting federal ambient air quality standards.

(b) through (d): The District is a non-attainment area for State and federal ambient ozone standards. Implementation of proposed Rules 67.6.1 and 67.6.2 would reduce emissions of VOC (an ozone precursor) by approximately 263 tons per year,

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providing a benefit to ozone air quality. Toxic air contaminant emissions would also be reduced. Project adoption would not violate any air quality standard or contribute to an existing or projected air quality violation; would not 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; and would not expose sensitive receptors to substantial pollutant concentrations.

- (e) Existing District Rule 51 (Nuisance) prohibits objectionable odors affecting a substantial number of people. Rule 51 would continue to apply following implementation of the proposed project. Proposed adoption of Rules 67.6.1 and 67.6.2 is not anticipated to create objectionable odors affecting a substantial number of people.

Based on the above discussion, it is expected that project implementation would have no adverse impact on air quality.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>IV. BIOLOGICAL RESOURCES.</b> Would the project:			
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (f): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; would not have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means; would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and would not conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Based on the above discussion, it is expected that project implementation would have no adverse impact on biological resources.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>V. CULTURAL RESOURCES.</b> Would the project:			
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (d): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not cause a substantial adverse change in the significance of a historical or archaeological resource; would not destroy a unique paleontological resource or site or unique geologic feature; and would not disturb any human remains.

Based on the above discussion, it is expected that project implementation would have no adverse impact on cultural resources.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>VI. GEOLOGY / SOILS.</b> Would the project:			
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Strong seismic ground shaking?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Seismic-related ground failure, including liquefaction?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Landslides?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (e): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning

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materials. Project implementation would not expose people to the risk of loss, injury, or death associated with earthquakes, seismic ground shaking, seismic-related ground failure, liquefaction or landslides; would not result in substantial soil erosion or loss of topsoil; would not require the construction of any building or structure, thereby resulting in a potential to be located on an unstable geologic unit or on expansive soil; and would not require the installation of septic tanks or wastewater systems.

Based on the above discussion, it is expected that project implementation would have no adverse impact on geology/soils.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>VII. HAZARDS / HAZARDOUS MATERIALS.</b> Would the project:			
a) Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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the project result in a safety hazard for people residing or working in the project area?			
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (h): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials.

To comply with the proposed rules, facilities may use cleaning materials formulated with water or exempt compounds, or a combination of both. Some cleaning materials may contain chemicals that are considered hazardous materials. Additionally, conditions of use may cause some non-hazardous cleaning materials to become hazardous waste if they contain materials such as dirt, oil, coatings, inks, resins, or adhesives that were removed from the part or component being cleaned. Exposure to hazardous materials generated by the use of these cleaning materials will be controlled by equipment and operational requirements implemented by proposed Rules 67.6.1 and 67.6.2. Further, the proposed rules require waste solvent and contaminated residue to be recycled or disposed of pursuant to existing requirements of California Health and Safety Code, Division 20, Chapter 6.3 (beginning at Section 25100), concerning hazardous waste disposal.

Most facilities subject to proposed Rules 67.6.1 and 67.6.2 are existing facilities that generate hazardous waste in their other operations not associated with solvent cleaning. Accordingly, many facilities are currently serviced by vendors providing hazardous waste handling services. It is expected that these facilities would include any hazardous material generated by solvent cleaning operations for off-site

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treatment and disposal. Further, the District will publish an advisory notice to inform affected facilities of the new requirements and of existing legal requirements for proper handling and disposal of cleaning materials pursuant to existing laws and regulations.

For the reasons discussed above, project implementation would not create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials; would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; and would not emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; would not require the construction of any building, structure or facility which could potentially be located on or a site pursuant to Government Code §65962.5 and create a significant hazard to the public or the environment; would not require the construction of any building, structure or facility which could potentially be located within an airport land use plan, within two miles of a public airport or within the vicinity of a private airstrip that would result in a safety hazard for people residing or working in the project area; would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan; and would not expose people or structures to wildland fires.

Based on the above discussion, it is expected that project implementation would have no adverse impact on hazards/hazardous materials.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>VIII. HYDROLOGY / WATER QUALITY.</b> Would the project:			
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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uses or planned uses for which permits have been granted)?			
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a), (e) and (f): The proposed adoption of Rule 67.6.1 will require each solvent utilized in a cold solvent cleaning operation (with specific exemptions as described in Section 7 above) to have a VOC content of 50 grams per liter (0.42 pounds per gallon) of material or less, as used. Facilities can use cleaning solvents formulated with water or exempt compounds, or a combination of both. Some water-based cleaning materials are labeled as "sewer safe" by the manufacturer. This label pertains only to the water-based cleaning material itself and not to the spent

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cleaning material. Conditions of use may cause some non-hazardous cleaning materials to become hazardous waste if they contain materials such as dirt, oil, coatings, inks, resins or adhesives that were removed from the part or component being cleaned. Disposal of spent cleaning material in storm drains and sewer systems is prohibited. Hazardous waste resulting from the use of cleaning solvents must be disposed of properly after its useful life. Most facilities subject to proposed Rules 67.6.1 and 67.6.2 are existing facilities that generate hazardous waste in other parts of their operations not associated with solvent cleaning. These facilities typically have that hazardous waste picked up and properly treated for disposal off-site. It is expected that these facilities would include any hazardous material generated by solvent cleaning operations with their existing hazardous waste for off-site treatment and disposal. Additionally, many affected sources in the District are currently serviced by vendors that provide waste handling services for spent cleaning materials. Spent cleaning material is picked up and treated by the vendor as part of the contract for service. These vendors also provide water-based cleaning systems and it is expected that they would provide the same waste handling services for spent water-based cleaning materials.

Proposed Rules 67.6.1 and 67.6.2 require waste solvent and contaminated residue to be recycled or disposed of according to the requirements based on the California Health and Safety Code, Division 20, Chapter 6.3 (beginning at Section 25100) concerning hazardous waste disposal. The District also publishes an advisory notice with the adoption of each new rule. Through this advisory notice the District will inform the affected sources of the rule requirements and proper handling and disposal of cleaning materials.

Project implementation would not violate any water quality standards or waste discharge requirements; would not require construction or other activities which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and would not otherwise substantially degrade water quality.

(b) through (d) and (g) through (j): The proposed rules regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations. Most facilities subject to proposed Rules 67.6.1 and 67.6.2 are existing facilities. Project implementation would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge; would not require construction or other activities which would substantially alter the existing drainage pattern of a site or area in a manner which would result in substantial erosion or siltation on- or off-site; would not require construction or other activities which would substantially increase the rate or amount of surface runoff water in a manner which would result in flooding on- or off-site; would not place housing within a 100-year flood hazard area; would not place structures which would impede or redirect flood flows within a 100-year flood hazard area; and would not expose

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people or structures to a significant risk of loss, injury, death, inundation by seiche, tsunami, or mudflow.

Based on the above discussion, it is expected that project implementation would have no adverse impact on hydrology/water quality.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>IX. LAND USE / PLANNING.</b> Would the project:			
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (c): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Local governments determine land use and planning considerations, and no land use or planning requirements would be altered by the proposed project. Project implementation would not physically divide an established community; would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect; and would not conflict with any applicable habitat conservation or natural community conservation plan.

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Based on the above discussion, it is expected that project implementation would have no adverse impact on land use/planning.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>X. MINERAL RESOURCES.</b> Would the project:			
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) and (b): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State; and would not result in the loss of availability of a locally important mineral resource recovery site.

Based on the above discussion, it is expected that project implementation would have no adverse impact on mineral resources.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XI. NOISE.</b> Would the project result in:			
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	noise ordinance, or applicable standards of other agencies?			
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (f): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not result in exposure of persons to or generation of noise levels in excess of applicable standards; would not expose people to or generate excessive groundborne vibration or noise; would not result in a substantial permanent, temporary, or periodic increase in ambient noise levels; and would not affect any airport land use plan or private airstrip.

Based on the above discussion, it is expected that project implementation would have no adverse noise impact.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XII. POPULATION / HOUSING.</b> Would the project:			
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (c): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not induce substantial growth and would not displace substantial numbers of housing or people, requiring the construction of replacement housing.

Based on the above discussion, it is expected that project implementation would have no adverse impact on population/housing.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XIII. PUBLIC SERVICES.</b> Would the project:			
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in			

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order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:			
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Some of these cleaning solvents may be volatile, flammable liquids. Proper installation, maintenance, and use of cleaning systems and components as required by the proposed rules, along with compliance with existing fire codes, will ensure project implementation will not impact fire protection services. Project implementation would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; would not result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives as they relate to fire protection, police protection, schools, parks, or other public services or facilities.

Based on the above discussion, it is expected that project implementation would have no adverse impact on public services.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XIV. RECREATION.</b>			
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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substantial physical deterioration of the facility would occur or be accelerated.?			
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) and (b): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not increase the use of existing neighborhood and regional parks or other recreational facilities and does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Based on the above discussion, it is expected that project implementation would have no adverse impact on recreation.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XV. TRANSPORTATION / TRAFFIC.</b> Would the project:			
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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	levels or a change in location that results in substantial safety risks?			
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (g): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system; would not exceed, either individually or cumulatively, a level of standard established by the regional congestion management agency for any road or highway; would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; would not substantially increase hazards due to a design feature or incompatible uses; would not result in inadequate emergency access or parking capacity; and would not conflict with adopted policies, plans, or programs supporting alternative transportation.

Based on the above discussion, it is expected that project implementation would have no adverse impact on transportation/traffic.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XVI. UTILITIES / SERVICE SYSTEMS.</b> Would the project:			
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (g): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Project implementation would not exceed wastewater treatment requirements of the regional water quality control board; would not require or result in the construction of new water, wastewater treatment, or storm water drainage facilities, or the expansion of existing facilities; would not require water supplies in excess of existing entitlements and resources or require new or expanded entitlements; would not require additional wastewater treatment capacity or landfill capacity; and would comply with federal, State, and local statutes and regulations related to solid waste.

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Based on the above discussion, it is expected that project implementation would have no adverse impact on utilities/service systems.

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	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XVII. MANDATORY FINDINGS OF SIGNIFICANCE.</b>			
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(a) through (c): Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules; repeal of outdated District Rule 67.6; and public outreach to inform affected facilities of existing legal requirements for proper disposal of spent cleaning materials. Based on the analyses presented herein, it is concluded that the project (a) would not: have the potential to degrade the quality of the environment,

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substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory; (b) would not have impacts that are individually limited, but cumulatively considerable; and (c) would not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Based on the above discussion, it is expected that project implementation would have no impact with respect to the mandatory findings of significance.

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<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(a) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects and the effects of other current projects and the effects of probable future projects.)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(c) Does the project have environmental effects that will substantially degrade the quality of the environment, significantly reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

(a) through (c) Proposed District Rules 67.6.1 and 67.6.2 regulate emissions from organic solvents used in cold solvent cleaning and stripping operations and vapor degreasing operations to reduce VOC and TAC emissions and improve air quality in the region. The project consists of adoption and implementation of the proposed new rules, repeal of outdated District Rule 67.6, and public outreach in form of informational materials for existing legal customers for proper disposal of spent cleaning materials. Based on the analysis presented herein, it is concluded that the project would not have the potential to degrade the quality of the environment, significantly reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory; (b) would not have impacts that are individually limited, but cumulatively considerable; and (c) would not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Re Rules and Regulations of the )  
Air Pollution Control District )  
of San Diego County . . . . .)

**RESOLUTION ADOPTING THE NEGATIVE DECLARATION FOR REPEAL OF  
EXISTING RULE 67.6 – SOLVENT CLEANING OPERATIONS, AND ADDING  
NEW RULE 67.6.1 - COLD SOLVENT CLEANING AND STRIPPING  
OPERATIONS AND NEW RULE 67.6.2 - VAPOR DEGREASING OPERATIONS**

On motion of Member Slater-Price, seconded by Member Cox, the following Resolution is adopted:

**WHEREAS**, pursuant to the California Environmental Quality Act, adoption of the new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6 is a project requiring environmental review; and

**WHEREAS**, the San Diego County Air Pollution Control District has the principal responsibility for adopting the new Rules 67.6.1 and 67.6.2 and repealing existing Rule 67.6, therefore, pursuant to the California Environmental Quality Act, is the lead agency for the requisite environmental review; and

**WHEREAS**, pursuant to the California Environmental Quality Act, an Initial Study was prepared evaluating potential environmental consequences resulting from the adoption of new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6; and

**WHEREAS**, the Initial Study revealed no substantial evidence that the proposed adoption of new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6 may have a significant adverse environmental effect; and

**WHEREAS**, based on the Initial Study findings, a draft Negative Declaration was prepared pursuant to the California Environmental Quality Act; and

**WHEREAS**, the draft Negative Declaration was circulated for a 30-day public comment period and no comments were received; and

**WHEREAS**, the final Negative Declaration concludes there is no substantial evidence indicating the proposed adoption of new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6 will have a significant adverse impact on the environment; and

**WHEREAS**, the San Diego County Air Pollution Control Board reviewed and considered the information contained in the Initial Study and final Negative Declaration; and

**WHEREAS**, the documents and other materials on which the decision to adopt the Negative Declaration is based are located at the San Diego County Air Pollution Control District, 10124 Old Grove Road, San Diego, California 92131; the custodian is Robert Reider, Supervising Air Resources Specialist.

**NOW, THEREFORE, IT IS RESOLVED AND ORDERED** by the San Diego County Air Pollution Control Board that the Initial Study and Negative Declaration reflect the Board's independent judgment and analysis of potential environmental consequences resulting from the proposed adoption of new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6; and

**IT IS FURTHER RESOLVED AND ORDERED** that, considering the entire record before the Board, there is no substantial evidence that adoption of the proposed new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6 will have a significant adverse effect upon the environment; and

**IT IS FURTHER RESOLVED AND ORDERED** that the Negative Declaration is hereby adopted as a true and complete statement of potential environmental consequences resulting from adoption of new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6; and

**IT IS FURTHER RESOLVED AND ORDERED** that there is no evidence in the entire record that adoption of the proposed new Rules 67.6.1 and 67.6.2 and repeal of existing Rule 67.6 will have an adverse effect on wildlife resources, and on the basis of substantial evidence, the presumption of adverse effect in California Code of Regulations, Title 14, Section 753.5(d) has been rebutted.

**PASSED AND ADOPTED** by the Air Pollution Control Board of the San Diego County Air Pollution Control District, State of California, this 23rd day of May, 2007, by the following votes:

**AYES: Cox, Jacob, Slater-Price, Roberts, Horn**

APPROVED AS TO FORM AND LEGALITY  
COUNTY COUNSEL

BY *T. Dutton*  
SENIOR DEPUTY

STATE OF CALIFORNIA)  
County of San Diego)<sup>SS</sup>

I hereby certify that the foregoing is a full, true and correct copy of the Original Resolution entered in the Minutes of the Board of Supervisors.

THOMAS J. PASTUSZKA  
Clerk of the Board of Supervisors

By: Catherine Santos  
Catherine Santos, Deputy



Resolution No. 07-111  
05/23/07 (APCD 2)

Re Rules and Regulations of the )  
Air Pollution Control District )  
of San Diego County . . . . . )

**RESOLUTION REPEALING EXISTING RULE 67.6 – SOLVENT CLEANING OPERATIONS AND ADDING NEW RULES 67.6.1 - COLD SOLVENT CLEANING AND STRIPPING OPERATIONS AND 67.6.2 - VAPOR DEGREASING OPERATIONS TO REGULATION IV OF THE RULES AND REGULATIONS OF THE SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT**

On motion of Member Slater-Price, seconded by Member Cox, the following resolution is adopted:

WHEREAS, the San Diego County Air Pollution Control Board, pursuant to Section 40702 of the Health and Safety Code, adopted Rules and Regulations of the Air Pollution Control District of San Diego County; and

WHEREAS, said Board now desires to amend said Rules and Regulations; and

WHEREAS, notice has been given and a public hearing has been had relating to the amendment of said Rules and Regulations pursuant to Section 40725 of the Health and Safety Code.

NOW THEREFORE IT IS RESOLVED AND ORDERED by the San Diego County Air Pollution Control Board that the Rules and Regulations of the Air Pollution Control District of San Diego County be and hereby are amended as follows:

1. Existing Rule 67.6 to be repealed in its entirety.

2. Proposed new Rule 67.6.1 to read as follows:

**RULE 67.6.1 COLD SOLVENT CLEANING AND STRIPPING OPERATIONS**  
(Adopted & Effective (date of adoption))

(a) **APPLICABILITY**

(1) Except as provided in Section (b), this rule is applicable to all cold solvent cleaning and all stripping operations.

(2) Any cleaning of application equipment is not subject to this rule.

(3) Any dry cleaning operation subject to or exempt from the Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations or subject to or exempt from Rule 67.2 is not subject to this rule.

(4) Wipe cleaning operations are not subject to this rule.



(5) Rule 66 shall not apply to any cold solvent cleaning or stripping operation.

(b) EXEMPTIONS

(1) This rule shall not apply to the following:

(i) Non-immersion stripping operations subject to or exempt from Rules 67.9, 67.11, or 67.11.1.

(ii) Solvent cleaning operations regulated by the National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning, 40 CFR Part 63, Subpart T.

(iii) Cold solvent cleaning or stripping operations conducted in any cold solvent tank or stripping tank with a liquid surface area of one square foot (0.09 square meters) or less, or with a capacity of one gallon (3.8 liters) or less.

(iv) Cold solvent cleaning operations conducted in any remote reservoir cleaner with a sink cross-sectional area of 1 square foot (0.09 square meters) or less.

(v) Cold solvent degreasers used exclusively for educational purposes. This exemption does not apply to degreasers used for other purposes at an educational institution.

(vi) Except for requirements for waste solvent disposal in Subsections (d)(4)(xii) or (d)(6)(x), as applicable, cold solvent cleaning or stripping operations that exclusively utilize water-based materials with a volatile organic compound (VOC) content of 50 grams per liter (g/l) of material (0.42 pounds per gallon) or less, as used.

It shall be the responsibility of any person conducting such operations to keep a current list of all cleaning materials and the VOC content of each material, as applied, to substantiate this exemption.

(2) Subsection (d)(1) shall not apply to cold solvent cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components.

(c) DEFINITIONS

(1) "Aerospace Component" means any raw material, partial or completed fabricated part, assembly of parts, or completed unit of any aircraft, helicopter, missile, or space vehicle, including mockups, test panels and prototypes.

(2) "Airless/Air-Tight Cleaning System" means a system that consists of a sealed cold solvent cleaner and the devices to condense and recover solvent and emission control devices to remove solvent from all gas streams that vent to the atmosphere. The system must have no open solvent-air interface, and be designed and operated in such a manner as to prevent the discharge or leakage of solvent emissions to the atmosphere during all cleaning and drying operations.

(3) "Application Equipment" means equipment used to apply coatings, inks, adhesives, or resins including, but not limited to: spray guns, rollers, brushes, and printing presses.

(4) "Batch-loaded Solvent Cleaner" means a degreaser in which any material is placed in solvent for cleaning and removed as a single batch after the cleaning is finished. This does not include remote reservoir cleaners.

(5) "CFR" means Code of Federal Regulations.

(6) "Cold Solvent Cleaning (Degreasing) Operation" means any solvent cleaning that is conducted in a tank, drum, or other container and that uses non-boiling solvent to remove contaminants.

(7) "Cured" means the coating, ink, adhesive, or resin is dry to the touch.

(8) "Degreaser" means a tank, drum, or other container in which objects to be cleaned are exposed to a solvent, in order to remove contaminants. This includes batch-loaded solvent cleaners and remote reservoir cleaners.

(9) "Electrical Components" means internal components such as wires, windings, stators, rotors, magnets, contacts, relays, energizers, and connections in an apparatus that generates or transmits electrical energy including, but not limited to, generators, transformers, and electric motors.

(10) "Electronic Components" means components or assemblies of components including, but not limited to, circuit card assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and other electrical fixtures, except for the cabinet in which the components are to be housed.

(11) "Exempt Compounds" means the same as defined in Rule 2.

(12) "Existing Cold Solvent Cleaning or Stripping Operation" means any cold solvent cleaning or stripping operation that is not new.

(13) "Freeboard Height" means:

(i) For batch-loaded solvent cleaners, the distance from the solvent-air interface to the top of the degreaser tank, based on inside tank dimensions.

(ii) For remote reservoir cleaners, the height from the bottom of the sink or work area to the top of the sink or work area.

(14) "Freeboard Ratio" means the freeboard height divided by the smaller of the interior length or width of the degreaser tank.

(15) "Liquid Leak" means any visible leak of a VOC-containing liquid at a rate in excess of three drops per minute.

(16) "Liquid Surface Area" means the area of interface between the liquid solvent available for dipping and the air which is contiguous with the outside of the solvent degreaser or stripping tank.

(17) "Medical Device" means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article including any component or accessory, that is intended for use in the diagnosis of disease or other conditions or in the cure, mitigation, treatment, or prevention of disease, or is intended to affect the structure or any function of the body.

(18) "New Cold Solvent Cleaning or Stripping Operation" means any cold solvent cleaning or stripping operation for which a complete application for an Authority to Construct in San Diego County was submitted after (date of adoption).

(19) "Precision Optics Components" means the components used to create high resolution images in optical devices. This does not include eye glasses.

(20) "Remote Reservoir Cleaner" means a degreaser that consists of a sink or working area and a separate solvent tank that is not accessible for soaking parts and is completely enclosed except for a solvent return opening, which allows used solvent to drain into it from the sink or work area.

(21) "Sealing Fluid" means a fluid that prevents evaporation of a stripping solvent by forming a liquid or solid layer on the solvent's surface.

(22) "Solvent" means any substance containing an organic compound or combination of organic compounds which is liquid at atmospheric pressure and ambient temperature and which is used as a diluent, thinner, dissolver, viscosity reducer, or cleaning agent, or for other similar purposes.

(23) "Solvent-Air Interface" means the area of contact between the solvent and air that is contiguous with the air outside the degreaser.

(24) "Solvent Carry-Out" means solvent carried out of a degreaser that adheres to or is entrapped in the part being cleaned.

(25) "Solvent Cleaning Operation" means any solvent cleaning activity including subsequent drying that is conducted in a degreaser to remove contaminants from parts, products, tools, machinery, and/or equipment.

(26) "Stripping Operation" means a removal of cured coatings, inks, resins, or adhesives conducted with the use of solvents by immersion into a container such as tank or drum.

(27) "Water-Based Material" means any solvent that consists only of water and VOC and does not contain exempt compounds.

(28) "Wipe Cleaning" means the method of cleaning a surface, not conducted in a container, by physically rubbing it with a material or device such as a rag, paper, or cotton swab moistened with a solvent.

(29) "Volatile Organic Compound (VOC)" means any volatile compound containing at least one atom of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(d) STANDARDS

(1) VOC Content Requirements for Cold Solvent Cleaning Operations

Except as specified in Subsection (b)(2), each solvent utilized in a cold solvent cleaning operation subject to this rule shall have a VOC content of 50 g/l (0.42 lbs/gal) of material or less, as used.

(2) General Equipment Requirements for Cold Solvent Cleaning Operations

A person shall not conduct a cold solvent cleaning operation unless a degreaser is equipped with all of the following.

(i) A cover that completely covers the solvent when work is not being performed in the degreaser. This includes covers for the sink or basin of a remote reservoir cleaner.

(ii) A facility for draining parts such that the drained solvent returns to the degreaser.

(3) Equipment Specific Requirements for Cold Solvent Cleaning Operations

(i) A person shall not operate a batch-loaded cold solvent cleaner unless it has:

(A) a freeboard ratio greater than or equal to 0.5,

(B) a cover easily operable with one hand or mechanically assisted, and

(C) a readily visible, permanent mark or line indicating the maximum allowable solvent level that conforms to the freeboard ratio.

(ii) A person shall not operate a remote reservoir cleaner unless it has:

(A) a freeboard height of at least 6 inches (15 cm), and

(B) a sink-like work area for draining cleaned parts, which is sloped sufficiently towards the drain to preclude pooling of solvent.

(4) Operating Requirements for Cold Solvent Cleaning Operations

A person shall not conduct a cold solvent cleaning operation without meeting all of the following requirements.

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the degreaser.

(ii) The solvent degreaser and any emission control system are properly installed and maintained in proper working order.

(iii) Any emission control system is properly operating at all times when parts are being cleaned.

(iv) The required cover is not removed except to process work or to perform maintenance.

(v) There are no liquid leaks from any portion of the degreaser. Upon detection of a liquid leak, the leak shall be repaired immediately, or the degreaser shall be shut down and drained in a manner that minimizes emissions.

(vi) No porous or absorbent materials, such as cloth, leather, wood, or rope are cleaned in the degreaser.

(vii) Solvent spraying, when necessary, is conducted by using only a continuous liquid stream (not a fine, atomized, fan, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container.

(viii) Solvent agitation, where necessary, is achieved exclusively through pump circulation or by means of a mechanical mixer or ultrasonic agitation. Air or gas agitation shall not be used.

(ix) For batch-loaded cleaners the actual solvent level is not above the marked maximum solvent level line at any time.

(x) The degreaser is not exposed to drafts greater than 131 feet (40 meters) per minute.

(xi) Solvent carry-out is minimized by all of the following methods:

(A) allowing for full drainage by racking parts or other means;

(B) tipping out any pools of solvent from the cleaned parts before removal; and

(C) allowing parts to dry within the degreaser until visually dry or dripping ceases.

(xii) Waste solvent and contaminated residue, if any, shall be recycled or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter 6.3 (beginning at Section 25100) concerning hazardous waste disposal.

#### (5) Equipment Requirements for Stripping Operations

A person shall not operate stripping equipment unless it is equipped with all of the following.

(i) A cover that completely covers the solvent when work is not processed in the tank.

(ii) A facility for draining parts such that the drained solvent returns to the container.

(iii) A readily visible, permanent mark or line indicating the maximum allowable solvent level that conforms to the freeboard ratio in Subsection (d)(5)(iv) below, unless a sealing fluid is used.

(iv) Stripping equipment has:

(A) a freeboard ratio greater than or equal to 0.75; or

(B) a sealing fluid.

(6) Operating Requirements for Stripping Operations

A person shall not conduct a stripping operation without meeting all of the following requirements.

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the stripping operation.

(ii) The stripping equipment and any emission control system are properly installed and maintained in proper working order.

(iii) Any emission control system is properly operating at all times when parts are being stripped.

(iv) The required cover is not removed except to process work or to perform maintenance.

(v) There are no liquid leaks from any portion of the stripping equipment. Upon detection of a liquid leak, the leak shall be repaired immediately, or the stripping tank drained and taken out of service, in a manner that minimizes emissions.

(vi) Solvent is not above the marked maximum solvent level line, unless a sealing fluid is used.

(vii) Solvent carry-out is minimized by all of the following methods:

(A) allowing for full drainage by racking parts or by other means;

(B) tipping out any pools of solvent from the stripped parts before removal; and

(C) allowing parts to dry within the stripping equipment until visually dry or dripping ceases.

(viii) Solvent agitation, where necessary, is achieved exclusively through pump circulation or by means of a mechanical mixer or ultrasonic agitation. Air or gas agitation shall not be used.

(ix) Solvent spraying, when necessary, is conducted by using only a continuous fluid stream (not a fine, atomized, fan, or shower type spray) at a pressure which does not cause liquid solvent to splash outside of the solvent container.

(x) Waste solvent and contaminated residue, if any, shall be recycled or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter 6.3 (beginning at Section 25100) concerning hazardous waste disposal.

(e) CONTROL EQUIPMENT

(1) In lieu of complying with the requirements in Subsections (d)(1), (d)(2), and (d)(3) an owner/operator may use an airtight/airless cold solvent cleaner provided that all of the following requirements are met:

(i) The equipment is operated in accordance with the manufacturer's specifications and with a door or other pressure sealing apparatus in place during all cleaning and drying cycles;

(ii) All associated pressure relief devices do not allow liquid solvents to drain out. Spills during any solvent transfer shall be cleaned up immediately;

(iii) A differential pressure gauge is installed to indicate the sealed chamber pressure;

(iv) The equipment complies with all applicable operating requirements of Subsection (d)(4).

(2) In lieu of complying with the requirements of Subsections (d)(1), (d)(2), (d)(3), and (d)(5) a person conducting a cold solvent cleaning or stripping operation may use an air pollution control system which:

(i) Has been installed in accordance with an Authority to Construct; and

(ii) Has a combined emissions capture and control efficiency of at least 85% by weight.

(3) A person electing to use control equipment pursuant to Subsection (e)(2) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed emission control and collection system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such a plan shall:

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(2)(ii), such as temperature and/or pressure;

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters; and

(iii) Upon approval by the Air Pollution Control Officer, a person subject to the requirements of Subsection (e)(2) shall implement the Operation and

Maintenance plan and shall comply with the all the provisions of the approved plan.

(f) RECORDKEEPING REQUIREMENTS

(1) Any person conducting a cold solvent cleaning or stripping operation subject to this rule shall maintain the following records:

(i) A current list of solvents and sealing fluids in use, which provides all of the data necessary to evaluate compliance, including but not limited to:

(A) Manufacturer name and identification for each solvent, and

(B) VOC content of solvent expressed in g/l (lbs/gal) of material as used, and density and mix ratios for each solvent.

(2) Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with the requirements of Subsection (f)(1); and

(ii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan pursuant to Subsection (e)(3). Such records shall be sufficient to document continuous compliance with Subsection (e)(2)(ii) during periods of emission producing activities.

All records shall be retained on site for at least three years and shall be made available to the District upon request.

(g) TEST METHODS

(1) The VOC content of cleaning materials shall be determined by the South Coast Air Quality Management District (SCAQMD) Method 313 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry), SCAQMD Method 308 (Quantitation of Compounds by Gas Chromatography), or any other test methods approved by the Environmental Protection Agency (EPA), California Air Resources Board (ARB), and the Air Pollution Control District.

(2) The overall control efficiency of air pollution control equipment operated pursuant to Subsection (e)(2)(ii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA Test Methods 18 and 25 or 25A (40 CFR 60, Appendix A) and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA Test Method 204 and EPA's "Guidelines for Determining Capture Efficiency" dated January 9, 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.



(h) COMPLIANCE SCHEDULE

(1) All new cold solvent cleaning or stripping operations shall comply with the applicable requirements of this rule upon initial startup.

(2) All existing cold solvent cleaning or stripping operations shall comply with the applicable requirements of this rule not later than (12 months after date of adoption).

(3) The owner or operator of existing cold solvent cleaning or stripping equipment that will require modifications pursuant to the requirements of Subsections (d)(1), (d)(3), and/or (d)(5), except for those switching to a water-based solvent with a VOC content 50 g/l or less shall:

(i) By (6 months after date of adoption) submit to the Air Pollution Control Officer an application to modify a Permit to Operate for complying with the applicable requirements of Subsections (d)(1), (d)(3), and/or (d)(5).

(ii) By (12 months after date of adoption) comply with all applicable rule requirements.

(4) The owner or operator of existing cold solvent cleaning or stripping equipment that chooses to comply with the rule by installing air pollution control equipment pursuant to Section (e) of this rule shall:

(i) By (6 months after date of adoption) submit to the Air Pollution Control Officer an application for an Authority to Construct and a Permit to Operate an air pollution control system as specified in Section (e).

(ii) By (12 months after date of adoption) comply with all applicable rule requirements.

3. Proposed new Rule 67.6.2 to read as follows:

RULE 67.6.2 VAPOR DEGREASING OPERATIONS

(Adopted & Effective (date of adoption))

(a) APPLICABILITY

(1) Except as provided in Section (b), this rule is applicable to all vapor degreasing operations.

(2) Rule 66 shall not apply to any vapor degreasing operation.

(b) EXEMPTIONS

(1) This rule shall not apply to the following:

(i) Except for requirements for waste solvent disposal in Subsection (d)(4)(xiii), vapor degreasing operations that exclusively utilize water-based cleaning materials with a volatile organic compound (VOC) content of 50 grams per liter (g/l) of material (0.42 pounds per gallon) or less, as used

It shall be the responsibility of any person conducting such operations to keep a current list of all cleaning materials and the VOC content of each material, as applied, to substantiate this exemption.

(ii) Vapor-phase solder reflow units.

(c) DEFINITIONS

(1) "Airless/Air-Tight Vapor Degreaser" means a system that consists of a sealed vapor degreaser and the devices to condense and recover solvent and emission control devices to remove solvent from all gas streams that vent to the atmosphere. The system must have no open vapor-air interface, and be designed and operated in such a manner as to prevent the discharge or leakage of solvent emissions to the atmosphere during all cleaning and drying operations.

(2) "Batch-loaded Solvent Degreaser" means a degreaser in which any material is placed for cleaning and removed as a single batch after the cleaning is finished.

(3) "CFR" means Code of Federal Regulations.

(4) "Degreaser" means a tank, drum, or other container in which objects to be cleaned are exposed to a solvent or solvent vapors, in order to remove contaminants.

(5) "Exempt Compounds" means the same as defined in Rule 2.

(6) "Existing Vapor Degreasing Operation" means any vapor degreasing operation that is not new.

(7) "Freeboard Height" means the distance from the solvent vapor-air interface to the top of the degreaser tank, based on inside tank dimensions.

(8) "Freeboard Ratio" means the freeboard height divided by the smaller of the interior length or width of the degreaser tank.

(9) "Liquid Leak" means any visible leak of a VOC-containing liquid at a rate in excess of three drops per minute.

(10) "New Vapor Degreasing Operation" means any vapor degreasing operation for which a complete application for an Authority to Construct in San Diego County was submitted after (date of adoption).

(11) "Open-top Vapor Degreaser" means any batch loaded vapor degreaser.

(12) "Perimeter Trough" means a receptacle within the vapor degreaser located below the primary condenser that conveys condensed solvent and atmospheric moisture to a water separator.

(13) "Primary Condenser" means a series of circumferential cooling coils on the inside of walls of a vapor degreaser through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors, thereby creating a concentrated solvent vapor zone.

(14) "Refrigerated Freeboard Chiller" means an emission control device which is mounted above the degreaser's water jacket or primary condenser coils, and which consists of secondary coils that carry a refrigerant to provide a chilled air blanket above the solvent vapor.

(15) "Solvent" means any substance containing an organic compound or combination of organic compounds which is liquid at atmospheric pressure and ambient temperature and which is used as a diluent, thinner, dissolver, viscosity reducer, or cleaning agent, or for other similar purposes.

(16) "Solvent Carry-Out" means solvent carried out of a degreaser that adheres to or is entrapped in the part being cleaned.

(17) "Vapor-Air Interface" means the area of contact between the solvent vapors and air that is contiguous with the air outside the degreaser. The area of the vapor-air interface shall be calculated as the product of the lengths between internal solvent cleaner walls behind the condensing coils.

(18) "Vapor-Phase Solder Reflow Unit" means a device in which parts are immersed in VOC-rich vapor generated by boiling a liquid for heating to melt or soften solder connections of electronic components.

(19) "Vapor Degreaser" means a degreaser in which objects to be cleaned are exposed to a boiling solvent or solvent vapors.

(20) "Vapor Degreasing Operation" means a cleaning operation that is conducted by immersing parts, products, tools or other items in a boiling solvent or in solvent vapors generated by boiling solvent.

(21) "Volatile Organic Compound (VOC)" means any volatile compound containing at least one atom of carbon excluding carbon monoxide, carbon dioxide,

carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds.

(22) "Water-Based Cleaning Material" means cleaning material that consists only of water and VOC and does not contain any exempt compounds.

(23) "Water Separator" means a device that isolates water from a solvent or a mixture of solvents through mechanical or chemical means.

(d) STANDARDS

(1) General Equipment Requirements

A person shall not operate any vapor degreaser unless it is equipped with all of the following:

(i) A cover that can be easily operated without disturbing the vapor layer and that completely covers the solvent tank when work is not performed in the degreaser;

(ii) A primary condenser situated above the boiling solvent;

(iii) A water separator that does not operate by means of evaporation or distillation;

(iv) A perimeter trough;

(v) For vapor degreasers employing sprays:

(A) spray nozzles having a pressure low enough to prevent liquid splashing outside of the tank, and

(B) spray nozzles which produce continuous liquid flow, rather than fine atomized or shower type sprays; or

(C) spray nozzles which are located below the vapor-air interface.

(2) Additional Equipment Requirements

All vapor degreasers shall have one of the following:

(i) A freeboard ratio of at least 1.0; or

(ii) A refrigerated freeboard chiller, where the chilled air blanket temperature measured in degrees Fahrenheit at the center of the air blanket is not greater than 40% of the initial boiling point of the solvent; or

(iii) Be designed in such a manner that its cover or door opens only when the dry part is entering or exiting the degreaser.

### (3) Safety Devices

Vapor degreasers shall be equipped with the following safety devices:

(i) A device which shuts off the sump heat if the condenser's coolant stops circulating. This requirement does not apply to vapor degreasers equipped with refrigerated condensers; and

(ii) A device which shuts off the sump heat if the condenser's coolant or refrigerant temperature becomes higher than the designed operating temperature; and

(iii) A device which is only manually resettable and which shuts off the sump heat if the vapor level rises above the designed operating level;

(iv) For vapor degreasers employing sprays, a device that prevents spray pump operation if the solvent vapor-air interface temperature falls below the designed operating level.

### (4) Operating Requirements

A person shall not operate a vapor degreaser unless all of the following requirements are met:

(i) A permanent, conspicuous, legible label listing the applicable operating requirements is posted on or near the degreaser;

(ii) The degreaser and any emission control equipment are installed and maintained in proper working order. The emission control equipment shall be properly operating at all times when parts are being cleaned or solvent is being heated in the degreaser;

(iii) The cover is not removed except to process workload or to perform maintenance;

(iv) There are no liquid leaks from any portion of the degreaser. Upon detection of a liquid leak, the leak shall be repaired immediately, or the degreaser shall be shut down and drained in a manner that minimizes emissions;

(v) Ventilation fans are not positioned near the degreaser openings in such a way as to disturb the vapor zone;

(vi) At startup, the primary condenser and the refrigerated freeboard chiller, if required, are turned on before the sump heater is turned on. At shutdown, the sump heater is turned off before the primary condenser and refrigerated freeboard chiller are turned off;

(vii) No porous or absorbent materials, such as cloth, leather, wood, or rope are cleaned in a vapor degreaser;

(viii) Solvent is not sprayed above the vapor-air interface;

(ix) Exhaust ventilation rate does not exceed 65 cubic feet per minute per square foot (20 cubic meters per minute per square meter) of the degreaser vapor-air interface area, unless necessary to meet OSHA requirements;

(x) Workloads placed in the degreaser occupy a horizontal cross-sectional area that is less than one half of the vapor-air interface area;

(xi) The water separator is maintained to prevent water from returning to the surface of the boiling solvent sump or from becoming visibly detectable in the solvent exiting the water separator; and

(xii) Solvent carry-out is minimized by all of the following methods:

(A) racking parts for full drainage;

(B) moving parts in and out of the degreaser at a speed of less than 11 feet per minute (3.3 meters per minute);

(C) cleaning the workload in the vapor zone until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal; and

(E) not removing parts from the degreaser until they are visually dry.

(xiii) Waste solvent and contaminated residue, if any, shall be recycled, or disposed of according to requirements based on the California Health and Safety Code, Division 20, Chapter 6.3 (beginning at section 25100) concerning hazardous waste disposal.

(e) CONTROL EQUIPMENT

(1) In lieu of complying with the equipment requirements in Subsections (d)(1), (d)(2), and (d)(3), an owner/operator may use an airtight/airless vapor degreaser provided that all of the following requirements are met:

(i) The degreaser is operated in accordance with the manufacturer's specifications and is equipped with a door or other pressure sealing apparatus in place during all cleaning and drying cycles;

(ii) All associated pressure relief devices do not allow liquid solvents to drain out. Spills during any solvent transfer shall be wiped up immediately;

(iii) A differential pressure gauge is installed to indicate the sealed chamber pressure;

(iv) The applicable operating requirements of Subsection (d)(4) are met.

(2) In lieu of complying with the requirements of Subsections (d)(1), (d)(2), and (d)(3), an owner/operator of a vapor degreaser may use an air pollution control system which:

(i) Has been installed in accordance with an Authority to Construct; and

(ii) Has a combined emissions capture and control efficiency of at least 85% by weight.

(3) A person electing to use control equipment pursuant to Subsection (e)(2) shall submit to the Air Pollution Control Officer for approval an Operation and Maintenance plan for the proposed air pollution control system and receive approval prior to operation of the control equipment. Thereafter, the plan can be modified, with Air Pollution Control Officer approval, as necessary to ensure compliance. Such plan shall

(i) Identify all key system operating parameters. Key system operating parameters are those necessary to ensure compliance with Subsection (e)(2)(ii), such as temperature and/or pressure;

(ii) Include proposed inspection schedules, anticipated ongoing maintenance, and proposed recordkeeping practices regarding the key system operating parameters; and

(iii) Upon approval of the Air Pollution Control Officer, a person subject to the requirements of Subsection (e)(2) shall implement the Operation and Maintenance plan and shall comply with all the provisions of the approved plan.

(f) RECORDKEEPING REQUIREMENTS

(1) Any person conducting vapor degreasing operations subject to this rule shall maintain the following records:

(i) A current list of cleaning materials in use, which provides all of the data necessary to evaluate compliance, including but not limited to:

(A) Manufacturer name and identification for each material;

(B) VOC content expressed in g/l (lb/gal) of material as used, and density and mixed ratios for each component; and

(C) Initial boiling point of a cleaning material if a refrigerated freeboard chiller is used.

(2) Any person using control equipment pursuant to Section (e) of this rule shall:

(i) Maintain records in accordance with the requirements of Subsection (f)(1); and

(ii) Maintain daily records of key system operating parameters as approved in the Operation and Maintenance plan pursuant to Subsection (e)(3). Such records shall be sufficient to document continuous compliance with Subsection (e)(2)(ii) during periods of emission producing activities.

All records shall be retained on site for at least three years and shall be made available to the District upon request.

(g) TEST METHODS

(1) The VOC content of cleaning materials shall be determined by the South Coast Air Quality Management District (SCAQMD) Method 313 (Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry), SCAQMD Method 308 (Quantitation of Compounds by Gas Chromatography), or any other test methods approved by the Environmental Protection Agency (EPA), California Air Resources Board (ARB), and the Air Pollution Control District.

(2) Measurement of initial boiling point of solvents shall be conducted in accordance with ASTM Standard Test Method D1078-03 for distillation range of volatile organic liquids, or its most current version,

(3) Hoist speed shall be determined by measuring the distance traveled by the hoist per unit of time.

(4) Temperatures in the vapor zone shall be measured with the use of a properly calibrated temperature probe, with an accuracy of  $\pm 1^\circ \text{F}$ .

(5) The overall control efficiency of air pollution control equipment operated pursuant to Subsection (e)(2)(ii) shall be determined by multiplying the capture efficiency of the emission collection system by the control efficiency of the air pollution control device. The control efficiency of the air pollution control device shall be determined using EPA Test Methods 18 and 25 or 25A (40 CFR Part 60, Appendix A) and in accordance with a protocol approved by the Air Pollution Control Officer. Capture efficiency shall be determined according to EPA Test Method 204 and EPA's "Guidelines for Determining Capture Efficiency" dated January 9, 1995. Subsequent to the initial compliance demonstration period, appropriate key system operating parameters as determined by the Air Pollution Control Officer may be used as indicators of the performance of the emission control system.

(h) COMPLIANCE SCHEDULE

(1) All new vapor degreasing operations shall comply with the applicable requirements of this rule upon initial startup.

(2) All existing vapor degreasing operations, except for those specified in Subsection (h)(3) or (h)(4), shall comply with the applicable requirements of this rule after (date of adoption).

(3) An owner or operator of any existing vapor degreaser that does not comply with one of the requirements of Subsection (d)(2) as of (date of adoption) shall:



(i) By (6 months after date of adoption) submit to the Air Pollution Control Officer an application to modify a Permit to Operate for complying with the applicable requirements of Subsections (d)(2);

(ii) By (12 months after date of adoption) comply with all applicable rule requirements.

(4) An owner or operator of an existing vapor degreaser that chooses to comply with the rule by installing air pollution control equipment pursuant to Section (e) of this rule shall:

(i) By (6 months after date of adoption) submit to the Air Pollution Control Officer an application for an Authority to Construct and a Permit to Operate an air pollution control system as specified in Section (e);

(ii) By (12 months after date of adoption) comply with all applicable rule requirements.

IT IS FURTHER RESOLVED AND ORDERED that the subject addition of Rules 67.6.1 and 67.6.2 of Regulation IV shall take effect upon adoption.

IT IS FURTHER RESOLVED AND ORDERED that the subject repeal of Rule 67.6 of Regulation IV shall take effect 12 months after the date of adoption of new Rules 67.6.1 and 67.6.2.

PASSED AND ADOPTED by the Air Pollution Control Board of the San Diego County Air Pollution Control District, State of California, this 23rd day of May, 2007, by the following votes:

**AYES: Cox, Jacob, Slater-Price, Roberts, Horn**

APPROVED AS TO FORM AND LEGALITY  
COUNTY COUNSEL

BY H. Dutton  
SENIOR DEPUTY

STATE OF CALIFORNIA)  
County of San Diego)<sup>SS</sup>

I hereby certify that the foregoing is a full, true and correct copy of the Original Resolution entered in the Minutes of the Board of Supervisors.

THOMAS J. PASTUSZKA  
Clerk of the Board of Supervisors

By: Catherine Santos  
Catherine Santos, Deputy



Resolution No. 07-112  
05/23/07 (APCD 2)

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***RULE 67.6 - SOLVENT CLEANING OPERATION***  
***is to be deleted in its entirety 12 months***  
***after the date of adoption of new Rules 67.6.1 and 67.6.2.***

**RULE 67.6. SOLVENT CLEANING OPERATIONS** (Effective 7/25/79:  
Rev. Effective 10/16/90)

(a) **APPLICABILITY**

This rule is applicable to all surface cleaning or stripping operations or gas-path cleaners which use solvents for the purpose of removing surface impurities or coatings, and preparing parts or products for painting, plating, repair, inspection, assembly, heat treatment, or for any other use. This rule is also applicable to operations which immerse items in solvent-rich atmospheres for heating or any other purpose, including vapor-phase solder reflow operations.

(b) **EXEMPTIONS**

(1) **Cleaning Material**

The provisions of Section (d) shall not apply to any solvent cleaner installed, or for which application for an Authority to Construct was received, before September 1, 1980, and which, prior to and since September 1, 1980, has continuously employed exclusively any of the following cleaning materials:

- (i) 1,1,1-Trichloroethane
- (ii) Trichlorotrifluoroethane
- (iii) Methylene Chloride

The provisions of Section (d) shall not apply to any cold solvent cleaner with a liquid surface area less than 5 square feet and vapor solvent cleaner with a vapor-air interface less than 5 square feet installed, or for which application for an Authority to Construct was received before October 16, 1990, and that employ any of the following cleaning materials:

- (i) 1,1,1-Trichloroethane
- (ii) Trichlorotrifluoroethane
- (iii) Methylene Chloride

(2) Wipe Cleaning

The provisions of Section (d) shall not apply to any solvent cleaning operation employing only wipe cleaning.

(3) The provisions of Section (d) shall not apply to any cold solvent cleaner dip tank with a liquid surface area of 1 square foot (0.09 square-meters) or less, or with a capacity of 1 gallon or less.

(4) Operations Subject to Rules 67.9 or 67.11.

The provisions of Section (d) shall not apply to non-immersion stripping or coating equipment cleanup operations subject to the requirements of Rule 67.9 or Rule 67.11.

(5) Dry Cleaning Operations.

The provisions of Section (d) shall not apply to the application of solvent to garments, fabrics, or leather for the purposes of cleaning when such applications are subject to the requirements of Rule 67.2 or Rule 67.8.

(c) **DEFINITIONS**

(1) **"Cold Solvent Cleaner"** means any non-boiling solvent cleaner, excluding conveyORIZED solvent cleaners, vapor solvent cleaners, and gas-path cleaners, and wipe cleaning operations, and including spray sinks, spray booths, strippers, remote-reservoir cleaners, and dip tanks. Solvent cleaners which employ heated but non-boiling solvents shall be considered cold solvent cleaners.

(2) **"Conveyorized Cold Solvent Cleaner"** means any continuously loaded, solvent cleaner which is not a conveyORIZED vapor solvent cleaner.

(3) **"Conveyorized Vapor Solvent Cleaner"** means any continuously loaded solvent cleaner which immerses parts in boiling solvent or in solvent vapors generated by boiling solvent. Conveyorized solvent cleaners which contain any vapor solvent cleaning sections shall be considered conveyORIZED vapor solvent cleaners.

(4) **"Existing Unit"** means, for the purposes of this rule, one which was installed and operating in San Diego County before October 16, 1990.

(5) **"Freeboard Chiller"** means a condenser placed above the primary condenser which provides a blanket of cold air above the vapor-air interface to reduce emissions.

(6) **"Freeboard Height"** means

(i) For cold solvent cleaner dip tanks, the distance from the maximum solvent level line to the top of the tank.

(ii) For open-top vapor solvent cleaners, the distance from the solvent vapor-air interface to the top of the solvent cleaner tank.

(iii) For conveyORIZED solvent cleaners, the distance from the top of the solvent or solvent vapor-air interface to the bottom of the lowest entrance of the solvent cleaner.

(7) **"Freeboard Ratio"** means the freeboard height divided by the smaller of the interior length or width of the solvent cleaner tank.

(8) **"Gas-Path Cleaner (Corrosion Control Cart)"** means equipment which applies solvent to the interiors of gas turbines or jet engines for removal of corrosion or combustion deposits.

(9) **"Liquid Leak"** means any visible leak of liquid solvent at a rate in excess of three drops per minute.

(10) **"Liquid Surface Area"** means the area of the interface between the liquid solvent available for dipping and the air which is contiguous with the outside of the solvent cleaner. The area of surfaces wetted by the solvent before it drains into a reservoir in a section of the solvent cleaner used for parts drainage and not used for dipping shall not be included in the liquid surface area.

(11) **"Open-top Vapor Solvent Cleaner"** means any batch loaded, vapor solvent cleaner.

(12) **"Organic Compound"** means any compound of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and methane) which might be emitted during use, processing, application, curing, or drying of a solvent or other material.

(13) **"Remote-Reservoir Solvent Cleaner"** means any batch-loaded cold solvent cleaner in which liquid solvent is pumped to a sink-like work area which drains back into a liquid solvent tank, which is completely enclosed except for the drain opening, while parts are being cleaned. For the purposes of this rule any cold solvent cleaner except for wipe stations, dip tanks, and gas-path cleaners shall be considered a remote-reservoir solvent cleaner.

(14) **"Solvent"** means, for the purposes of this rule, any liquid containing more than 10 percent by weight of organic compounds and which is used to dissolve, clean, strip, or remove impurities, coatings, stains, or films from surfaces.

(15) **"Solvent Cleaner"** means a device which applies solvent or in which solvent is applied to items for the purpose of removing or stripping impurities, coatings, stains, or films.

(16) **"Stripper"** means a solvent cleaner in which solvent is applied to a surface for the purpose of removing a film, coating, or stain, including, but not limited to, dip tanks and spray sinks.

(17) **"Stripping"** means applying solvent to remove a coating or film from a surface.

(18) **"Vapor-Air Interface"** means the area of contact between the solvent vapors and air which is contiguous with the air outside the solvent cleaner.

(i) The area of the vapor-air interface shall be calculated as the product of the lengths between internal solvent cleaner walls behind the condensing coils.

(ii) The perimeter of the vapor-air interface shall be calculated as the sum of the lengths of the internal solvent cleaner walls behind the condensing coils.

(19) **"Vapor-Phase Solder Reflow Unit"** means a device in which parts are immersed in an organic compound-rich vapor generated by boiling a liquid for heating to melt or soften solder connections of electronic components. For the purposes of this rule batch-loaded vapor-phase solder reflow units shall be considered open-top vapor solvent cleaners and continuously loaded vapor-phase solder reflow units shall be considered conveyORIZED vapor solvent cleaners.

(20) **"Vapor Solvent Cleaner"** means a solvent application device in which parts are immersed in an organic compound-rich vapor generated by boiling a liquid for cleaning. For the purposes of this rule vapor-phase solder reflow units shall be considered to be vapor solvent cleaners. For the purposes of this rule solvent cleaners which immerse parts in boiling solvent shall be considered vapor solvent cleaners.

(21) **"Wipe Cleaning"** means that method of cleaning which utilizes a material, such as a rag, wetted with a solvent, coupled with a physical rubbing process to remove contaminants from surfaces.

(d) **STANDARDS AND REQUIREMENTS**

(1) **General Equipment Requirements.** A person shall not operate a solvent cleaner unless all of the following are used:

(i) A container for the solvent ;

(ii) An apparatus or cover which completely covers the solvent container when not processing work;

(iii) A facility for draining cleaned parts such that drained solvent is returned to the container; and

(iv) A permanent, conspicuous, legible label listing the applicable operating requirements contained in Subsections (d)(5) through (d)(9).

(2) Cold Solvent Cleaner Equipment Requirements. A person shall not operate a cold solvent cleaner unless the requirements of Subsection (d)(1) are met and the following are used:

(i) A cover which is easily operable with one hand or mechanically assisted.

(ii) For dip tanks or dip sections, a readily visible, permanent mark or line indicating the maximum allowable solvent level.

(iii) For dip tanks, a freeboard ratio greater than or equal to 0.5.

(iv) For remote-reservoir cleaners, a solvent with a vapor pressure of organic compounds less than 33 mm Hg at 38°C (0.6 psia at 100°F): This provision does not apply to stripping of wood products with any combination of 1,1,1-trichloroethane or methylene chloride.

(v) For cold solvent cleaners employing sprays, spray nozzles which produce continuous liquid flows, not fine atomized nor shower-type sprays.

(vi) For cold solvent cleaners employing solvent with a vapor pressure of organic compounds greater than 33 mm Hg (0.6 psia) at 38°C (100°F) or employing solvent heated above 50°C (122°F).

(A) an internal drainage device, such that parts are enclosed under the cover of the solvent cleaner while draining; and

(B) a freeboard ratio greater than or equal to 0.75; or

(C) a water cover, provided the solvent is insoluble in and denser than water.

(3) Open-top Vapor Solvent Cleaner and ConveyORIZED Solvent Cleaner Equipment Requirements: A person shall not operate an open-top vapor solvent cleaner or conveyORIZED solvent cleaner unless the requirements of Subsection (d)(1) are met and the following are used:

(i) A cover which can be easily operated without disturbing the vapor layer;

(ii) A primary condensing coil situated above the boiling solvent, except for conveyORIZED cold solvent cleaners;

(iii) All of the following safety devices, except for conveyORIZED cold solvent cleaners:

(A) a device which shuts off the sump heat if the condenser coolant stops circulating, except for refrigerated condensers;

(B) a device which shuts off the sump heat if the condenser coolant or refrigerant becomes warmer than the designed operating temperature;

(C) a device which shuts off the sump heat if the vapor level rises above the designed operating level and which is only manually resettable; and

(D) for solvent cleaners of the spray type, a device which prevents spray pump operation if the solvent vapor-air interface falls below the designed operating level.

(iv) For solvent cleaners employing sprays:

(A) spray nozzles which produce continuous liquid flows, not fine atomized or shower type sprays; or

(B) sprays which are located below the vapor-air interface.

(v) For open-top vapor solvent cleaners with a vapor-air interface area greater than 1 square meter (10.76 square feet), conveyORIZED vapor solvent cleaners with an vapor-air interface area greater than 2 square meters (21.52 square feet), and conveyORIZED cold solvent cleaners with a liquid surface area greater than 2 square meters (21.52 square feet).

(A) an automated cover-elevator system which opens only when the dry part is actually entering or exiting the solvent cleaner, except for conveyORIZED solvent cleaners; or

(B) a freeboard ratio greater than or equal to 0.75 and a powered cover, except for conveyORIZED solvent cleaners; or

(C) a refrigerated freeboard chiller having a minimum of 500 BTU per hour cooling capacity per foot along the vapor-air interface perimeter or a refrigerated condenser coil having a minimum cooling capacity of 100 percent of the boiling sump heat input rate; or



(D) a carbon adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of vapor-air interface area and a control efficiency of 90 percent or more by weight of organic compounds ; or

(E) a control system which has a control efficiency at least as effective as any of the above and which is approved by the Air Pollution Control Officer on an annual basis and meets the requirements of Section (e).

(vi) For all conveyORIZED solvent cleaners, the following:

(A) a drying tunnel, which is an extension from the exit of the conveyORIZED solvent cleaner to allow more time for the cleaned parts to drain completely, or other means sufficient to prevent cleaned parts from carrying solvent liquid out of the solvent cleaner, and

(B) minimized openings such that entrances and exits shall silhouette work loads with an average clearance between parts and the edge of the solvent cleaner opening less than 10 centimeters or less than 10 percent of the opening width.

(4) Gas-Path Cleaner (Corrosion Control Cart) Requirements: A person shall not operate a gas-path cleaner unless the requirements of Subsection (d)(1) are met and a solvent with a vapor pressure of organic compounds less than 33 mm Hg at 38°C (0.6 psia at 100°F) and greater than 75 percent water by volume or a vapor pressure of organic compounds less than 1 mm HG at 38°C (0.6 psia at 100°F) and greater than 50 percent water by volume is used.

(5) General Operating Requirements: Any person who operates a solvent cleaner shall conform to the following operating requirements.

(i) The solvent cleaner, ventilation systems, and emission control equipment shall be installed and maintained in proper working order. The ventilation systems and emission control equipment shall be properly operating at all times when parts are being cleaned or solvent is being heated in the solvent cleaner.

(ii) There shall be no liquid solvent leaks from any portion of the degreasing equipment.

(iii) Solvent, including waste solvent and distillation residue, shall not be stored or disposed of in a manner that will cause or allow evaporation into the atmosphere.

(iv) Distillation residues shall not contain more than 10 percent solvent by volume after distillation recovery of waste.

(v) Devices designed to cover the solvent shall not be removed except to process work or to perform maintenance.

(vi) Solvent agitation shall be achieved only by means of pump circulation, mechanical mixing, or with ultrasonics. Gas agitation shall not be used.

(vii) For solvent cleaners employing sprays, except gas-path cleaners, the stream pressure shall be low enough to prevent liquid splashing outside the container.

(viii) No porous or absorbent materials, such as cloth, leather, wood, or rope shall be cleaned with solvent. This provision does not apply to stripping of wood products using solvents which are more than 50% by volume of any combination of 1,1,1-trichloroethane and methylene chloride.

(ix) Solvent cleaner operators shall maintain records of the types, amounts, and dates of solvents added to and removed from each solvent cleaner. The records shall be maintained for three years and made available to the Air Pollution Control Officer immediately upon request.

(6) Cold Solvent Cleaner Operating Requirements: Any person who operates a cold solvent cleaner shall conform to requirements of Subsection (d)(5) and the following:

(i) Cleaned parts shall be drained until dripping ceases.

(ii) The solvent cleaner liquid level shall not be above the marked maximum solvent level line.

(iii) For remote-reservoir cleaners, the cover of the solvent reservoir shall be closed at all times except when the reservoir is being cleaned or repaired, and

(iv) For remote-reservoir cleaners, the portion of the solvent cleaner where parts are cleaned shall not be exposed to drafts greater than 40 meters per minute (131 feet per minute).

(7) Open-top Vapor Solvent Cleaner Operating Requirements: Any person who operates an open-top vapor solvent cleaner shall conform to the requirements of Subsection (d)(5) and the following:

(i) Solvent carry-out shall be minimized by all of the following methods:

(A) racking parts for full drainage;

(B) moving parts in and out of the solvent cleaner at a speed less than 3.3 meters per minute;

(C) cleaning the workload in the vapor zone until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal; and

(E) not removing parts from the solvent cleaner until visually dry.

(ii) Solvent shall not be sprayed above the vapor-air interface.

(iii) Solvent cleaner exhaust ventilation systems, if used, shall not exceed 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of solvent cleaner vapor-air interface area, unless necessary to meet OSHA requirements. Comfort ventilation fans shall not be positioned near the solvent cleaner opening in such a way as to disturb the vapor zone. Lip ventilation, located below the cover of the solvent cleaner, if used, shall be turned off when the solvent cleaner is covered.

(iv) Water shall not be visibly detectable in the organic compound phase exiting the water separator, nor shall organic compounds be visibly detectable in the aqueous phase leaving the separator.

(v) Workloads placed in the solvent cleaner shall have an occupied, horizontal cross-sectional area less than one half of the vapor-air interface area.

(vi) During start up, the primary condenser and refrigerated freeboard chiller, if used, shall be turned on either simultaneously or before the sump heater. During shutdown, the sump heater shall be turned off, either simultaneously or before the condenser coolant and refrigerated freeboard chiller are turned off. The solvent cleaner shall be covered whenever the primary condenser is turned off.

(8) Conveyorized Solvent Cleaner Operating Requirements: Any person who operates a conveyorized solvent cleaner shall conform to the requirements of Subsection (d)(5) above and the following:

(i) Solvent carry-out shall be minimized by the following methods:

(A) racking parts for best drainage;

(B) for conveyorized vapor solvent cleaners, maintaining vertical conveyor speed at less than 3.3 meters (11 feet) per minute; and

(C) for conveyorized cold solvent cleaners, draining parts until dripping ceases.

(ii) Solvent cleaner exhaust ventilation systems shall not exceed 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of solvent cleaner open area, unless necessary to meet OSHA requirements. Comfort ventilation fans shall not be positioned near the solvent cleaner opening in such a way as to disturb the vapor zone.

(iii) Water shall not be visibly detectable in the organic compound phase exiting the water separator, nor shall organic compounds be visibly detectable in the aqueous phase leaving the separator.

(iv) During startup, the primary condenser and refrigerated freeboard chiller, if used, shall be turned on either simultaneously or before the sump heater. During shutdown, the sump heater shall be turned off, either simultaneously or before the condenser coolant and refrigerated freeboard chiller are turned off. The solvent cleaner shall be covered whenever the primary condenser is turned off.

(9) Gas-Path Cleaner (Corrosion Control Cart) Operating Requirements: Any person who operates a gas-path cleaner shall conform to the requirements of Subsection (d)(5) and the following:

(i) Cleaned parts shall be drained until dripping ceases.

(ii) The cover of the solvent reservoir shall be closed at all times except when the reservoir is being cleaned or repaired.

(iii) Solvent cleaning operations shall not be conducted in areas with air flows greater than 135 meters per minute (5 miles per hour).

**(e) ALTERNATIVE CONTROL**

(1) The provisions of Section (d) shall not apply if alternative methods which reduce emissions of organic compounds from the solvent cleaning operations by at least 85 percent by weight are employed, such as:

(i) Venting the organic compound emissions from a solvent cleaning operation through an air pollution control device approved by the Air Pollution Control Officer,

(ii) Reducing the emissions of organic compounds from a solvent cleaning operation through the use of low volatility cleaning materials.

When employing low volatility cleaning materials, the reduction shall be determined by comparing the organic compound emissions which occur when employing the low volatility cleaning materials with the organic compound emissions that occur when employing the organic solvent cleaning material that

was in use on or before September 1, 1980. Such demonstration shall be done using methods and procedures approved by the Air Pollution Control Officer.

(2) Any person electing to comply by one or more alternative control measures shall first submit a plan to the Air Pollution Control Officer, for approval, showing how compliance will be achieved. Such plan shall include documentation sufficient to identify and characterize the cleaning materials in use on or before September 1, 1980 and shall include a protocol describing how compliance shall be demonstrated. The protocol shall include methods and procedures approved by the Air Pollution Control Officer.

(3) Any person electing to comply by one or more alternative control measures shall first submit an application for authorization to construct and permit to operate or for modified permit to operate to the Air Pollution Control Officer. Such person shall reimburse the District for all District costs incurred in evaluating an alternative compliance demonstration. The District costs shall be determined using the labor rates specified in Rule 40, Schedule 94.

(4) An alternative control measure subject to the provisions of this section shall be submitted as a Source-Specific Revision to the State Implementation Plan (SIP) for Solvent Metal Cleaning by the USEPA. The Air Pollution Control Officer shall not accept a method as equivalent under this Section unless it has been accepted as a Source-Specific SIP Revision.

**AIR POLLUTION CONTROL DISTRICT  
SAN DIEGO COUNTY**

**PROPOSED ADOPTION OF NEW RULES**

**67.6.1 – COLD SOLVENT CLEANING AND STRIPPING OPERATIONS,  
67.6.2 – VAPOR DEGREASING OPERATIONS AND  
REPEAL OF CURRENT RULE 67.6 – SOLVENT CLEANING OPERATIONS**

**WORKSHOP REPORT**

A workshop notice was mailed to all companies in San Diego County that may be subject to proposed new Rules 67.6.1 – Cold Solvent Cleaning and Stripping Operations and 67.6.2 – Vapor Degreasing Operations. Notices were also mailed to all Economic Development Corporations and Chambers of Commerce in San Diego County, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and other interested parties.

The workshop was held on July 11, 2006, and was attended by 43 people. The comments and Air Pollution Control District (District) responses are as follows:

**PROPOSED NEW RULE 67.6.1**

**1. WORKSHOP COMMENT**

If solvent cleaning is conducted by applying solvent to a rag and then cleaning the part with this rag, would this type of cleaning be subject to Rule 67.6.1?

**DISTRICT RESPONSE**

No, this type of solvent cleaning meets the definition of wipe cleaning. Rule 67.6.1 is not applicable to cleaning with rags.

**2. WORKSHOP COMMENT**

Are paint spray gun cleaners subject to this regulation?

**DISTRICT RESPONSE**

No, this rule is not applicable to cleaning of paint spray guns in gun cleaners. Please see Subsection (a)(2) of the rule.

3. **WORKSHOP COMMENT**

Is cleaning conducted for aerospace component maintenance operations exempt from this rule?

**DISTRICT RESPONSE**

No, aerospace component maintenance cleaning operations are only exempt from the requirement to use solvents with volatile organic compound (VOC) content limit of 50 grams per liter (g/l) or less. These operations must be conducted in compliance with all equipment and operational requirements of the rule.

4. **WORKSHOP COMMENT**

Does this rule apply to solvent cleaning conducted in a container with a capacity less than one gallon?

**DISTRICT RESPONSE**

No, cold solvent cleaning or stripping operations conducted in a tank with a capacity of one gallon or less are exempt from this rule.

5. **WORKSHOP COMMENT**

Some air districts exempt tanks with a capacity of two gallons or less from their solvent cleaning rule requirements. The District should increase the size of small cleaners eligible for exemption from one gallon to two gallons to be consistent with other districts.

**DISTRICT RESPONSE**

The District disagrees. Most air districts in California exempt solvent cleaners with a capacity of one gallon or less, or with a liquid surface area of one square foot or less. Several districts exempt specialty cleaners with a capacity of two gallons or less from some parts of their rule, but none have an outright exemption for cleaners with a capacity of two gallons or less. The District will maintain the one gallon capacity exemption.

6. **WORKSHOP COMMENT**

The District should consider exempting solvents with very low vapor pressure (for example, with a vapor pressure < 2 mm Hg) from the VOC content limit.

**DISTRICT RESPONSE**

The District disagrees. While evaporation rate of low volatility cleaning solvents is lower than high volatility solvents, a large part of emissions from solvent cleaning is a result of a solvent carry-out. This solvent will eventually evaporate into the atmosphere. Therefore, providing

vapor pressure limits in the rule in lieu of a VOC content limit would negatively affect the total amount of VOC emission reductions from the proposed rule. Please see District response to Comment No. 7.

**7. WORKSHOP COMMENT**

Rule 67.6.1 should exempt cold solvent cleaning operations that use conventional solvents in very small quantities from the VOC content limit.

**DISTRICT RESPONSE**

The District disagrees. Most cold solvent cleaning operations, especially those conducted in remote reservoir cleaners, have a very low solvent usage. Individually, each cold solvent cleaning operation is not a large source of VOC emissions, but the combined emissions from this equipment are over 280 tons per year in San Diego County. Exempting cleaning operations using conventional solvents in very small quantities would significantly reduce the emission reduction potential of the new rule.

**8. WORKSHOP COMMENT**

Subsection (c)(13)(ii), defines a freeboard height for remote reservoir cleaner. How is this freeboard height measured?

**DISTRICT RESPONSE**

The freeboard height for a remote reservoir cleaner is measured from the bottom of the sink or work area to the top of the sink or work area. Subsection (c)(13)(ii) has been revised to clarify this definition.

**9. WORKSHOP COMMENT**

If a cold solvent cleaner uses a solvent with the VOC content of 50 g/l or less, does the cleaner still require a permit from the District?

**DISTRICT RESPONSE**

Cold solvent cleaning operations using water-based solvents complying with the VOC content limit of 50 g/l or less are exempt from the District permit requirements. Currently, District Rule 11 (Exemptions from Permit Requirements) contains an exemption for all cold solvent cleaning operations using a water-based solvent with the VOC content not exceeding 10% by weight. Rule 11 is being revised to reduce this exemption threshold to 50 g/l or less to be consistent with proposed Rule 67.6.1.



However, cold solvent cleaning operations using solvents with a VOC content of 50 g/l or less and containing exempt compounds must still comply with operational and equipment requirements of the rule and therefore will need a permit.

**10. WORKSHOP COMMENT**

How much does it cost for a facility to obtain a permit for a cold solvent cleaner?

**DISTRICT RESPONSE**

The cost of a permit for a cold solvent cleaner depends whether the cleaner is a remote reservoir or a dip tank. The cost also depends on the size of the tank. The District charges an initial application fee for each emission unit, which includes a source category fee, a processing fee, and an emissions fee. A renewal fee per unit is charged each year after the first year of operation. For example, an initial application fee for a cold solvent degreaser with a liquid surface area of five square feet or less is \$451 and an annual renewal fee is \$75. District permit fees are provided in Rule 40 (Permit and Other Fees). Please see Fee Schedule 28 of Rule 40.

The District also provides a reduction in fees when a company applies for multiple permits for similar units at a single facility. Explanation of the reduced fee for similar equipment is contained in Rule 40, Subsection (d)(8).

**11. WORKSHOP COMMENT**

Subsection (b)(1)(vi) exempts cleaning or stripping operations using exclusively water-based solvent with a VOC content of less than 50 g/l, but then Subsection (d)(1) requires all solvents to have a VOC content of 50 g/l or less. Is there a difference between these two requirements?

**DISTRICT RESPONSE**

The exemption in Subsection (b)(1)(vi) only applies to cleaning operations using water-based solvents. If a facility complies with the 50 g/l VOC content limit by using a water-based solvent, then the equipment, operational, and recordkeeping requirements do not apply to that operation. The facility is only required to keep records of the VOC content of solvents used.

Conversely, if a facility conducting a cold solvent-cleaning operation complies with the VOC content requirement using solvents containing exempt compounds, such as acetone, then the equipment, operational, and recordkeeping requirements of the rule also apply to the operation.

**12. WORKSHOP COMMENT**

Will facilities have to replace their current cold solvent degreasers to comply with the new rule? If so, has the District considered the cost of this equipment replacement?

**DISTRICT RESPONSE**

If a facility chooses to comply with the VOC content requirement by replacing a high VOC content solvent with a water-based solvent, the facility will probably have to replace existing equipment. For example, existing solvent cleaners usually do not have a heating unit while most water-based solvents have to be heated to properly clean parts. Other degreasers may have to be replaced because their material is not corrosion-resistant and will not be compatible with water-based solvents.

The District has considered the cost of replacing degreasers in its preliminary analysis of the new rule costs to industry. This analysis showed that the cost-effectiveness of the proposed Rule 67.6.1 (i.e., annual equipment and operational costs per pound of VOC emissions reduced) is within the limits used by the District as guidance in adopting rules regulating VOC emissions.

**13. WORKSHOP COMMENT**

The proposed Rule 67.6.1 seems very similar to South Coast Air Quality Management District (SCAQMD) Rule 1122, which requires the use of solvents with the VOC content of 25 g/l or less for cold solvent cleaning operations. Will the District accept solvents specified in the SCAQMD Clean Air Solvent list as meeting the requirements of Rule 67.6.1?

**DISTRICT RESPONSE**

Yes, solvents on the SCAQMD Clean Air Solvent list will meet Rule 67.6.1 VOC content requirement because these solvents are certified to have VOC content 25 g/l or below.

**14. WORKSHOP COMMENT**

The solvent usage in San Diego County has decreased over the past three to four years. The price of solvent has significantly risen over the past ten years, causing several facilities in San Diego County to discontinue using solvents solely due to economic constraints and without any regulatory requirements. Some facilities still use conventional solvents because waster-based solvents do not work in all situations, especially for a heavy-duty cleaning job.

**DISTRICT RESPONSE**

The proposed rule exempts some specialized solvent cleaning operations from the requirement to use a solvent with a VOC content of 50 g/l or less. The exemptions include cleaning of aerospace components, optical components, electrical components, and electronics. If there are other specific cleaning types where it is not feasible to use a solvent with a low VOC content, the District will consider exempting those operations. Such information must be provided in a timely manner to the District before the proposed rule is submitted to the Air Pollution Control Board for adoption in early 2007.

It should be noted that District staff has spoken to many people in a variety of industries that use water-based or exempt compound based solvents for cleaning operations. District staff visited

several facilities that exclusively use water-based solvents for cleaning. The District has also reviewed technical reports prepared by and for other local air districts. Based on this information, the District has concluded that these solvents are technically feasible in most circumstances.

**15. WORKSHOP COMMENT**

With water-based cleaning the amount of hazardous waste generated at a facility will increase because, unlike solvents, water-based materials cannot be recycled cost-effectively.

**DISTRICT RESPONSE**

The District understands this concern and is aware that water-based cleaning potentially generates hazardous waste. The District considered the cost of hazardous waste disposal in assessing the cost-effectiveness of the rule.

**16. WORKSHOP COMMENT**

What is the VOC limit in the existing Rule 67.6?

**DISTRICT RESPONSE**

Current District Rule 67.6 does not have a VOC content limit for cleaning solvents. It regulates VOC emissions by providing specified equipment and operational requirements for high volatility and low volatility solvents. The new rule applies a different strategy for reducing emissions from solvent cleaning operations. It restricts the VOC content of solvents used in cleaning operations to achieve greater emission reductions.

**17. WORKSHOP COMMENT**

When will Rule 67.6.1 take effect?

**DISTRICT RESPONSE**

For new operations, Rule 67.6.1 will take effect on the date of adoption by the Air Pollution Control Board. The effective date of the rule for existing sources is one year after the date of adoption.

The District expects to submit the rule to the Board in the beginning of 2007.

**18. WORKSHOP COMMENT**

Subsection (d)(2)(i), requires a remote reservoir be covered when work is not being performed. Does the cover need to be closed if a remote reservoir is not in operation or does a plug covering the drain satisfy the requirement?

**DISTRICT RESPONSE**

The District requires the entire sink area of a remote reservoir be covered. A plug over the drain does not satisfy this requirement.

**19. WORKSHOP COMMENT**

Are cold solvent degreasers that use water-based solvents exempt from all the requirements of the rule?

**DISTRICT RESPONSE**

Cold solvent degreasers that use water-based solvents with a VOC content of 50 g/l or less are exempt from all rule requirements. However, the facility must maintain records proving that the solvent used is water-based and contains 50 g/l of VOC or less, as applied. In addition, if the waste water is considered to be a hazardous waste it must be disposed in accordance with the existing regulations. The rule has been revised to add this requirement to conform to the requirements of the California Health and Safety Code.

**20. WORKSHOP COMMENT**

What is the definition of cold solvent cleaning?

**DISTRICT RESPONSE**

Cold solvent cleaning operation is defined as any solvent cleaning that is conducted in a tank, drum, or other container and that uses non-boiling solvent to remove contaminants. Please see this definition in Subsection (c)(6) of the rule.

**21. WORKSHOP COMMENT**

Some shops clean automobile brakes with solvent sprayed from aerosol spray cans. Is this type of cleaning subject to this rule?

**DISTRICT RESPONSE**

No, solvent cleaning using an aerosol spray cans is not subject to this rule.

**22. WORKSHOP COMMENT**

What is the freeboard ratio requirement for a stripping operation that uses a sealing fluid?

**DISTRICT RESPONSE**

There is no freeboard ratio requirement for stripping operations that use a sealing fluid. Stripping operations have to either meet a freeboard ratio of 0.75 or use a sealing fluid to minimize evaporative emissions.

**23. WORKSHOP COMMENT**

What if a facility uses a water-based solvent with a VOC content of 75 g/l for cleaning?

**DISTRICT RESPONSE**

All cold solvent cleaning operations, except for those specifically exempt in Subsection (b)(2), must use a solvent with a VOC content of 50 g/l or less. This can be a water-based solvent or solvent based on exempt compounds. Using a solvent with a VOC content of 75 g/l for a cleaning operation not specifically exempt pursuant to Subsection (b)(2) will be a violation of Rule 67.6.1.

**24. WORKSHOP COMMENT**

Is there is list of VOC exempt compounds? If so, where is this list located?

**DISTRICT RESPONSE**

The list of VOC exempt compounds is contained in Table 1 of District Rule 2.

**25. WORKSHOP COMMENT**

What solvents can comply with Rule 67.6.1 VOC content limit?

**DISTRICT RESPONSE**

There are numerous solvents both water-based and exempt compounds-based that have a VOC content of 50 g/l or less. One place to find a list of complying solvents is the SCAQMD Clean Air Solvent list. This list can be found on the SCAQMD website at <http://www.aqmd.gov/rules/cas/prolist.html>. Also, information on the VOC content of solvents is available from solvent manufacturers or distributors that supply California, because many air districts in California already have similar requirements in their solvent cleaning rules.

**26. WORKSHOP COMMENT**

What records does a facility need to provide to the District to verify that the solvent used has a VOC content of 50 g/l or less?

**DISTRICT RESPONSE**

Facilities must keep onsite Material Safety Data Sheets or manufacturer specifications showing the VOC content of solvents, as used, including a dilution ratio. This information must be made available to District staff when requested.

**27. ARB COMMENT**

Subsections (b)(1)(iii) and (iv) provide an exemption from the rule for cold solvent cleaning or stripping operations conducted in any tank with a liquid surface area of one square foot or less, or a with a capacity of one gallon or less. This exemption is less stringent than similar exemptions in San Joaquin Valley Air Pollution Control District (SJVAPCD) and SCAQMD rules that also have a usage limit of 5.0 gallons per month. Rule 67.6.1 should contain a usage limit in this exemption.

**DISTRICT RESPONSE**

The District disagrees. It would be very unusual for such a small unit to use five gallons of solvent per month. The District believes that solvent usage in these units is not substantial and does not represent a significant source of VOC emissions.

**28. ARB COMMENT**

Subsection (b)(1)(v) exempts cold solvent cleaning operations used exclusively for educational purposes. This is a relaxation of current Rule 67.6, since it does not exempt these operations.

**DISTRICT RESPONSE**

The District disagrees. While Rule 67.6 does not currently exempt cold solvent cleaning operations used exclusively for education purposes, proposed new Rule 67.6.1, even with this exemption, will provide approximately 263 tons/year of VOC emission reductions as compared with the current rule. Therefore, exempting these insignificant sources of emissions will not result in Rule 67.6 relaxation.

**29. ARB COMMENT**

Subsection (b)(2) exempts cold solvent cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components from the 50 g/l VOC content limit. This is a relaxation of Rule 67.6.

**DISTRICT RESPONSE**

The District disagrees. Current Rule 67.6 does not restrict a VOC content limit for solvent cleaning operations; it only contains certain equipment standards and operational requirements. Therefore, exempting solvent cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components from the VOC content limit is not a relaxation of Rule 67.6. These types of operations must still comply with the equipment and operational standards of the rule. See also District response to the previous comment.

**30. ARB COMMENT**

The rule should include a requirement that waste solvent and distillation residue should be stored in a manner that will minimize VOC emissions into the atmosphere.

**DISTRICT RESPONSE**

The District agrees. A requirement has been added to Rule 67.6.1 specifying that all facilities dispose of waste in a manner conforming to requirements arising from those in Division 20, Chapter 6.3, beginning with Section 25100 of the California Health and Safety Code.

**31. ARB COMMENT**

The rule should include a provision requiring solvent cleaner operators to maintain records of the types, amounts, and dates of solvents added to and removed from each solvent cleaner. The records should be maintained for three years and made available to District staff when requested.

**DISTRICT RESPONSE**

The District disagrees. The proposed rule does not have a limit for solvent usage; therefore, it is unnecessary for operators to maintain usage data. In addition, it is very difficult for operators to collect and maintain solvent consumption data because most operations use service contract providers that remove one 55-gallon drum of used solvent and replace it with a 55-gallon drum of fresh solvent. The amount of solvent remaining in the drum or the amount of sludge in the drum is not determined prior to removal of the used solvent. Therefore, the VOC emissions from solvent cleaning operations are not calculated by using the mass balance of solvent but by using a generic emission factor per cleaning unit. The District determined that keeping solvent usage records would be an unnecessary burden for the affected facilities.

**32. ARB COMMENT**

The freeboard ratio requirement of 0.5 for batch-loaded cold solvent cleaners in Subsection (d)(3)(i)(A) is less stringent than in similar rules in other districts. The required freeboard ratio for batch-loaded cold solvent cleaners should be increased to 1.0.

**DISTRICT RESPONSE**

The District disagrees. This would not provide a sizeable emission benefit. In addition, increasing the freeboard ratio from 0.5 to 1.0 for batch-loaded cold solvent cleaners would reduce emissions by 2.3 tons per year or 0.006 tons per day with a cost-effectiveness of \$8.47 per pound of VOC reduced. This is higher than the cost-effectiveness of any other VOC control rule adopted by the District.

**33. ARB COMMENT**

Subsection (d)(4)(x) requires that degreasers not be exposed to drafts greater than 131 feet per minute. This is less stringent than similar rules in other districts that require drafts no greater than 30 feet per minute. The District should modify Rule 67.6.1 to decrease the permissible draft exposure of degreasers to 30 feet per minute.

**DISTRICT RESPONSE**

The District disagrees. The standard for an air flow of 131 ft/min (40 m/min) corresponds to the flow rate of 1.5 mile/hour which is common in a cross-ventilated room and is quite low. This requirement is similar to the Reduced Room Rate limit in the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning. Further reducing this limit will not result in any substantial emission reductions.

**PROPOSED NEW RULE 67.6.2**

**34. WORKSHOP COMMENT**

The exemption in Subsection (b)(1)(i) should apply to all vapor degreasers using solvents with a VOC content 50 g/l or less and not just to degreasers using water-based cleaning materials.

**DISTRICT RESPONSE**

The District disagrees. This exemption does not apply to vapor degreasing operations using solvents containing exempt compounds because the majority of exempt compounds have some photochemical reactivity, albeit low. By complying with the equipment and operational requirements of Rule 67.6.2, emissions from vapor degreasers that use exempt compound-based solvents are minimized to the maximum extent possible.

**35. WORKSHOP COMMENT**

In Subsection (b)(1)(iii) the term "liquid surface area" should be changed to "vapor-air interface area." Some vapor degreasers are specifically designed to limit a vapor-air interface area, even though the liquid surface area may be larger.



**DISTRICT RESPONSE**

The District agrees. Subsection (b)(1)(iii) has been revised accordingly.

**36. ARB COMMENT**

Subsection (b)(1)(iii) provides an exemption for vapor degreasing operations conducted in any tank with a liquid surface area of one square foot or less, or a with a capacity of one gallon or less. This exemption is less stringent than similar exemptions in SJVAPCD and SCAQMD solvent degreasing rules that have a usage limit of five gallons per month. Rule 67.6.1 should include a usage limit in this exemption.

**DISTRICT RESPONSE**

The District disagrees. This exemption has not been changed because VOC emissions associated with such small units are insignificant. Please see also District response to Comment No. 27.

**37. ARB COMMENT**

Subsection (b)(1)(ii) provides a new exemption for “vapor-phase solder reflow units” that were not previously exempted in Rule 67.6. This equipment is not covered under any other District rule. ARB recommends that vapor-phase solder reflow units be included in the rule with their own specific set of requirements.

**DISTRICT RESPONSE**

The District disagrees. Vapor-phase solder reflow units are exempt in the proposed rule because their design is significantly different from the design and operations of vapor degreasers. Vapor phase solder reflow units are regulated by District Rule 66. New units will be also subject to New Source Review.

**38. ARB COMMENT**

The rule should include a provision requiring waste solvent and distillation residue to be stored in a manner that will not cause or allow solvent evaporation into the atmosphere.

**DISTRICT RESPONSE**

The District agrees. This provision has been added to Subsection (d)(4)(xiii) in the rule.

**39. ARB COMMENT**

The rule should include a provision requiring solvent cleaner operators to maintain records of the types, amounts, and dates of solvents added to and removed from each solvent cleaner. The records should be maintained for three years and made available to District staff when requested.

**DISTRICT RESPONSE**

The District disagrees. The proposed rule does not have a limit for solvent usage; therefore, it is unnecessary for operators to maintain usage data. See also District Response to Comment No. 31.

**40. ARB COMMENT**

Section (g) should include EPA Test Methods 2, 2A, 2B, 2C, and 2D for measuring ventilation rates.

**DISTRICT RESPONSE**

The District disagrees. These test methods are not applicable for measuring exhaust ventilation rates. These rates can be determined by standard engineering calculations based on the maximum capacity of an exhaust fan.

**EPA COMMENTS**

EPA had no comments regarding proposed new Rules 67.6.1 and 67.6.2, or the repeal of existing Rule 67.6.

NY:ls  
02/23/07

**SOCIOECONOMIC IMPACT ASSESSMENT**

**PROPOSED RULE 67.6.1 -  
COLD SOLVENT CLEANING AND  
STRIPPING OPERATIONS**

**February 2007**

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**SOCIOECONOMIC IMPACT ASSESSMENT**

**PROPOSED RULE 67.6.1-  
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## EXECUTIVE SUMMARY

This report presents the results of a socioeconomic impact assessment of the San Diego County Air Pollution Control District's proposed new Rule 67.6.1- Cold Solvent Cleaning and Stripping Operations.

This rule together with the proposed new Rule 67.6.2 -Vapor Degreasing Operations will replace and update existing Rule 67.6 - Solvent Cleaning Operations. Rule 67.6.1 will also fulfill the District's commitment in the San Diego Regional Air Quality Strategy to implement all feasible control measures as required by State law. The rule imposes a volatile organic compound (VOC) content limit of 50 grams per liter (g/l) or less for all materials used in cold solvent cleaning operations. Cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components is exempt from the VOC content limit. All operations subject to the rule have to comply with equipment and work practice requirements to minimize emissions. If implemented, Rule 67.6.1 will reduce VOC emissions by approximately 253 tons per year.

The rule applies to 3,562 cold solvent cleaners in San Diego County located at 2,024 businesses representing 18 different industry sectors. The new VOC content limit for cleaning materials affects the majority of solvent cleaning operations that are presently using high VOC content organic solvents. Approximately 80 cold solvent cleaning and 10 stripping operations exempt from the VOC content limits are still subject to the equipment and operational requirements of the rule.

It is expected that the majority of businesses conducting cold solvent cleaning operations will choose to comply with Rule 67.6.1 by replacing solvent-based cleaning materials with water-based materials. In most cases it will require the installation of new water compatible cleaning equipment and some process adjustments such as heating of cleaning solutions. Several compliance scenarios and the cost of equipment and cleaning materials replacement were evaluated based on information from manufacturers and vendors.

As shown in this report the cost of compliance with the proposed rule will not have significant socioeconomic impacts on affected industries or small businesses.

## **I. STATUTORY REQUIREMENTS**

California law requires air pollution control districts to perform a socioeconomic impact assessment (SIA) when adopting, amending, or repealing rules and regulations that will significantly affect air quality and emission limitations.

The Health and Safety Code section 40728.5 specifies the following elements be included in the socioeconomic impact assessment:

1. The necessity of adopting, amending, or repealing the rule or regulation in order to attain State and federal ambient air quality standards.
2. The type of business, including small business, affected by the rule or regulation.
3. The range of probable costs, including costs to industry or business, including small business, of the rule or regulation.
4. The emission reduction potential of the rule or regulation.
5. The impact of the rule or regulation on employment and the economy of the region affected by the adoption of the rule or regulation.
6. The availability and cost-effectiveness of alternatives to the rule or regulation.

This report presents the results of a socioeconomic impact assessment of San Diego Air Pollution Control District's (District) new proposed Rule 67.6.1 - Solvent Cleaning and Stripping Operations. The rule will impose more stringent emission limitations for cold cleaning and stripping operations that use organic solvents containing volatile organic compounds (VOC) and toxic air contaminants.

## **II. NECESSITY OF ADOPTING RULE 67.6.1**

San Diego Air Basin does not attain the National and State Ambient Air Quality Standard for ozone. Both federal and State laws require the District to implement rules that regulate emissions of ozone precursors - volatile organic compounds and nitrogen oxides. Solvent cleaning and stripping operations are a significant source of VOC emissions.

Presently, the use of organic compounds in solvent cleaning operations, which include vapor degreasing, cold solvent degreasing, paint stripping operations and gas-path cleaners are regulated by District Rule 67.6 – Solvent Cleaning Operations. The rule was first adopted in 1979 and last revised in 1990. It was approved by the Environmental Protection Agency (EPA) and is included in the State Implementation Plan (SIP). Existing Rule 67.6 controls not only VOC emissions from vapor and cold solvent cleaning operations, but also emissions of toxic air contaminants and chlorinated fluorocarbons that deplete stratospheric ozone. However, Rule 67.6 does not reflect recent advances in low-emitting cleaning materials and equipment and aqueous-based solvents that are now being required by other air districts in California.

Proposed new Rules 67.6.1 (Cold Solvent Cleaning and Stripping Operations) and 67.6.2 (Vapor Degreasing Operations) will replace current Rule 67.6. Both rules reflect the current state of emission control technology for cleaning operations which use organic solvents. In addition, the rules will fulfill the District's commitment in the San Diego Regional Air Quality Strategy to implement all feasible control measures as required by State law. While Rule 67.6.1 contains new and more restrictive emission limitations, Rule 67.6.2 requirements are similar to existing Rule 67.6. The only new provision in Rule 67.6.2 applies to the equipment standards and operations of airtight or airless vapor degreasers. However, the use of this equipment is optional. Since there are not new emission limitations in Rule 67.6.2, it is not expected to have any impact on affected industry and is not evaluated in this document.

This report addresses only a socioeconomic impact of proposed new Rule 67.6.1 as stipulated by State law.

### **III. SUMMARY OF RULE 67.6.1 REQUIREMENTS**

Proposed new Rule 67.6.1 applies to all solvent degreasing or stripping operations conducted in a tank, drum, or other container at temperatures below a boiling point of a solvent (cold cleaning). The rule has several requirements and exemptions identical to current Rule 67.6. As in the current rule, the new rule does not apply to cleaning of coating application equipment, or to dry cleaning or wipe cleaning operations. The new rule continues to exempt stripping operations not conducted in a container and subject to other District Rules. It also contains the current exemptions for cold solvent cleaning or stripping operations carried out in small containers and degreasers used exclusively for educational purposes. The work practice and equipment standards of the proposed rule are also similar to those in Rule 67.6. However, new Rule 67.6.1 will restrict the VOC content of cleaning materials for the majority of cold cleaning operations and remove exemptions for pre-1980 and pre-1990 operations using chlorinated fluorocarbons, and hazardous (toxic) air pollutants 1,1,1-trichloroethane and methylene chloride.

Specifically, proposed new Rule 67.6.1 will:

- Require that each solvent utilized in a cold solvent cleaning operation (with specific exemptions as described below) have a VOC content of 50 grams per liter (0.42 lbs/gal) of material or less, as used. Facilities can use cleaning materials formulated with water or exempt compounds, or a combination of both.
- Exempt cleaning operations using exclusively water-based materials with a VOC content of 50 g/l or less for all requirements, provided the specified records are kept. Cleaning operations using materials with a VOC content of 50 g/l or less and formulated with exempt compounds (rather than water-based) must continue to comply with all the equipment and work practice requirements of the rule.
- Exempt cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components from the 50 g/l VOC content limit. However, facilities conducting these operations must comply with the equipment and operational requirements of the rule.



- Exempt cold solvent cleaning operations regulated by the *National Emission Standard for Hazardous Air Pollutants: Halogenated Solvent Cleaning* from all requirements.
- Allow the use of airless or airtight degreasers for cleaning operations in lieu of complying with the 50 g/l VOC content limit and equipment and operational requirements of the rule.
- Require remote reservoir cleaners to have a freeboard height of at least six inches.
- Require paint stripping equipment to have a freeboard ratio of at least 0.75 or use a sealing fluid.
- Revise and update definitions for major terms used in the rule.
- Update the test methods for determining compliance.
- Provide a compliance schedule for facilities necessary to modify or replace solvent cleaning equipment or install an air pollution control system for compliance with the new rule requirements.

#### **IV. INDUSTRIES AFFECTED BY RULE 67.6.1**

Proposed Rule 67.6.1 applies to both cold solvent cleaning and stripping operations. While the rule imposes new emission limitations for solvent cleaning, it will not introduce any substantial new requirements for stripping operations. These operations will be subject to similar limits on the VOC content of stripping solvents, work practice and equipment standards as those in the current Rule 67.6. Therefore the rule will not impact facilities involved in stripping operations and will not have an economic impact on these facilities.

There are approximately 1,935 facilities with permitted solvent cleaning equipment operating within the District, the majority of which are automotive and other repair and maintenance related type establishments. These data were obtained from the permit files maintained by the District, and from the information provided by the two leading solvent cleaning equipment vendors in the San Diego area, Safety-Kleen Systems, Inc. (Safety-Kleen) and Industrial Solvent and Chemical, Inc. These two companies, in addition to selling solvent cleaning equipment, such as batch cleaners and remote reservoir cleaners, also lease this type of equipment to their customers and provide cleaning materials, equipment service, and waste disposal service.

In order to perform the analysis required throughout this report, it was necessary to obtain economic data on the business establishments that are involved in solvent cleaning operations. This study did not allow for the conduct of a detailed, site specific survey of all facilities with permitted solvent cleaning equipment, so the most current published source of available economic data on business establishments – the 2004 County Business Patterns of the U.S. Census – was utilized. This document provides data based on the North American Industry Classification System (NAICS). Consequently, it was necessary to assign the establishments with solvent cleaning equipment within San Diego County to their respective NAICS code in order to identify the industries affected by the proposed rule. Table 1 below presents

establishments, employment, and annual payroll for the identified affected industries in San Diego County in 2004. Table 2 shows the importance of the affected establishments relative to the total industrial establishments in San Diego County and to the same industry establishments within the State of California.

**TABLE 1**  
**San Diego County Industries Affected by Proposed Rule 67.6.1**

<b>NAICS</b>	<b>NAICS Description</b>	<b>Number of Establishments</b>	<b>Employment</b>	<b>Annual Payroll (\$1,000)</b>
221122	Electric power distribution	21	2500-4999*	D
325998	Misc. chemical product & preparation manufacturing	15	114	\$6,019
336611	Ship building and repairing	21	5,886	\$245,245
484110	General freight truck, local	178	1,639	\$54,912
484121	General freight trucking, long distance, truckload	81	351	\$10,832
484122	General freight trucking, long distance, less than truckload	39	800	\$35,447
484220	Specialized freight trucking, local	184	1,260	\$40,496
484230	Specialized freight trucking, long-distance	27	266	\$9,957
485113	Bus & other motor vehicle transit systems	12	1,000-2,499*	D*
488410	Motor vehicle towing	84	1,122	\$31,580
811111	General automotive repair	829	3,520	\$103,903
811112	Automotive exhaust system repair	37	143	\$4,545
811113	Automotive transmission repair shop	78	316	\$9,829
811118	Other auto mechanical and electrical repair & maintenance	96	399	\$11,321
811122	Automotive glass replacement	52	303	\$10,666
811191	Automobile oil changes	76	494	\$8,606
811198	All other auto repair & maintenance	63	132	\$4,338
81149	Other personal and household goods repair & maintenance	131	547	\$15,195
<b>TOTAL</b>		<b>2,024</b>	<b>22,791</b>	<b>\$602,891</b>

D = figures withheld to avoid disclosing data for individual companies

\*Total values were calculated using the mid value of any ranges provided and do not include data from the "D" categories.

Source: U.S. Census, County Business Patterns (NAICS 2004).

As shown in Table 1, there are 2,024 establishments in San Diego County affected by the proposed rule. This number is slightly higher than the 1,935 facilities estimated from the District permit data. This may be due to the fact that some facilities use cold solvent cleaning equipment that does not require a permit. District Rule 11 (Exemptions from Rule 10 Permit Requirements) exempts operations using small cold cleaning equipment (with a liquid surface area of one square foot or less, or with a maximum capacity of one gallon or less) from obtaining permits. In addition, solvent cleaning equipment that used aqueous solvents with the VOC content not exceeding 10% by weight, or equipment used for educational purposes were also exempt from permit requirements. Consequently, it was assumed that the number of establishments provided in Table 1 (2,024) represents both permitted and non-permitted facilities.

The vast majority of establishments that conduct solvent cleaning operations are in automotive and other repair and maintenance related industries (1,967, or 97%). There are also other industries that use solvent cleaning. Some of these potentially affected industries include: utilities (including electric power generation and distribution and other utilities-related sectors such as natural gas distribution, water, sewer and other utilities), printing and publishing, ship

building and repair, industrial machinery, turbines and turbine generators, machine shops, farm machinery, and others.

The electric power distribution industry (NAICS 221122) was selected to represent utilities affected by the proposed rule, although some electric, natural gas, water, sewer, and other utility-related establishments use solvent cleaning equipment as well. These facilities maintain private motor vehicle fleets although some also have permitted units in their machine shops to clean parts associated with utility generation, transmission, and distribution. The shipbuilding industry is also included in Table 1, represented by NAICS 336611, ship building and repairing.

The other industries mentioned above are not included in Table 1 for a variety of reasons. Most importantly, the percentage of permitted solvent cleaning equipment in San Diego in these industries is very low relative to other industries. Moreover, the presence of solvent cleaning equipment is not as widespread in these industries as in other industries. For example, some establishments in the printing and publishing industries use solvent cleaning, but this equipment is generally used to clean printing machinery only at large newspapers and large publishers. Including all of the establishments in the printing and publishing NAICS codes (upwards of 600) would significantly skew the data presented in Tables 1 and 2.

It is interesting to note that, even in industries other than the automotive repair and maintenance related sectors, a primary use of solvent cleaning equipment is not to clean equipment associated with a production process, but to clean motor vehicle parts in the business' private garage. For example, many high schools and vocational training institutions have permitted solvent cleaning equipment in their auto shops. Some bicycle repair shops have permitted equipment because they use it to clean bike parts.

One type of industry that is not directly reflected in Table 1, but that includes establishments holding a number of solvent cleaning equipment permits in San Diego County is the military facilities. Approximately 3% of the total permitted solvent cleaning equipment in the County is located at military bases, including Camp Pendleton, MCAS Miramar, Coast Guard, Naval Base Coronado, Space and Naval Warfare Systems Center San Diego (SSC San Diego), and the California Air National Guard. At Camp Pendleton, for example, solvent cleaning equipment is used to clean weapons. The military is not listed as an affected industry in Table 1 because employment and other economic statistics are not available through published sources. Nevertheless, the selected affected industries do reflect the U.S. military's important role in the regional economy because most of the region's ship building and repairing industry (NAICS 336611) is engaged in the building and repair of U.S. Navy ships and boats.

**TABLE 2**  
**San Diego County Affected Establishments and Employment as Percentage of**  
**Total San Diego County and California Establishments and**  
**Employment in Corresponding Industry Categories**

NAICS	NAICS Description	S.D. Affected Establishments as % of Total S.D. County Establishments	S.D. Affected Establishments as % of the Same Industry Statewide	S.D. Affected Industry Employment as % Total of S.D. County Employment	S.D. Affected Industry Employment as % of the Same Industry Employment Statewide
221122	Electric power distribution	0.03%	7.4%	0.43%*	10.0%
325998	Misc. chemical product & preparation manufacturing	0.02%	11.0%	0.01%	5.2%
336611	Ship building and repairing	0.03%	14.7%	0.51%	66.4%
484110	General freight truck, local	0.24%	6.5%	0.14%	6.0%
484121	General freight trucking, long distance, truckload	0.11%	5.6%	0.03%	1.3%
484122	General freight trucking, long distance, less than truckload	0.05%	7.3%	0.07%	4.2%
484220	Specialized freight trucking, local	0.25%	6.9%	0.11%	5.5%
484230	Specialized freight trucking, long-distance	0.04%	4.2%	0.02%	3.3%
485113	Bus & other motor vehicle transit systems	0.02%	8.8%	0.15%*	23.7%
488410	Motor vehicle towing	0.11%	7.6%	0.10%	8.9%
811111	General automotive repair	1.11%	8.6%	0.31%	8.8%
811112	Automotive exhaust system repair	0.05%	9.7%	0.01%	10.2%
811113	Automotive transmission repair shop	0.10%	8.8%	0.03%	9.8%
811118	Other auto mechanical and electrical repair & maintenance	0.13%	10.8%	0.03%	10.4%
811122	Automotive glass replacement	0.07%	8.5%	0.03%	11.5%
811191	Automobile oil changes	0.10%	10.2%	0.04%	6.8%
811198	All other auto repair & maintenance	0.08%	9.0%	0.01%	5.0%
81149	Other personal and household goods repair & maintenance	0.18%	11.8%	0.05%	10.5%
TOTAL		2.72%	—	1.98%	—

\*Mid value of any ranges provided in Table 1 was used in calculating percentages above.

Source: U.S. Census, County Business Patterns (NAICS 2004).

As shown in Tables 1 and 2, the identified affected industries employ nearly 23,000 workers, or approximately 2% of total employment in the County. Ship building and repairing (NAICS 336611), general automotive repair (NAICS 811111), local trucking (NAICS 484110), and local specialized freight trucking (NAICS 484220) account for a majority of employment. The affected establishments represent a small percentage of all establishments in San Diego County at approximately 3%. When compared to the same industry categories across the state, data in Table 2 show that most affected industries are not heavily concentrated in San Diego County. A notable exception is Ship building and repairing (NAICS 336611); nearly two-thirds of California employment in that industry is in San Diego County.

## V. SMALL BUSINESSES AFFECTED BY THE RULE

There are a number of different ways to define a “small business.” For example, the Federal Small Business Administration (SBA), the Federal Clean Air Act (FCAA), the California Department of Health Services (DHS), and the South Coast Air Quality Management District (SCAQMD) each provide their own definition of a small business. In order to identify small

businesses for this report, these and other federal, State and local laws defining a small business were examined.

The SBA's definition of small business uses the criterion of either gross annual receipts (ranging from \$0.75 million to \$31.5 million, depending on industry classification) or number of employees (ranging from 100 to 1,500, depending on industry classification). The SBA definitions of small business vary by NAICS code. Within SBA, the Office of Advocacy defines a small business as an independent business having fewer than 500 employees.

The FCAA (Sec.507) classifies a facility as a "small business stationary source" if it: employs 100 or fewer employees, does not emit 50 tons/year or more of any regulated pollutant and less than 75 tons/year of all regulated pollutants and is a small business as defined by SBA.

The DHS definition of a small business uses an annual gross receipts criterion of \$10 million or less in combination with an employment criterion of fewer than 100 employees for non-manufacturing industries, or for manufacturing industries, a single employment criterion of fewer than 100 employees. The SCAQMD defines "small business" in Rule 102 as one that employs 10 or fewer persons and earns less than \$500,000 in gross annual receipts. Further, the California Government Code Section 11342.610 defines a small business as one that is independently owned and operated and not dominant in its field of operation.

For purposes of this report, the SCAQMD definition of a business that is independently owned and operated, has 10 or fewer employees, and \$500,000 in receipts was utilized as the definition of small business. This definition was selected because, as Table 1 shows, the establishments affected by the proposed rule are all quite small in terms of employment - the average number of employees per establishment in the affected industries is 11 with the highest average number of employees in any industry category being 21 employees per establishment and the industry classification with the greatest number of establishments averages only 4 employees per establishment. Published employment data are readily available for 2004 at the six-digit NAICS level whereas data for annual receipts are not, so employment data alone were used.

The U.S. Census County Business Patterns provides a break-out by NAICS code of the number establishments within certain employment size cohorts, e.g., 1 to 4 employees, 5 to 9, 10 to 19, etc. In order to utilize the County Business Patterns data to determine the number of small and large businesses, it is important to discuss the difference between an "establishment," which is the level at which the County Business Patterns data is reported, and a "firm" or "enterprise." An establishment is a single physical location at which business is conducted or services or industrial operations are performed, whereas a company, firm or enterprise may consist of one or more establishments. This is important because an establishment may be quite small, but be just one location of a very large firm. The impact of this distinction can be quite significant. For example, looking at County Business Pattern's data for San Diego, 73% of establishments or 54,402 businesses, have fewer than 10 employees. Calculating instead, the percentage of establishments by employment size of *firms* within San Diego County, only 63% of establishments, or 46,950 establishments have fewer than 10 employees.

In order to estimate the number of small businesses affected by the proposed rule, the County Business Patterns employment and establishment data were used in combination with data from the SBA. The U.S. Census Bureau provides SBA's Office of Advocacy with data on employer

firm size in the Statistics of U.S. Businesses (SUSB). In these data, a firm is defined as the aggregation of all establishments owned by a parent company (within a geographic location and/or industry) that have some annual payroll. A firm may be located in one or more places. The data contain the number of firms, number of establishments, employment, and annual payroll for employment size of firm categories by location and industry. Using these data, the percent of establishments in firms with less than 10 employees was calculated at the national level for each of the industries affected by the proposed rule. The results of this calculation are presented in Table 3<sup>1</sup>.

**TABLE 3**  
**Number of Establishments by Employment Size at National Level, 2004**

NAICS Code	Number of Establishments by Employment Size Cohorts			Percent of Establishments with <10 Employees	
	All	0 emp	1-4 emp		5-9 emp
221122	7393	34	103	70	2.8
325998	1,194	76	264	148	40.9
336611	640	38	151	87	43.1
484110	24,760	4,925	11,614	2,763	78.0
484121	30,298	4,366	13,731	2,875	69.2
484122	7,277	619	1,635	380	36.2
484220	31,485	4,950	16,703	4,322	82.5
484230	11,590	1,235	5,228	1,447	68.2
485113	809	33	203	93	40.7
488410	7,390	876	3,461	1,469	78.6
811111	79,265	6,419	48,049	15,591	88.4
811112	3,628	236	2,000	755	82.4
811113	6,800	615	3,736	1,775	90.1
811118	6,768	374	3,982	1,217	82.3
811122	7,215	596	2,684	871	57.5
811191	8,508	598	1,721	1,375	43.4
811198	3,193	444	1,645	461	79.9
811490	10,624	1,685	6,499	1,291	89.2

Source: Small Business Administration, <[http://www.sba.gov/advo/research/us03\\_04n02.txt](http://www.sba.gov/advo/research/us03_04n02.txt)>

<sup>1</sup> The 0 employees column reflects what the Census Bureau and SBA refer to as non-employer firms. A non-employer firm is defined as one that has no paid employees, has annual business receipts of \$1,000 or more (\$1 or more in the construction industries), and is subject to federal income taxes. Also, because employment is measured in March, the SUSB has a firm size category of zero for firms that had no employees in March, but had positive employment at some point during the year. According to the Census Bureau, non-employer firms account for roughly 3% of business activity in terms of sales or receipts, while accounting for nearly three-quarters of all businesses. Most non-employer firms are very small, and many are not the primary source of income for their owners. See the U.S. Census Bureau, Non-employer Statistics for more detailed information.

The percent of establishments in enterprises with less than 10 employees determined on the national level was then applied to the number of establishments within each affected industry group in San Diego County in order to estimate the number of small businesses affected by the proposed rule in total and within each industry group. This estimate is provided in Table 4. As the table shows, approximately 1,608 establishments (79.4%) within San Diego County affected by the proposed rule are part of firms (enterprises) with fewer than 10 employees and are therefore, for purposes of this analysis, considered small businesses.

**TABLE 4**  
**Estimated Number of Small Business Enterprises**  
**Affected by Proposed Rule**

NAICS	NAICS Description	Number of Establishments	Percent of Establishments With <10 Employees	Number of SD Establishments With <10 Employees
221122	Electric power distribution	21	2.8	1
325998	Misc. chemical product & preparation manufacturing	15	40.9	6
336611	Ship building and repairing	21	43.1	9
484110	General freight truck, local	178	78.0	139
484121	General freight trucking, long distance, truckload	81	69.2	56
484122	General freight trucking, long distance, less than truckload	39	36.2	14
484220	Specialized freight trucking, local	184	82.5	152
484230	Specialized freight trucking, long-distance	27	68.2	18
485113	Bus & other motor vehicle transit systems	12	40.7	5
488410	Motor vehicle towing	84	78.6	66
811111	General automotive repair	829	88.4	733
811112	Automotive exhaust system repair	37	82.4	31
811113	Automotive transmission repair shop	78	90.1	70
811118	Other auto mechanical and electric rapid and maintenance	96	82.3	79
811122	Automotive glass replacement	52	57.5	30
811191	Automobile oil changes	76	43.4	33
811198	All other auto repair and maintenance	63	79.9	50
81149	Other personal and household goods repair	131	89.2	117
<b>Total</b>		<b>2,024</b>		<b>1,608</b>

Source: Small Business Administration, <[http://www.sba.gov/advo/research/us03\\_04n02.txt](http://www.sba.gov/advo/research/us03_04n02.txt)> and U.S. Census Bureau, County Business Patterns (NAICS2004).

## VI. INDUSTRY TRENDS

Existing trends in the affected industries are analyzed in order to estimate the relative significance of the direct or regional economic impacts of the proposed rule on affected industries in comparison to normal business indicators such as employment and total annual value of shipments, receipts, or revenues.

Table 5 provides a time series of data on the number of establishments in the affected industries in San Diego County from 1998 to 2004. The majority of affected establishments are general automotive repair shops (NAICS 811111) and local trucking firms (NAICS 484110 and 484220). The number of auto repair shops has fluctuated since 1998. Local trucking is on an upward trend in the County, likely because of local population growth and expanding trade with Mexico.

**TABLE 5**  
**San Diego County Affected Establishments,**  
**1998 to 2004**

NAICS	NAICS Description	1998	1999	2000	2001	2002	2003	2004
221122	Electric power distribution	NA	NA	NA	9	NA	NA	21
325998	Misc. chemical product & preparation manufacturing	12	12	13	15	10	13	15
336611	Ship building and repairing	15	14	15	15	16	20	21
484110	General freight truck, local	107	118	137	135	141	164	178
484121	General freight trucking, long distance, truckload	50	63	83	78	63	71	81
484122	General freight trucking, long distance, less than truckload	34	37	37	40	39	39	39
484220	Specialized freight trucking, local	151	132	137	160	188	178	184
484230	Specialized freight trucking, long-distance	38	39	34	38	34	28	27
485113	Bus & other motor vehicle transit systems	10	9	8	7	15	16	12
488410	Motor vehicle towing	79	71	74	77	85	86	84
811111	General automotive repair	852	850	878	853	873	865	829
811112	Automotive exhaust system repair	31	31	31	33	34	38	37
811113	Automotive transmission repair shop	95	88	92	96	97	88	78
811118	Other auto mechanical and electrical repair & maintenance	123	119	112	111	108	91	96
811122	Automotive glass replacement	48	47	41	41	52	52	52
811191	Automobile oil changes	72	86	75	79	71	80	76
811198	All other auto repair & maintenance	26	32	34	37	40	52	63
81149	Other personal and household goods repair & maintenance	101	105	111	118	156	143	131
<b>TOTAL</b>		<b>1,844</b>	<b>1,853</b>	<b>1,912</b>	<b>1,942</b>	<b>2,022</b>	<b>2,024</b>	<b>2,024</b>

\*Total does not include data from the "NA" categories.

Source: U.S. Census Bureau, County Business Patterns

Employment trends have followed the number of establishment trends, according to Table 6. The total numbers do not include industries for which specific data were not disclosed such as tire retreading industry (NAICS 326212). Ship building and repair, general automotive repair, motor vehicle towing, and local trucking accounted for a majority of employment in the affected industries in 2004. "Bus and other motor vehicle transit systems" also is a major employer (1,000 to 2,499 employees). Employment in local trucking has expanded considerably since 1998.



**TABLE 6**  
**San Diego County Employment in Affected Establishments,**  
**1998 to 2004**

NAICS	NAICS Description	1998	1999	2000	2001	2002	2003	2004
221122	Electric power distribution	NA	NA	NA	236	NA	NA	h
325998	Misc. chemical product & preparation manufacturing	74	88	187	238	58	95	114
336611	Ship building and repairing	6,544	5,747	5,558	4,873	5,239	5,588	5,886
484110	General freight truck, local	826	914	920	886	825	1,257	1,639
484121	General freight trucking, long distance, truckload	412	524	658	672	583	375	351
484122	General freight trucking, long distance, less than truckload	656	735	727	679	750	780	800
484220	Specialized freight trucking, local	1,102	1,092	1,190	1,163	1,271	1,232	1,260
484230	Specialized freight trucking, long-distance	354	334	334	348	317	235	266
485113	Bus & other motor vehicle transit systems	g	g	g	g	g	g	g
488410	Motor vehicle towing	879	854	927	1,056	1,047	1,057	1,122
811111	General automotive repair	3,510	3,496	3,397	3,369	3,520	3,309	3,520
811112	Automotive exhaust system repair	98	98	99	107	104	98	143
811113	Automotive transmission repair shop	441	422	419	419	379	353	316
811118	Other auto mechanical and electrical repair & maintenance	650	573	532	536	508	435	399
811122	Automotive glass replacement	237	281	283	299	371	289	303
811191	Automobile oil changes	516	525	483	476	486	525	494
811198	All other auto repair & maintenance	98	89	99	107	104	98	143
81149	Other personal and household goods repair & maintenance	755	834	947	864	919	507	547
<b>TOTAL</b>		<b>18,902</b>	<b>18,356</b>	<b>18,510</b>	<b>18,078</b>	<b>18,231</b>	<b>17,983</b>	<b>22,802</b>

g = 1,000 to 2,499

h = 2,500 to 4,999

\*Total values were calculated using mid value of any ranges provided and do not include data from the "NA" categories.

Source: U.S. Census Bureau, *County Business Patterns*

The Economic Census also collects data on number of establishments, employment, and payroll. Unlike the annual survey for *County Business Patterns*, which was used for previous tables, the Economic Census compiles data for "total value of shipments" for manufacturing establishments, "revenue" for transportation establishments, and "receipts/revenue" for service establishments. As shown in Tables 7 and 8, results from the 1997 and 2002 Economic Censuses show that the local trucking industries in San Diego County experienced dramatic growth in all data categories. In contrast, the specialized freight long-distance trucking industry (NAICS 484230) downsized. The motor vehicle towing and general automotive repair industries grew appreciably since 1997. The data reported for "Other auto mechanical and electric rapid and maintenance" (NAICS 811118) dropped precipitously, while indicators for "All other auto repair and maintenance" (NAICS 811198) more than doubled; this phenomenon is likely due to re-classification of auto repair businesses between the two industry classifications. "Other personal and household goods repair" (NAICS 81149) declined severely.

**TABLE 7**  
**San Diego County 1997 Economic Census,**  
**Affected Industry Statistics**

NAICS	NAICS Description	Number of Establishments	Employment	Annual Payroll (\$1,000)**	Total Annual Value of Shipments/Receipts/Revenue (\$1,000)**
221122	Electric power distribution	NA	NA	NA	NA
325998	Misc. chemical product & preparation manufacturing	NA	NA	NA	NA
336611	Ship building and repairing	16	6,759	\$217,422	\$786,424
484110	General freight truck, local	88	793	\$16,214	\$57,746
484121	General freight trucking, long distance, truckload	42	343	\$9,178	\$43,053
484122	General freight trucking, long distance, less than truckload	34	615	\$22,355	\$104,405
484220	Specialized freight trucking, local	126	1,000	\$25,248	\$129,485
484230	Specialized freight trucking, long-distance	35	303	\$10,691	\$56,195
485113	Bus & other motor vehicle transit systems	NA	NA	NA	NA
488410	Motor vehicle towing	77	828	\$19,109	\$48,735
811111	General automotive repair	826	3,199	\$71,757	\$298,686
811112	Automotive exhaust system repair	30	86	\$1,968	\$9,125
811113	Automotive transmission repair shop	98	381	\$9,676	\$36,474
811118	Other auto mechanical and electrical repair & maintenance	124	745	\$15,917	\$56,740
811122	Automotive glass replacement	43	298	\$8,342	\$29,091
811191	Automobile oil changes	70	445	\$6,526	\$28,111
811198	All other auto repair & maintenance	23	71	\$1,125	\$4,905
81149	Other personal and household goods repair & maintenance	123	725	\$15,397	\$52,112
<b>TOTAL</b>		<b>1,755</b>	<b>16,591</b>	<b>\$450,925</b>	<b>\$1,741,287</b>

\*Total does not include data from the "NA" categories.

\*\* All data are in nominal dollars for the reported, i.e. not adjusted for inflation.

Source: U.S. Bureau of the Census, 1997 Economic Census

The trends revealed in this analysis show that the number of auto repair shops has fluctuated in San Diego County since 1998, but this industry still includes the greatest number of affected establishments. The local trucking industry is on an upward trend in the county according to all reported indicators including number of establishments, employment and annual revenues. This is likely because of local population growth and expanding trade with Mexico. The number of automotive transmission shops (NAICS 811113) and employment in that industry have declined since 1998. According to an interview with an industry observer, this may be because new vehicles are better built and require fewer transmission repairs. Though employment in the Ship building and repairing industry (NAICS 336611) fluctuated slightly in the late 1990s – early 2000s, it remains a significant employer amongst the affected industries in the County and has been to some extent growing in recent years.

None of the trends highlighted by this analysis were determined to be significant in terms of how the proposed rule will affect regulated industries. There is no indication that any trends exist that would lead any of the affected industries to change significantly in the coming years as a result of the proposed rule.

**TABLE 8**  
**San Diego County 2002 Economic Census,**  
**Affected Industry Statistics**

NAICS	NAICS Description	Number of Establishments	Employment	Annual Payroll (\$1,000)	Total Annual Value of Shipments/Receipts/Revenue (\$1,000)
221122	Electric power distribution	19	2,500 to 4,999	NA	NA
325998	Misc. chemical product & preparation manufacturing	NA	NA	NA	NA
336611	Ship building and repairing	18	6,080	\$249,019	\$940,245
484110	General freight truck, local	137	1,107	\$36,997	\$103,298
484121	General freight trucking, long distance, truckload	66	435	\$12,095	\$58,029
484122	General freight trucking, long distance, less than truckload	48	948	\$38,152	\$136,364
484220	Specialized freight trucking, local	184	1,144	\$36,243	\$183,610
484230	Specialized freight trucking, long-distance	35	243	\$7,456	\$50,958
485113	Bus & other motor vehicle transit systems	NA	NA	NA	NA
488410	Motor vehicle towing	85	1,113	\$29,365	\$77,184
811111	General automotive repair	878	3,419	\$90,996	\$351,515
811112	Automotive exhaust system repair	36	117	\$3,198	\$15,028
811113	Automotive transmission repair shop	102	382	\$12,012	\$45,516
811118	Other auto mechanical and electrical repair & maintenance	97	463	\$10,673	\$35,764
811122	Automotive glass replacement	59	291	\$10,586	\$34,431
811191	Automobile oil changes	77	493	\$10,372	\$40,628
811198	All other auto repair & maintenance	40	123	\$3,267	\$13,012
81149	Other personal and household goods repair & maintenance	137	470	\$11,353	\$49,800
<b>TOTAL</b>		<b>2,018</b>	<b>20,578</b>	<b>\$561,784</b>	<b>\$2,135,382</b>

\*Total value does not include data from the "NA" categories.  
Source: U.S. Bureau of the Census, 2002 Economic Census

## VII. VOC EMISSIONS FROM COLD SOLVENT CLEANING AND STRIPPING OPERATIONS

All persons conducting cold solvent cleaning and stripping operations (i.e. operations using any organic solvent below its boiling point) in San Diego County are required to obtain a District operating permit with only a few exceptions<sup>2</sup>. Equipment used in such operations can be separated into two major categories: batch solvent cleaners (dip tanks) and remote reservoir cleaners. According to the latest District permit files there are 3,183 remote reservoir cleaners and 459 batch cleaners in San Diego County as shown in Table 9. The vast majority of equipment which is subject to the proposed rule is used in solvent cleaning operations. There are also 10 dip tanks used for stripping operations.

<sup>2</sup> The following cold solvent cleaning equipment is exempt from permit requirements according to District Rule 11:

- Equipment exclusively using aqueous cleaning materials with the VOC content no exceeding 10% by weight.
- Equipment with a maximum capacity of one gallon or a liquid surface area of one square foot or less.
- Equipment used exclusively for educational purposes.

**TABLE 9**  
**Cold Cleaning and Stripping Operations in San Diego County**

<b>Name of Emission Unit</b>	<b>Number of Units</b>
Cold Cleaner - Batch	459
Cold Cleaner – Remote Reservoir	3,183
Stripping tank	10
<i>Total</i>	<i>3,652</i>

As shown in Table 10 below, about 61% of batch cleaners and 89% of remote reservoir cleaners belong to contract service companies, mostly to Safety-Kleen Corporation. The rest are the property of individual facilities belonging to a variety of industries as discussed in the previous chapters.

**TABLE 10**  
**Cold Solvent Cleaners in San Diego County**

<b>Ownership of Equipment</b>	<b># of Batch Cleaners</b>	<b>% of Batch Cleaners</b>	<b># of Remote Reservoirs</b>	<b>% of Remote Reservoirs</b>
Facility Owned	177	38.6	355	12.1
Contracting Company Owned	282	61.4	2828	88.9
<i>Total</i>	<i>459</i>	<i>100</i>	<i>3183</i>	<i>100</i>

The majority of solvents presently used in cold cleaning operations are petroleum or citrus-based solvents with an average VOC content of about 6.6 lbs/gal (800 g/l) and a vapor pressure below 1 mm Hg. There are also a few batch cleaners using alcohol-based or exempt compound-based materials. Remote reservoir cleaners almost exclusively are used with petroleum-based solvents.

The majority of VOC emissions during solvent cleaning operations occur from solvent splatter while the part is cleaned and solvent “carry-out” as the part is removed from the cleaning tank. Emissions also occur as a result of solvent evaporation, spills as the solvent tank is filled or emptied, and during solvent disposal. Carry-out and splashing losses take place while the unit is in use. Evaporation emissions may occur during the use of the unit or while it is inactive. Current Rule 67.6, as well as proposed Rule 67.6.1, provides specific work practice standards to minimize these emissions.

Solvent emissions from cleaning operations are typically determined on a mass balance basis, corrected for accumulated waste in the solvent tank. In 1997-1998 the District conducted a thorough review of the VOC emissions data from solvent cleaning operations in San Diego Air Basin (Ref. 1). Based on the solvent usage information in the District emission inventory combined with the data provided by Safety-Kleen Corporation, the District has developed generic emission factors<sup>3</sup> separately for batch and remote reservoir cleaners expressed as pounds of VOC per unit per day. These emission factors and the latest data from District permit files

<sup>3</sup> Emission factors for batch and remote reservoir cleaners are correspondingly 1.1 lbs VOC/unit/day and 0.324 lbs VOC/unit/day (Ref. 1)

and two contract service companies were used to estimate the number of sources, and their VOC emissions, in San Diego County that will be subject to the proposed Rule 67.6.1.

It should be noted that the total number of permits issued by the District is greater than the total number of units in use on any given day. This discrepancy is a result of the policy of Safety-Kleen Corporation that holds active permits for the units that are not assigned to a customer. These units however could be used at any time a facility leases the solvent cleaning equipment and starts using it, i.e., this equipment will be a source of VOC emissions. Since it is conceivable that all permitted units can be leased, the assumption has been made that there are emissions coming from these units. Therefore, it was assumed that the total number of units subject to Rule 67.6.1 includes all the equipment permitted by the District regardless whether a particular piece of equipment is in use on any given day.

**TABLE 11**  
**Type of Solvent Cleaning Equipment in Use in San Diego County**  
**and Corresponding Annual<sup>4</sup> VOC Emissions**

<b>Type of Equipment</b>	<b>Number of Units</b>	<b>Percent of Total Units</b>	<b>VOC Emissions, tpy</b>	<b>Percent of Total Emissions</b>
Batch Cleaners	459	12.6	92.3	33.0
Remote Reservoirs	3,183	87.4	187.8	67.0
<i>Total</i>	<i>3,642</i>	<i>100</i>	<i>280.1</i>	<i>100</i>

As shown in Table 11, the majority of solvent cleaners in San Diego County are remote reservoir units (87.4%) which contribute 67% of the total VOC emissions from solvent cleaning operations.

The overall VOC emissions from all equipment subject to Rule 67.6.1, including emissions from stripping operations (3.1 tpy), are 280.1 + 3.1 = 283.2 tons per year.

## **VIII. EMISSION REDUCTION POTENTIAL OF PROPOSED RULE**

Proposed Rule 67.6.1 requires the majority of solvent cleaning operations in San Diego County be conducted with solvents containing 50 g/l of VOC or less. The rule exempts solvents used for cleaning electrical and electronic components, aerospace components, medical devices and specialized optical devices from the VOC content limit. These facilities will still be subject to the equipment and work practice standards of the rule. According to District data there are 36 batch cleaners and 44 remote reservoir cleaners employed in these industries, with the total VOC emissions of 9.8 tons per year. The remaining emission sources in this source category are required to use cleaning solvents with a VOC content of 50 g/l or less.

In addition, the new VOC content limits of Rule 67.6.1 are not applicable for stripping operations. Therefore, VOC emissions from these operations will remain the same, i.e., 3.1 tons per year.

<sup>4</sup> Annual VOC emissions were calculated assuming 365 days per year.

**TABLE 12**  
**Type and Number of Solvent Cleaning Equipment in San Diego County**  
**Subject to the VOC Content Limit of 50 gallons per liter**

<b>Type of Equipment</b>	<b>Number of Sources</b>	<b>Percent of Total Units</b>
Batch Cleaners	423	11.9%
Remote Reservoirs	3,139	88.1%
<i>Total</i>	<i>3,562</i>	<i>100%</i>

Assuming that the average VOC content of presently used cleaning solvents is approximately 800 g/l, the VOC emission reduction potential of Rule 67.6.1 will be 253.4 tons VOC per year, or 89.5% for cold solvent cleaning and stripping operations.

As stated earlier, the current Rule 67.6 applies to both vapor degreasing and cold cleaning operations. According to the recent District emission inventory there are 37 vapor degreasers emitting approximately 15 tons of VOC per year. Therefore, the total VOC emissions from solvent cleaning operations (both vapor and cold cleaning) subject to the current rule will be reduced by 85% as a result of the proposed revision of Rule 67.6.

## **IX. RANGE OF PROBABLE COSTS**

The range of probable costs discussed in this section represents the anticipated annual costs to affected businesses for compliance with the proposed rule. These costs were calculated by the District as part of its cost-effectiveness analysis, first conducted in 2000 (Ref. 2) and updated for this report. The cost-effectiveness is determined as the cost in dollars per pound of VOC emission reductions associated with implementation of Rule 67.6.1.

The probable costs are based upon estimates of the total annual costs incurred by businesses considering their current solvent cleaning equipment and disposal activities, and those costs that would be required in order to comply with the proposed rule.

Suggested cost scenarios, as shown in Table 13, represent different options affected businesses might choose in order to comply with the proposed rule based on their existing permitted equipment and the type(s) of equipment that would be required. Though the cost scenarios developed consider alternative options, they all assume the method of choice to comply with the reduced VOC content limit of the proposed rule is a conversion from solvent-based cleaning to water-based cleaning.

**TABLE 13**  
**Cost Scenarios for Conversion from Solvent-Based to**  
**Water-Based Cold Solvent Cleaning Operations**

Option 1	Replace Leased RR* using Solvent-Based Material with Leased RR using Water-Based Material
Option 2	Replace Leased RR using Solvent-Based Material with Owned RR using Water-Based Material
Option 3	Replace Leased Dip Tank using Solvent-Based Material with Leased Dip Tank using Water-Based Material
Option 4	Replace Leased Dip Tank using Solvent-Based Material with Owned Spray Cabinet using Water-Based Material
Option 5	Replace Leased Dip Tank using Solvent-Based Material with Owned Dip Tank using Water-Based Material
* RR – remote reservoir cleaner	

The costs of conversion from solvent-based to water-based cleaning operations are presented in Table 14 on the following page. They include the total annual costs of both the current equipment and its use and those associated with the new equipment and its use. The total annual costs include the annualized cost of business-owned or leased equipment, as appropriate, annual labor costs, electricity costs, disposal costs and the cost of changing spent cleaning material to a fresh one (change-out). The total annual costs for each option are highlighted in Table 14. The assumptions used in developing these costs are specified in the footnotes to the table.

Subsequently, for each option, the cost differentials have been calculated between a cleaning operation that uses an existing solvent-based material and an operation that would use a water-based material. By applying the total annual cost differentials to what is known about the universe of existing cold solvent cleaners and the types of businesses in which they are used, the range of probable costs to affected businesses can be estimated.

**TABLE 14**  
**Cost of Conversion from Solvent-Based to Water-Based Cold Solvent Cleaning Operations**

Costs	Option 1		Option 2		Option 3		Option 4		Option 5	
	Solvent	Aqueous	Solvent	Aqueous	Solvent	Aqueous	Solvent	Aqueous	Solvent	Aqueous
Owned Unit (Full cost), \$	-	-	-	950	-	-	-	5,000	-	3,000
Owned Unit (Annualized), \$/yr	-	-	-	156	-	-	-	820	-	492
Waste disposal & Change-out or Lease Package, \$/yr	545	511	545	601	1,051	984	1,051	770	1,128	601
Electricity, \$/yr	29	437	29	437	59	1,381	59	1,848	59	1,381
Labor, \$/yr	3,626	3,626	3,626	3,626	7,252	7,252	7,252	5,439	7,252	7,252
<b>Total Annual Cost, \$/yr</b>	<b>4,200</b>	<b>4,574</b>	<b>4,200</b>	<b>4,820</b>	<b>8,362</b>	<b>9,617</b>	<b>8,362</b>	<b>8,887</b>	<b>8,439</b>	<b>9,726</b>
VOC Emissions, lb/yr	118	7	118	7	402	24	402	24	402	24
Cost-effectiveness, \$/lb VOC reduced	\$3.37		\$5.33		\$3.32		\$1.36		\$3.41	

Assumptions: (Based on District Information unless specifically noted)

1. Emission Factors: Solvent RR = 0.324 lbs/day, Solvent Dip Tank = 1.1 lbs/day, Aqueous = 6% of solvent emissions, annual calculations assume emissions occur 365 days per year.
2. Labor costs assume a labor rate of \$24.13 using 2003 dollars (applied employment cost index for 1998 & 2003)
3. Labor requirements are estimated at 0.5 hr/day for solvent RR, 1.0 hr/day for solvent dip tanks and the same for aqueous RR and dip tanks. It is also assumed that the use of aqueous spray cabinet requires 25% less labor.
4. Leased unit cost includes cost of equipment, District permit fees, solvent cost, and maintenance and disposal costs.
5. Solvent change-outs for RR, dip tanks are 5.2 times per year or once every 10 weeks.
6. Aqueous change-outs for RR and dip tanks and spray cabinet are 4 times per year or once every 13 weeks. (San Joaquin Valley APCD)
7. Electrical costs are \$0.125/kw-hr, solvent pumps run 2 hrs/day and aqueous pumps run 4 hrs/day. Heater operates 6.74 hrs/day. Heater size for RR is 1.5 KW, for dip tank is 5 KW, and for spray cabinet is 6 KW.
8. Unit price is based on cost to purchase equipment in 2006.
9. Annualized cost assumes a 10-year life-cycle and a 10% interest rate. (Capital recovery factor = 0.164).

Based on the District's cost calculations, the conversion from solvent-based to water-based cleaning solutions will result in total annual cost increases for the affected businesses ranging from \$374 per year to \$1,287 per year depending on the exact equipment used and leasing options followed. Table 15 summarizes the cost increases (cost differentials) based on the compliance options presented in Tables 13 and 14. Though the proposed rule allows for options other than converting to a water-based material in order to comply with the rule, e.g., the installation of an air pollution control system or the use of an airtight/airless cold solvent cleaner, the costs of these options considering the type of usage and size of operation of the affected facilities is assumed to preclude their widespread use.

VOC-exempt compounds such as Volatile Methyl Siloxanes (VMS) can also be used to comply with the rule. Such materials are quite expensive but some companies in San Diego County prefer to use them on large scale operations. Since VMS are recyclable, the high cost of disposing considerable volumes of wastewater, which is classified as a hazardous waste, offsets the cost of VMS-based cleaning solutions (Ref. 3).



**TABLE 15**  
**Summary of Compliance Option Annual Cost Differentials**

Option	Summary of Compliance Option	Total Annual Cost Differential*, (\$/unit/yr)
1	Replace Leased RR* using Solvent-Based Material with Leased RR using Water-Based Material	374
2	Replace Leased RR using Solvent-Based Material with Owned RR using Water-Based Material	620
3	Replace Leased Dip Tank using Solvent-Based Material with Leased Dip Tank using Water-Based Material	1255
4	Replace Leased Dip Tank using Solvent-Based Material with Owned Spray Cabinet using Water-Based Material	515
5	Replace Leased Dip Tank using Solvent-Based Material with Owned Dip Tank using Water-Based Material	1,287

Source: San Diego County Air Pollution Control District

\*Cost differential was calculated as the cost increase in converting to a water-based material shown in Table 14.

As stated earlier, the majority of permitted cold solvent cleaners (approximately 88% of the total permitted equipment) are remote reservoir cleaners. It was assumed that an owner currently using a remote reservoir cleaner would continue using the same type of equipment; therefore, existing remote reservoir cleaning equipment would be replaced using compliance options 1 or 2. Based on discussions with officials in other California air districts that have implemented similar rules and with the two San Diego County vendors of contract cleaning equipment, it was further assumed that approximately 70% of the remote reservoir users would continue to lease their equipment (Option 1) and 30% would choose to buy equipment themselves (Option 2).

For the present users of dip tank cold solvent cleaners, it was assumed that 80% of them would choose to lease a comparable water-based dip tank cleaner (Option 3), and 20%, would opt to convert to the remaining two options, 10% – to a customer-owned spray cabinet (Option 4) and 10% – to a customer-owned water-based dip tank (Option 5). Table 16 presents a total annual cost of compliance with the proposed rule calculated using the above assumptions.

**TABLE 16**  
**Total Annual Costs of Equipment and Process Changes**  
**in Response to Proposed Rule 67.6.1**

<b>Option</b>	<b>Number of Units</b>	<b>Annual Cost Differential \$/yr/unit</b>	<b>Annual Cost of Compliance, \$/yr</b>
1	2,197	374	\$821,678
2	942	620	\$584,040
3	339	1255	\$425,445
4	42	515	\$21,630
5	42	1,287	\$54,054
<b>Total</b>	<b>3,562</b>		<b>\$1,906,847</b>

In order to determine the probable costs to affected businesses, the total annual costs from Table 16 were applied to the range of industry sectors known to be impacted by the proposed rule. The costs were applied to each industry based on each industry's share of the total number of affected establishments. Table 17 presents the probable costs of proposed Rule 67.6.1 to the affected businesses in San Diego County and provides those costs as a percentage of their 2002 value of shipments (manufacturing industries) or receipts/revenue (service establishments).

**TABLE 17**  
**Probable Costs of Proposed Rule 67.6.1 to Affected Businesses**

NAICS	NAICS Description	Annual Cost of Converting from Solvent-Based to Aqueous-Based Operations	No. of Affected Business Establishments (2004)	Total Annual Value of Shipments or Receipts/Revenue (2002*, \$1,000)	Cost of Compliance as % of Shipments or Receipts/Revenue (2002*)
221122	Electric power distribution	\$19,784	21	NA	NA
325998	Misc. chemical products and preparation manufacturing	\$14,132	15	NA	NA
336611	Ship building and repairing	\$19,784	21	\$940,245	0.002%
484110	General freight truck, local	\$167,697	178	\$103,298	0.16%
484121	General freight trucking, long distance, truckload	\$76,312	81	\$58,029	0.13%
484122	General freight trucking, long distance, less than truckload	\$36,743	39	\$136,364	0.03%
484220	Specialized freight trucking, local	\$173,350	184	\$183,610	0.09%
484230	Specialized freight trucking, long-distance	\$25,437	27	\$50,958	0.05%
485113	Bus & other motor vehicle transit systems	\$11,305	12	NA	NA
488410	Motor vehicle towing	\$79,138	84	\$77,184	0.10%
811111	General automotive repair	\$781,016	829	\$351,515	0.22%
811112	Automotive exhaust system repair	\$34,858	37	\$15,028	0.23%
811113	Automotive transmission repair shop	\$73,485	78	\$45,516	0.16%
811118	Other auto mechanical and electrical repair & maintenance	\$90,443	96	\$35,764	0.25%
811122	Automotive glass replacement	\$48,990	52	\$34,431	0.14%
811191	Automobile oil changes	\$71,601	76	\$40,628	0.18%
811198	All other auto repair & maintenance	\$59,353	63	\$13,012	0.46%
81149	Other personal and household goods repair & maintenance	\$123,417	131	\$49,800	0.25%
		\$1,906,847	2,024	\$2,135,382	0.09%

Source: U.S. Bureau of the Census, 2002 Economic Census and 2004 County Business Patterns

\* The latest shipments or revenue/receipts data available

## **X. IMPACT OF PROPOSED RULE ON EMPLOYMENT & REGIONAL ECONOMY INCLUDING THE IMPACT ON SMALL BUSINESS**

As demonstrated in the previous sections, businesses that would be affected by Rule 67.6.1 represent a relatively small percentage of the total number of businesses and total employment in the County at 3% and 2%, respectively. Moreover, in comparison with businesses across the state in the same industry classifications, the affected businesses do not have a heavy concentration in San Diego County, as previously shown in Table 2.

The range of annual costs, based on the District's cost-effectiveness calculations, of converting from solvent-based to water-based cleaning operations is from \$374 per year to \$1,287 per year depending on the exact equipment used and leasing or buying equipment options followed. Permit data from the District and customer data from Safety-Kleen, the leading degreaser

equipment and service provider, indicates that the range of annual incremental cost increases is primarily in the \$374 to \$620 per year range, because most businesses will continue using remote reservoir cleaners. Based on 2002 U.S. Census data for affected businesses, these costs represent less than 1% of the affected businesses' annual revenues, as shown in Table 17.

In order to comply with the proposed rule, almost all affected businesses will have to use a cleaning material with a VOC content of 50 g/l or less. Though there are other means of complying with the rule, the costs of such alternatives are prohibitive given the size of the operations and cleaning requirements of the types of businesses impacted by the rule.

The vast majority of the affected businesses use cleaning equipment vendors such as Safety-Kleen to lease solvent cleaning equipment and utilize their services for cleaning materials, equipment maintenance and waste disposal. Discussions with Safety-Kleen indicate that the increased costs of the equipment necessary for using water-based materials will be passed along to their customers in terms of the leased unit package price and disposal costs. Safety-Kleen's customers can in turn, be expected to pass those increased costs on to their customers. Given that these costs are in most cases between \$374 and \$620 per year, the proposed rule is not anticipated to have significant economic or employment impacts on the affected businesses. Since 79% of the affected establishments were deemed to be small, it can be further stated that the proposed rule is not expected to have significant impacts on small business. Moreover, considering that all affected businesses represent a relatively small percentage of area businesses and employment, it can be concluded that the proposed rule is not expected to have significant employment or other economic or social impact on the region. Further, no significant trends in the affected industries are evident that would alter the interpretation of the anticipated impacts.

## **XI. AVAILABILITY AND COST-EFFECTIVENESS OF ALTERNATIVES**

There are three basic alternatives to adopting Rule 67.6.1: not adopt the rule, adopt less stringent rule, and adopt a more stringent rule. The first two alternatives are not viable options for the District because San Diego County does not attain the federal and State ambient air quality standards for ozone. Adopting a less stringent rule or no rule at all will also violate the State law requiring the District to adopt all feasible control measures reducing emissions of ozone precursors - volatile organic compounds and nitrogen oxides. As shown in this report, proposed Rule 67.6.1 is technically and economically feasible. Similar rules have been implemented in the majority of air districts in California.

The District has considered adopting a more stringent rule. One such alternative would require using aqueous or exempt compound-based cleaning solutions with a VOC content 50 g/l or less for cleaning of special equipment, such as electronic, aerospace, electrical and high-precision optics components. However, in many cases such cleaning materials can damage these specialized components while the emission reductions achieved will be insignificant, only about 9.2 tpy, or 0.025 tpd.

Another alternative would require all solvent cleaning operations be conducted in air-tight or airless degreasers, or by using add-on air pollution control equipment. This alternative will be very costly considering high costs of purchasing and maintaining of add-on emission control equipment and specialized degreasers. For small businesses which represent the majority of

affected establishments that will be detrimental and will force many of them to discontinue their operations. Therefore, both alternatives for adopting a more stringent rule are not recommended.

## **XII. CONCLUSION**

The majority of companies affected by proposed Rule 67.6.1 currently use organic solvents with a high VOC content for cleaning operations. In order to comply with the new rule they will most probably substitute organic solvents with water-based cleaning materials. In most cases, this will require replacing cleaning equipment and modifying cleaning processes at an additional expense. There will also be a cost increase in the recovering and recycling cost, because water-based materials must be disposed of as hazardous waste and can not be recycled cost-effectively. Most entities are expected to pass the added costs onto their customers with minimal impact. Therefore, it is not anticipated that proposed Rule 67.6.1 will impose any significant impacts on the regional economy or on small businesses in San Diego County.

**References.**

1. San Diego County Air Pollution Control District. Estimation of VOC Emissions from Solvent Cleaning Operations in the San Diego Air Basin, Nov. 1998.
2. San Diego Air Pollution Control District. Technical Feasibility Assessment and Cost-Effectiveness Analysis of Potentially Feasible Control Measures for Rule 67.6. January, 2000.
3. Letter form Elaine Deboe, California Department of Transportation, July 2006.

**COMPARATIVE ANALYSIS FOR  
RULES 67.6.1 and 67.6.2**

Pursuant to California Health and Safety Code Section 40727, the Air Pollution Control District Board is required to make findings of necessity, authority, clarity, consistency, non-duplication, and reference prior to adopting, amending, or repealing a rule or regulation. As part of the consistency finding to ensure the proposed rule requirements do not conflict with or contradict other Air Pollution Control District (District) or federal regulations, Health and Safety Code Section 40727.2(a) requires the District to perform a written analysis identifying and comparing the air pollution control standards and other provisions of new Rules 67.6.1 and 67.6.2 with existing or proposed District rules and guidelines and existing federal rules, regulations, and guidelines applying to the same source category.

Currently both cold solvent cleaning and vapor degreasing operations are regulated by Rule 67.6 (Cold Solvent Cleaning Operations). Proposed Rules 67.6.1 and 67.6.2 will replace Rule 67.6. Rule 67.6.1 will apply only to cold solvent cleaning and stripping operations. Rule 67.6.2 will apply to vapor degreasing operations. The District has conducted a comparative analysis of these rules with a federal Control Technique Guideline (CTG) – Control of Volatile Organic Emissions from Solvent Metal Cleaning and the National Emission Standards for Hazardous Air Pollutants (NESHAP): Halogenated Solvent Cleaning. The results of this analysis are provided in Tables 1 and 2.

The requirements of Rules 67.6.1 and 67.6.2 were also compared with the District New Source Review (NSR) Rules that are applicable to any new emission source subject to the permitting requirements of District Rule 10 (Permits Required).

Solvent cleaning operations are a source of volatile organic compounds (VOC) emissions. Any newly installed emission source in San Diego County is subject to the Best Available Control Technology (BACT) requirements of the NSR rules if its potential to emit is greater than 10 pounds per day (lbs/day) of VOC. In reality, the VOC emissions from solvent cleaning operations are lower than 10 lbs/day because the vast majority of them are small scale operations. In addition, any new solvent cleaning operation proposed to be conducted in San Diego County will be subject to Rules 67.6.1 or 67.6.2, as applicable. The new rules will result in more stringent emission limitations for solvent cleaning operations to the extent that they will remain significantly less than 10 lbs/day of VOC. Therefore, there are no contradictions between BACT and the new proposed rules.

As shown in Tables 1 and 2 there are no conflicts or contradictions between Rules 67.6.1 and 67.6.2 and the federal CTG or NESHAP requirements.

**Table 1  
Detailed Comparison – Rule 67.6.1**

<b>Items for Comparison</b>	<b>Rule 67.6.1</b>	<b>CTG – Control of Volatile Organic Emissions from Solvent Metal Cleaning</b>	<b>National Emissions Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning</b>
Applicability	Cold solvent cleaning and stripping operations.	Cold solvent cleaning operations.	Cold solvent cleaning machines using a halogenated Hazardous Air Pollutant solvent in a total concentration greater than 5% by weight.
Exemptions	<p>Exempt from all rule requirements:</p> <ol style="list-style-type: none"> <li>1. Solvent cleaning operations regulated by the NESHAP: Halogenated Solvent Cleaning.</li> <li>2. Cold solvent cleaning or stripping conducted in a tank with a liquid surface area of 1 square foot or less, or with a capacity of 1 gallon or less.</li> <li>3. Cold solvent cleaning conducted in a remote reservoir with a sink cross sectional area 1 square foot or less.</li> <li>4. Cold solvent cleaning or stripping operations used exclusively for educational purposes.</li> <li>5. Cold solvent cleaning or stripping operations that exclusively utilize water-based material with a VOC content of 50 grams per liter or less.</li> </ol> <p>Exempt from the VOC content limit requirements: Cold solvent cleaning of electronic components, electrical components, medical devices, aerospace components, or precision optics components.</p>	No exemptions	N/A
VOC Limit	50 grams per liter, as applied	No limits	N/A



Table 1 - Detailed Comparison – Rule 67.6.1 continued

Items for Comparison	Rule 67.6.1	CTG – Control of Volatile Organic Emissions from Solvent Metal Cleaning	National Emissions Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning
Operational Standards	<p>No liquid leaks.</p> <p>Cover not removed except to process work or perform maintenance.</p> <p>Minimizing solvent carry out by:</p> <ul style="list-style-type: none"> <li>• Racking parts to dry, and</li> <li>• Tipping pools of solvent from clean parts, and</li> <li>• Allowing parts to dry within cleaner.</li> </ul>	<p>Closed cover when not handling parts.</p> <p>Draining parts until dripping ceases.</p>	<p>Minimize solvent carry out by:</p> <ul style="list-style-type: none"> <li>• Racking parts to dry, and</li> <li>• Tipping pools of solvent from clean parts, and</li> <li>• Allow parts to dry within degreaser.</li> </ul>
Equipment Standards	<p>A cover when work is not being performed.</p> <p>A facility for draining parts.</p> <p>A label summarizing operating requirements.</p> <p>Freeboard ratio of at least 0.5 for batch-loaded cleaners and a freeboard height of at least 6 inches for remote reservoirs.</p>	<p>A cover when work is not being performed.</p> <p>A facility for draining parts.</p> <p>A label summarizing operating requirements.</p>	<p>A tight fitting cover.</p> <p>A freeboard ratio of at least 0.75.</p>
Recordkeeping Requirements	<p>Current list of solvents used with their VOC content expressed in gallons per liter (g/l) or pounds per gallon (lbs/gal). Records must be kept by at least 3 years.</p>	<p>N/A</p>	<p>Owners manual, solvent list, and source test results. Records must be kept for at least 5 years.</p>
Test Methods	<p>South Coast Air Quality Management District Method 313 or 308 for determining the VOC content of cleaning materials.</p>	<p>Environmental Protection Agency (EPA) gas chromatography methods.</p> <p>EPA method 23 or 106 for chlorinated hydrocarbons.</p>	<p>Calculation of halogenated solvents concentration in cleaning material as provided in rule.</p> <p>EPA Method 307 for determination of emission rate during equipment idling.</p>

**Table 2**  
**Detailed Comparison – Rule 67.6.2**

<b>Items for Comparison</b>	<b>Rule 67.6.2</b>	<b>CTG – Control of Volatile Organic Emissions from Solvent Metal Cleaning</b>	<b>National Emissions Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning</b>
Applicability	Vapor degreasing operations	Vapor degreasing operations	Vapor degreasing machines using a halogenated HAP solvent in a total concentration greater than 5% by weight.
Exemptions	<p>Vapor degreasing operations that exclusively utilize water-based material with a VOC content of 50 grams per liter or less.</p> <p>Vapor-phase solder reflow units.</p>	<p>Conveyorized degreasers with air/vapor interface &lt; 2 meter<sup>2</sup> are exempt from having an add-on control equipment.</p> <p>Open top degreasers with open area &lt; 1 meter<sup>2</sup> are exempt from requirement to use refrigerated chiller or carbon adsorber.</p>	N/A
Operational Standards	<p>Cover not removed except to process work or perform maintenance.</p> <p>No liquid leaks.</p> <p>Minimize solvent carry out by:</p> <ul style="list-style-type: none"> <li>• Racking parts for full drainage, and</li> <li>• Move parts in and out of degreaser at less than 11 ft/min, and</li> <li>• Clean in vapor zone until condensation ceases, and</li> <li>• Tip pools of solvent out before removal, and</li> <li>• Allow parts to dry within the degreaser.</li> </ul>	<p>Keep cover closed except when processing work.</p> <p>Minimize solvent carry out by:</p> <ul style="list-style-type: none"> <li>• Rack parts to allow drainage, and</li> <li>• Move parts in and out of degreaser at a speed &lt;11 ft/min, and</li> <li>• Degrease in vapor zone for at least 30 seconds, and</li> <li>• Tip pools of solvent out before removal, and</li> <li>• Allow parts to dry within the degreaser.</li> </ul> <p>Never spray above vapor zone.</p>	<p>Move parts in and out of degreaser at less than 11 feet per minute</p> <p>Limit drafts, so as not to disturb the vapor zone.</p>

Table 2 - Detailed Comparison – Rule 67.6.2 continued

Items for Comparison	Rule 67.6.2	CTG – Control of Volatile Organic Emissions from Solvent Metal Cleaning	National Emissions Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning
Equipment Standards	<p>A cover easily opened without disturbing vapor zone.</p> <p>Safety switches.</p> <p>A label summarizing operating requirements.</p> <p>Major Control Devices:</p> <ul style="list-style-type: none"> <li>• Freeboard ratio 1.0, or</li> <li>• Refrigerated freeboard chiller, or</li> <li>• Enclosed design.</li> </ul>	<p>A cover easily opened without disturbing vapor zone.</p> <p>Safety switches.</p> <p>A label summarizing operating requirements.</p> <p>Major Control Devices:</p> <ul style="list-style-type: none"> <li>• Freeboard ratio 0.75, or</li> <li>• Refrigerated freeboard chiller, or</li> <li>• Enclosed design, or</li> <li>• Carbon adsorption system.</li> </ul>	<p>Safety devices.</p> <p>Major Control Devices:</p> <ul style="list-style-type: none"> <li>• A freeboard ratio of at least 1.0, or</li> <li>• Refrigerated freeboard chiller, or</li> <li>• Carbon absorber, or</li> <li>• Superheated vapor zone.</li> </ul>
Recordkeeping	<p>Current list of solvents used with their VOC content expressed in g/l or lbs/gal. Records must be kept by at least 3 years.</p>	<p>N/A</p>	<p>Owner’s manual, solvent list, and source test results. Records must be kept for at least 5 years.</p>
Test Methods	<p>South Coast Air Quality Management District Method 313 or 308 for determining the VOC content of the material.</p> <p>American Society for Test Methods D1078-03 for measuring the initial boiling point of solvents.</p>	<p>EPA gas chromatography methods.</p> <p>EPA method 23 or 106 for chlorinated hydrocarbons.</p>	<p>Calculation of halogenated solvents concentration in cleaning material as provided in rule.</p> <p>EPA Method 307 for determination of emission rate during equipment idling.</p>

CALIFORNIA DEPARTMENT OF FISH AND GAME  
**CERTIFICATE OF FEE EXEMPTION**

No Impact Finding

**Project Title:** Proposed Adoption of New Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations), New Rule 67.6.2 (Vapor Degreasing Operations) and Repeal of Existing Rule 67.6 (Solvent Cleaning Operations)

**Project Location:** Entire Area of San Diego County, California

**Project Proponent:** San Diego County Air Pollution Control District  
10124 Old Grove Road, San Diego, CA 92131

**Project Description:**

The San Diego County Air Pollution Control District (District) proposes to adopt new Rule 67.6.1 (Cold Solvent Cleaning and Stripping Operations) and new Rule 67.6.2 (Vapor Degreasing Operations) that include new emission reduction requirements for solvent cleaning operations. The proposed new rules will replace existing Rule 67.6 (Solvent Cleaning Operations), which regulates emissions from cold solvent cleaning and vapor degreasing operations. Rule 67.6 was last amended in 1990. Since then, advances have occurred in low-emitting solvent cleaning technologies and materials that are now being implemented in other California air districts. Such advances are reflected in proposed Rules 67.6.1 and 67.6.2 and would result in reduced emissions of volatile organic compounds and toxic air contaminants and improved air quality in the region.

**Findings of Exemption:**

Pursuant to the California Environmental Quality Act (CEQA), an Initial Study has been prepared by the lead agency (the District) evaluating the potential environmental consequences resulting from the project. Based on the Initial Study findings, a Negative Declaration has been prepared pursuant to CEQA. Based on review of the entire record before the District, the project will have no adverse effect on wildlife resources or the habitat on which the wildlife depends; and,

The District has, on the basis of substantial evidence, rebutted the presumption of adverse effect to the resources listed in Title 14, California Code of Regulations, Section 753.5(d).

**Certification:**

I hereby certify that the lead agency has made the above findings of fact and that based upon the Initial Study, Negative Declaration, and record as a whole the project will not individually or cumulatively have an adverse effect on wildlife resources or the habitat upon which the wildlife depends, as defined in Section 711.2 of the Fish and Game Code.

  
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RAYMOND A. FERNANDEZ

Title: Air Pollution Control Director (Acting)  
Lead Agency: San Diego County Air Pollution Control District

Date: April 11, 2007