

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

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**Final Environmental Assessment  
Proposed Amended Rule 1122 – Solvent Degreasers**

**SCAQMD No. 070301JDN**

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**Executive Officer**

Barry R. Wallerstein, D. Env.

**Deputy Executive Officer**

**Planning, Rules, and Area Sources**

Elaine Chang, DrPH

**Manager**

**Planning, Rules, and Area Sources**

Alene Taber, AICP

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**Author:** Jonathan Nadler - Air Quality Specialist

**Technical Assistance:** Rizaldy Calungcagin – Air Quality Engineer II

**Reviewed By:** William Wong- Senior Deputy District Counsel  
Steve Smith, Ph.D. - Program Supervisor  
Louis Yuhas – Air Quality Analysis and Compliance Supervisor

# **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

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Supervisor, Fourth District  
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**EXECUTIVE OFFICER:**

BARRY R. WALLERSTEIN, D.Env.

## **PREFACE**

This document constitutes the Final Environmental Assessment (EA) for proposed amended Rule 1122 – Solvent Degreasers. No comment letters were received during the 30-day review period for the Draft EA.

To ease in identification, modifications to the document are included in underline, and text removed from the document is indicated by ~~striethrough~~. None of the modifications alter any conclusions reached in the Draft EA, nor provide new information of substantial importance relative to the Draft document.

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Proposed Rule 1122

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## **CHAPTER 1 - PROJECT DESCRIPTION**

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**Introduction**

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## **INTRODUCTION**

Volatile organic compound (VOC) emissions are major contributors to the formation of ozone (key ingredient of smog) in the South Coast Air Basin (Basin). The formation of ozone occurs as VOCs react with oxides of nitrogen (NO<sub>x</sub>) in the atmosphere. Ozone, a criteria pollutant, has been shown to adversely affect human health. It also contributes to the formation of another criteria pollutant, particulate matter with a diameter less than 10 microns (PM<sub>10</sub>).

South Coast Air Quality Management District (SCAQMD) Rule 1122 – Solvent Degreasers, was adopted on March 2, 1979, to control VOC emissions from solvent degreasing operations. Solvent degreasing involves the use of solvents, in either liquid or vapor phase, to remove contaminants such as dirt, oil, soil, and grease from parts, products, tools, machinery, and equipment.

Rule 1122 establishes both equipment and operating requirements for solvent degreasing operations. Industries subject to the provisions of Rule 1122 include any facility that operates degreasing equipment that removes contaminants as part of their production process. The rule was last amended on July 11, 1997. The 1997 amendment established specific work practice, design, and control requirements for all types of degreasing equipment. Furthermore, the amendment established low VOC limits, reflecting available waterborne cleaning technologies, for cold cleaning operations. Starting January 1, 1999, Rule 1122 required that solvents used in batch-loaded and conveyORIZED cold cleaning operations contain no more than 50 grams of VOC per liter or that airless/air-tight systems be used. While the 1997 amendment to Rule 1122 reduced VOC emissions from solvent degreasing operations, further reductions are needed to help attain and maintain federal and state air quality standards. Proposed amended Rule 1122 will further reduce VOC emissions through greater use of aqueous cleaning materials, other certified Clean Air Solvents, exempt solvents, or airless/air-tight degreasers. The proposed amendments are estimated to reduce VOC emissions by over three tons per day.

Additionally, the proposed amendments would help implement the SCAQMD's Air Toxics Control Plan (ATCP), adopted by the SCAQMD Governing Board in March 2000. This plan directs staff to "integrate and maximize concurrent emission reduction opportunity for both criteria and toxic pollutants" and to "promote pollution prevention/elimination technologies."

Rule 1122 currently provides an exemption for degreasing operations using halogenated solvents regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP). During the first public workshop for the proposed amendments to Rule 1122 (June 29, 2000), SCAQMD staff received requests to regulate toxic solvents, particularly perchloroethylene, used in vapor degreasers by including NESHAP compounds in the rule. Similar requests were received from government agencies including the Department of Toxic Substances Control (DTSC) and the United States Environmental Protection Agency (USEPA). After evaluating these comments along with the directions set forth in the ATCP, the SCAQMD is proposing to include the NESHAP halogenated solvents as part of the control strategy for Rule 1122. Implementation of the proposed amendments is estimated to reduce air toxic emissions by approximately 0.8 ton per day by January 1, 2003.

Pursuant to the California Environmental Quality Act (CEQA) (California Public Resources Code § 21000 et seq.), this document includes an analysis of the potential environmental impacts of implementing proposed amended Rule 1122. Based upon the analysis contained herein, no

significant adverse environmental impacts are anticipated from the implementation of the proposed amendments.

### **LEGISLATIVE AUTHORITY**

The California Legislature created the SCAQMD in 1977 (Lewis-Presley Air Quality Management Act, California Health and Safety Code §§ 40400 et seq.) as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (SCAB) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin. By statute, SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all state and federal ambient air quality standards for the District [California Health and Safety Code § 40460(a)]. Furthermore, SCAQMD must adopt rules and regulations that carry out the AQMP [California Health and Safety Code, § 40440(a)]. The 1997 AQMP concluded that major reductions in emissions of VOCs and NO<sub>x</sub> are necessary to attain the air quality standards for ozone and PM<sub>10</sub>. Rule 1122 was originally prepared pursuant to these mandates.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT**

The proposed amendments to Rule 1122 are a "project" as defined by CEQA (California Public Resources Code §21080.5). SCAQMD is the lead agency for the proposed project and has prepared appropriate environmental analysis pursuant to its certified regulatory program (SCAQMD Rule 110). California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report (EIR) once the Secretary of the Resources Agency has certified the regulatory program. The SCAQMD's regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

CEQA requires that the potential environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, the SCAQMD has prepared this environmental assessment (EA) to address the potential environmental impacts associated with the proposed amendments to Rule 1122.

All comments received during the public comment period on the analysis presented in the Draft EA will be responded to and included in the Final EA<sup>1</sup>. Prior to making a decision on the proposed amendments, the SCAQMD Governing Board must review and certify the EA as providing adequate information on the potential adverse environmental impacts of the amended rule.

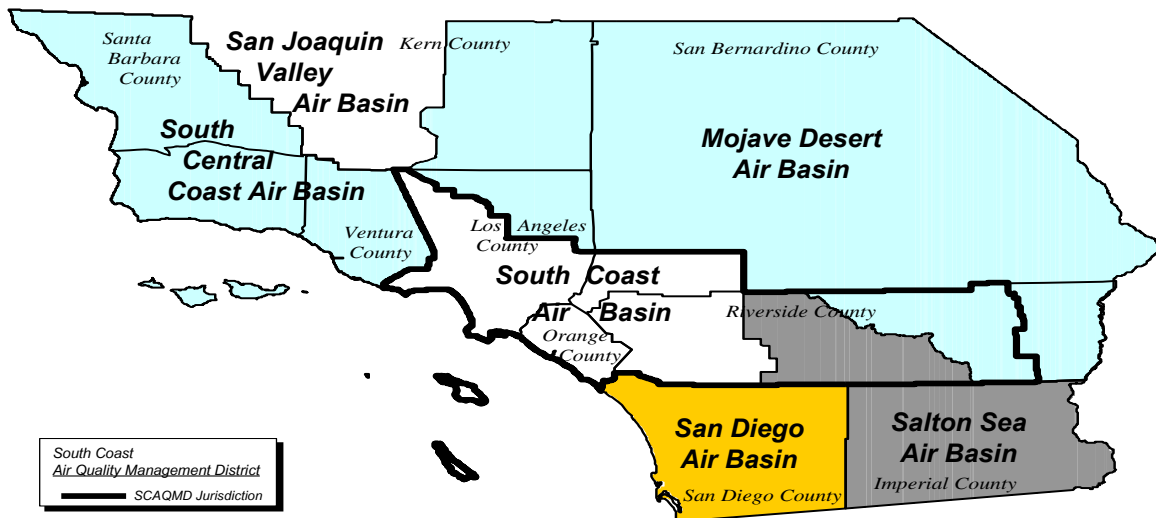
### **PROJECT LOCATION**

The SCAQMD has jurisdiction over an area of 10,473 square miles (referred to hereafter as the district), consisting of the four-county South Coast Air Basin (Basin) and the Riverside County portions of the Salton Sea Air Basin (SSAB) and the Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The 6,745 square-mile Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB

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<sup>1</sup> No comments were received on the Draft EA.

and MDAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of both Riverside County and the SSAB and is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (Figure 1-1).



**Figure 1-1**  
**South Coast Air Quality Management District**

## BACKGROUND

Solvent degreasing can be conducted as either a batch or conveyerized operation. With each of these methods, the solvent can be used in either the liquid or vapor state. When solvent is used as a liquid (cold cleaning), the part to be cleaned is lowered into and raised from the bath, and allowed to drain and dry. The cleaning process can be facilitated by the use of agitation or solvent spray.

When the solvent is used as a vapor (vapor degreasing), the hot vapors condense on the cold article, transferring the dirt and grease to the solvent. When the article reaches the temperature of the vapor, no further condensation occurs. The clean article dries and is removed from the degreaser. This vapor cleaning process has been used for many extensive and difficult cleaning operations.

Many industrial facilities use various solvents for cleaning and degreasing. Facilities that use VOC-containing solvents fall under the provisions of Rule 1122. They vary from small users to



major manufacturing operations that may have very sophisticated cleaning and degreasing facilities. Among the small users are machine shops, which use batch-loaded cold cleaners for their degreasing operations. A batch-loaded cold cleaner is a degreaser that is designed to contain liquid solvent at a temperature below its boiling point.

Previously, most cold cleaners used a number of high-VOC solvents such as mineral spirits, methyl ethyl ketones (MEK), naphthas, and alcohols. On July 11, 1997, the SCAQMD amended Rule 1122 and established lower VOC limits for batch-loaded and conveyORIZED cold cleaners. The amendment called for the use of aqueous cleaning materials, low-VOC solvents, and airless/air-tight equipment as primary control methods in reducing VOC emissions from solvent degreasing operations. The amendment also exempted cleaning material with a VOC content of 50 grams per liter or less, as used, from all requirements of Rule 1122.

Starting on January 1, 1999, Rule 1122 required that solvents used in any cold cleaning application contain no more than 50 grams of VOC per liter of material or that solvents be used in an airless/air-tight degreaser. With certain limited exceptions (e.g., medical devices), low-VOC aqueous materials have been successfully substituted across the board for solvent-based cleaners used in cold cleaning applications. A recent audit of Rule 1122 facilities revealed high level of compliance with the rule requirements.

In spite of advancements in aqueous cleaning technology, there are still about 250 facilities that continue to use open-top vapor degreasers. Six of these facilities currently use airless/air-tight cleaning systems. Most of the vapor degreasers either use high-VOC solvents or NESHAP halogenated solvents. Open-top vapor degreasers using VOCs are subject to the requirements of Rule 1122. Facilities that use toxic halogenated solvents for their degreasing operations are currently exempt from the provisions of Rule 1122, but are subject to federal NESHAP requirements for halogenated solvent cleaners.

The NESHAP for halogenated solvent cleaning was promulgated as 40 CFR Part 63 Subpart T on December 2, 1994. This applies to solvent cleaning machines using any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform, or any combination of these halogenated solvents in a total concentration greater than five percent by weight.

On June 29, 2000, the SCAQMD held a public workshop for Proposed Rule 1122. During the workshop, comments were received urging the SCAQMD to reduce air toxic emissions, particularly perchloroethylene, from the use of NESHAP solvents by regulating its use in Rule 1122. Similar requests in writing were received from other government agencies such as DTSC and the USEPA. In response, the SCAQMD delayed the Public Hearing for Rule 1122 in order to look at the toxic risk reduction potential from the rule and possible inclusion of the NESHAP solvents as part of the control strategy. An advisory panel, comprised of industry representatives, environmentalists, and regulators, was formed to assist in evaluating regulatory alternatives.

During the rule development process, the SCAQMD staff and other panel members visited a number of facilities that have successfully converted to alternative cleaning methods, such as aqueous cleaning, use of exempt compounds, and airless/air-tight degreasers. Staff has also visited facilities that continue to use VOC solvents and evaluated any special needs that have prevented them from converting to alternative cleaning methods. Based on site visits of diverse facilities, staff believes that facilities can convert to aqueous cleaners in most circumstances. In

some cases where companies may prefer to use solvents, they can use them in airless/air-tight or equivalent degreasers.

There are more aqueous technologies available today than there were several years ago. Since the last amendment of Rule 1122 in 1997, the number of certified Clean Air Solvents has increased significantly. There are more than 150 Clean Air Solvents currently certified and the number continues to grow. The proposed amendments to Rule 1122 will reduce not only VOC emissions but also reduce toxic air contaminant emissions from solvent degreasing operations.

Perchloroethylene, the most widely used halogenated solvent in degreasing operations, is a possible human carcinogen as identified by the International Agency for Research on Cancer. Its chronic health effects target the kidneys, gastrointestinal system and liver, and the respiratory system. Target organs/systems for acute health effects include the eyes, respiratory system, and central and peripheral nervous systems. The proposed amendments will reduce emissions of toxic air contaminants (mainly perchloroethylene) from solvent cleaning operations through solvent substitution and the use of aqueous materials, process changes, or the use of airless/air-tight cleaning systems.

### **RATIONALE FOR PROPOSED PROJECT**

The use of solvents for cleaning and degreasing represents a common source of VOC and toxic emissions. From small machine shops to large aerospace facilities, almost every commercial and industrial establishment that has a need to clean parts utilize degreasing equipment. A California Air Resources Board (CARB) study conducted in 1995 revealed that a majority of VOC solvent cleaning emissions comes from cold cleaning operations. The 1997 amendment of Rule 1122 lowered the VOC limits for solvents used in cold cleaners. While this amendment resulted in a substantial decrease in VOC emissions, further reductions are needed to attain and maintain state and federal ambient air quality standards.

SCAQMD Rule 1171 – Solvent Cleaning Operations, and Rule 1122 are closely related rules. Both rules support the use of similar aqueous and non-VOC cleaning technologies to reduce VOC emissions. The October 8, 1999, amendment to Rule 1171 lowered the VOC limits for certain solvent cleaning activities through the use of aqueous or semi-aqueous technologies and non-VOC cleaning materials. The amendment called for the use of cleaning solvents with a VOC content of no more than 25 grams per liter by the year 2005 for certain cleaning applications. Currently, more than 70 percent of the Clean Air Solvents certified by the SCAQMD have VOC contents of 25 grams per liter or less.

The proposed amendments to Rule 1122 will achieve further VOC emission reductions through the continued use of aqueous and other low-VOC cleaning materials as called for in the 1997 AQMP, as amended in 1999 (CTS-08). The proposed amendments will also ensure consistency between Rules 1122 and 1171 by lowering the allowable VOC content of solvents used in cold cleaners from 50 grams per liter to 25 grams per liter.

While most cleaning and degreasing operations are performed using cold cleaners, other facilities continue to use vapor degreasers in their cleaning operations. Many of these vapor degreasers utilize NESHAP halogenated solvents that emit toxic air contaminants (staff has also identified two facilities using NESHAP solvents in cold cleaning equipment). These solvents are currently not subject to the requirements of Rule 1122 that was designed to regulate VOC degreasing materials.

During the first public workshop on June 29, 2000, the SCAQMD received requests to regulate toxic solvents, particularly perchloroethylene, used in vapor degreasers by including NESHAP compounds into the rule. Similar requests in writing were received from government agencies such as DTSC and the USEPA. Furthermore, the SCAQMD Air Toxics Control Plan contains stationary control strategy AT-STA-04 – Reduction of Toxic Air Contaminant Emissions from Solvent Cleaning/Degreasing Operations, which calls for reduction of emissions of perchloroethylene, a toxic air contaminant and possible human carcinogen. The proposed amendments will reduce toxic risk from NESHAP halogenated solvents from cold cleaning and vapor degreasing operations by requiring the use of the airless/air-tight or equivalent cleaning systems or through substitution of alternative solvents or process changes. Other proposed amendments will delete rule requirements that became obsolete starting January 1, 1999, and add language to clarify rule intent.

### **PROJECT OBJECTIVE**

Based on the discussion above, the objectives of the proposed amendments are to:

- 1) further reduce VOC emission through the continued use of aqueous and non-VOC cleaning materials as called for in the 1997 AQMP, as amended in 1999 (Control Measure CTS-08);
- 2) ensure consistency between Rule 1122 and Rule 1171; and
- 3) implement SCAQMD's Air Toxics Control Plan stationary control strategy AT-STA-04 – Reduction of Toxic Air Contaminant Emissions from Solvent Cleaning/Degreasing Operations.

### **PROJECT DESCRIPTION**

The following list summarizes the proposed amendments to Rule 1122:

- ✓ Amend rule applicability to include NESHAP halogenated solvents;
- ✓ Add new definitions and modify existing ones;
- ✓ Establish lower VOC limits for cold cleaners effective January 1, 2003;
- ✓ Add new requirements for degreasers using NESHAP halogenated solvents effective January 1, 2003;
- ✓ Require stricter control standards for VOC vapor degreasing operations effective January 1, 2006;
- ✓ Add prohibition on the use of HCFC-141b or other solvents deemed unacceptable by USEPA;
- ✓ Clarify rule language pertaining to safety switches and high-vapor cutoff thermostat for certain types of degreasers;
- ✓ Add alternative test methods pertaining to VOC content determination;
- ✓ Amend the applicability and requirements for monitoring, recordkeeping, and reporting;
- ✓ Amend the exemption criteria; and
- ✓ Delete obsolete rule requirements.

The proposed amended rule is attached to this document as Appendix A.

## **EMISSIONS INVENTORY**

Rule 1122 emissions come from both point sources and area sources. As defined in the AQMP, companies that hold written permits from the SCAQMD are classified as point sources, with the remaining facilities classified as area sources. The databases used in identifying point and area sources were Annual Emissions Report (AER), AB2588 database, Automated Equipment Information System (now known as CLASS), and CARB's emission inventory data system. The proposed amendments seek to control both VOCs and toxic air contaminants from solvent degreasing operations; thus, the emissions inventories for these pollutants are reported separately.

### **VOC Emissions Inventory**

The VOC emissions data presented in the staff report for the 1997 amendment to Rule 1122 were used to determine the baseline inventory for this rule development process. Emission control measures that took effect on January 1, 1999, substantially reduced VOC emissions from cold cleaners and vapor degreasers. Based on the 1997 staff report, the remaining emissions inventory for cold cleaning operations in 1999 is 6.0 tons of VOC per day. This number represents the net emissions after reducing the inventory for cold cleaners by the emission reductions expected from the January 1, 1999, control measures. Using an annual growth rate of two percent, the 2001 VOC emissions inventory for cold cleaning operations is estimated to be 6.24 tons per day.

For vapor degreasing, the CLASS database currently has 314 facilities that still have active vapor degreaser permits (522 units) with the SCAQMD. Staff conducted a survey of these facilities to determine the type and amount of solvent used in each permitted vapor degreaser. The survey revealed that 251 facilities (342 units) currently use vapor degreasers for cleaning applications. The other facilities have eliminated the use of vapor degreasers by switching to aqueous cleaners. The solvents used in vapor degreasing operations are mostly NESHAP halogenated solvents and other VOC solvents such as n-propyl bromide and isopropyl alcohol. Other vapor degreasers use "designer chemicals" that contain VOC-exempt compounds and blends with added VOC solvents. SCAQMD staff used the survey data, as well as information from AER, in estimating the VOC emissions inventory for vapor degreasing operations. For the year 2001, the VOC emissions from vapor degreasing operations are estimated at 0.07 ton per day.

Combining both cold cleaning and vapor degreasing operations, the total VOC emissions in year 2001 for Rule 1122 is 6.31 tons per day.

### **Air Toxics Emissions Inventory**

A recent survey of facilities with active SCAQMD vapor degreaser permits revealed that approximately 60 percent of the vapor degreasing equipment use NESHAP halogenated solvents. Emissions from these solvents are classified as toxic air contaminants (TAC). The survey also showed perchloroethylene to be the most widely used NESHAP halogenated solvent. Other NESHAP solvents used in vapor degreasing are 1,1,1-trichloroethane, trichloroethylene, and methylene chloride. Currently, there are no known users of carbon tetrachloride and chloroform for vapor degreasing in the district.

Staff used the data from the survey and AER to determine the air toxic emissions from solvent degreasing operations. Air toxic emissions for year 2001 are estimated to be 0.81 ton per day. Perchloroethylene accounts for nearly 83 percent of the emissions. Table 1-1 below summarizes the toxic emissions by type of air contaminant.

**Table 1-1**  
**Air Toxic Emissions Inventory from Vapor Degreasers**  
(tons/day)

NESHAP Solvent	Current Emissions
Perchloroethylene	0.67
1,1,1-trichloroethane	0.10
Trichloroethylene	0.02
Methylene Chloride	0.02
<b>Total</b>	<b>0.81</b>

Subsequent to the release of the Draft EA, staff has become aware of two facilities using perchloroethylene as cleaning solvent in cold cleaning operations. Total emissions from these facilities are three tons per year or about 0.01 ton per day. Combined with the toxic emissions from vapor degreasers, the total toxic emissions degreasing operations is 0.82 ton per day.

## **CHAPTER 2 - ENVIRONMENTAL CHECKLIST**

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**Introduction**

**General Information**

**Potentially Significant Impact Areas**

**Determination**

**Environmental Checklist and Discussion**

**INTRODUCTION**

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed amendments to Rule 1122 – Solvent Degreasers.

**GENERAL INFORMATION**

Name of Proponent: South Coast Air Quality Management District  
Address of Proponent: 21865 E. Copley Drive  
Diamond Bar, CA 91765  
Lead Agency: South Coast Air Quality Management District  
CEQA Contact Person: Jonathan D. Nadler (909) 396-3071  
Rule Contact Person: Rizaldy Calungcagin (909) 396-2315  
Name of Project: PAR 1122 – Solvent Degreasers

**POTENTIALLY SIGNIFICANT IMPACT AREAS**

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. None of the environmental topics are expected to be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Aesthetics             | <input type="checkbox"/> Geology and Soils               | <input type="checkbox"/> Population and Housing  |
| <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Public Services         |
| <input type="checkbox"/> Air Quality            | <input type="checkbox"/> Hydrology and Water Quality     | <input type="checkbox"/> Recreation              |
| <input type="checkbox"/> Biological Resources   | <input type="checkbox"/> Land Use and Planning           | <input type="checkbox"/> Solid/Hazardous Waste   |
| <input type="checkbox"/> Cultural Resources     | <input type="checkbox"/> Mineral Resources               | <input type="checkbox"/> Transportation./Traffic |
| <input type="checkbox"/> Energy                 | <input type="checkbox"/> Noise                           | <input type="checkbox"/> Mandatory Findings      |

**DETERMINATION**

On the basis of this initial evaluation:

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

Date: June 29, 2001

Signature: Steve Smith

Steve Smith, Ph.D.  
Program Supervisor

**ENVIRONMENTAL CHECKLIST AND DISCUSSION**

	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>I. AESTHETICS.</b> Would the project:			
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"/> |
|---|--------------------------|--------------------------|-------------------------------------|

I. a) - d): The proposed project would amend the current emission control requirements for degreasing operations set forth in SCAQMD Rule 1122. The amendments would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. Amending the existing air quality regulation for degreasing operations at existing facilities has no potential to result in a substantial adverse effect on any scenic vistas, substantially degrade the existing visual character or quality of any site and its surroundings, or create new sources of substantial light or glare which would adversely affect day or nighttime views of an area. The proposed project would not result in new construction of buildings or other structures or modifications to existing buildings or structures.

	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>II. AGRICULTURE 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"/>

II. a) - c): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. The proposed project would not result in new construction of buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. There are no provisions in the proposed amended rule that would affect land use plans, policies, or regulations. Land use and other planning considerations are

determined by local governments; no land use or planning requirements will be altered by the proposed project.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>III. AIR QUALITY.</b> Would the project:			
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 that 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"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

III. a) - f): The proposed project would result in a net reduction of toxic air contaminants (TAC) and VOC emissions from ~~vapor~~ degreasing operations. The reduction in TAC emissions is due to the control of NESHAP halogenated solvents. Beginning January 2003, users of cold-cleaning or open-top vapor degreasers using NESHAP solvents would be required to convert to airless/airtight or equivalent systems or switch out of NESHAP solvents from an open-top vapor degreaser to an aqueous system. Facilities ~~Users of NESHAP solvents~~ could continue to use open-top vapor degreasers provided they switch to a VOC solvent subject to BACT evaluation<sup>2</sup>. Beginning January 2006, users of open-top vapor degreasers using VOC solvents

<sup>2</sup> Switching from a NESHAP to a VOC solvent would trigger New Source Review (NSR). A requirement of NSR is a BACT evaluation for emission increases greater than one pound per day. BACT for vapor degreasers is airless/airtight systems or equivalent reductions, unless not technically feasible. A facility could choose to cap its

would be required to use solvents with no more than 25 grams per liter of VOC or airless/airtight or equivalent systems. Cold cleaning operations would be required to meet a 25 gram per liter limit beginning January 1, 2003.

The proposed project would also result in a net reduction of VOC emissions from degreasing operations by: 1) reducing the allowable VOC concentration for cold cleaning from 50 grams of VOC per liter to 25 grams per liter, and 2) requiring open top vapor degreasers using high-VOC solvents to use low-VOC solvents (i.e., no more than 25 grams per liter of VOC) or convert to airless/airtight or aqueous systems. As discussed below, the potential increase in VOCs from the conversion of degreasers using NESHAP halogenated solvents to aqueous systems is included in this environmental analysis. Additionally, to provide a conservative worst-case analysis, the VOC emission increase from the conversion of degreasers using NESHAP halogenated solvents to VOC solvents and from the conversion of degreasers using perchloroethylene for motion picture cleaning (subject to SCAQMD Rule 1425) to VOC solvents (i.e., isopropyl alcohol) is also considered.

The proposal to prohibit the use of solvent replacement materials deemed unacceptable by USEPA for degreasing operations will ensure consistency with 40 Code of Federal Regulations 82 Subpart G (Appendix A). For example, HCFC-141b is deemed by USEPA as an unacceptable substitute in solvent cleaning applications because of its ozone depleting potential and the availability of cleaning alternatives that pose less risk to human health and the environment. The proposed prohibition will eliminate the emissions of this ozone-depleting compound from any facilities in the district that may be using HCFC-141b or other materials deemed unacceptable by USEPA for degreasing operations.

The following analysis is based on staff's best judgement of how degreaser owners/operators would comply with the proposed amendments. Staff made numerous site visits, surveyed degreaser operators, and investigated conversions from one type of system to another (e.g., open-top vapor degreasing to aqueous or airless/airtight or equivalent systems). Staff examined the SCAQMD databases relative to degreasing facilities in the district and considered equipment size, type of cleaning, and emissions at each facility. Based on these considerations, staff estimated the number and types of conversions that would likely occur as a result of the proposed amendments.

## **TOXIC AIR CONTAMINANTS**

The proposed amendments to Rule 1122 will allow the SCAQMD to effectively reduce TAC emissions from the use of NESHAP halogenated solvents in ~~vapor~~ degreasing operations. Effective January 1, 2003, facilities using NESHAP halogenated solvents must use only an airless/air-tight cleaning system or switch out of NESHAP solvents.

Staff estimates that about 10 percent of the current air toxic emissions of 0.81 ton per day from open-top vapor degreasers will be controlled using airless/air-tight cleaning systems by 2003. The control efficiency of such system is about 95 percent, while a compliant open-top vapor

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emissions at one pound per day and avoid the requirement to use an airless/airtight system, which has been an option for many sources.

degreaser is about 70 percent efficient in controlling emissions. The reduction in air toxic emissions from the use of an airless/air-tight cleaning system is derived as follows:

$$(0.81 \text{ ton/day}) \times (0.1) \times [(0.3-0.05)/0.3] = 0.07 \text{ ton per day TAC reduction}$$

For facilities that account for the remaining 90 percent of the total air toxic emissions from vapor degreasers, staff believes that these companies will convert to non-toxic aqueous cleaners with a VOC of 25 grams per liter (0.21 pound per gallon). Thus, the reduction in toxic emissions as a result of the conversion to aqueous cleaning systems is:

$$(0.81 \text{ ton/day}) \times (90\%) = 0.73 \text{ ton per day}$$

For facilities using NESHAP solvents in cold cleaning operations, staff expects air toxic emission reductions through conversion to aqueous cleaners (0.21 pound per gallon VOC). Therefore, the reduction in air toxic emissions from cold cleaning operations is equivalent to the total emissions inventory of 0.01 ton per day for these operations.

The total reductions of air toxic emission from the proposed amendment is:

$$0.07 \text{ ton/day} + 0.73 \text{ ton/day} + 0.01 \text{ ton/day} = 0.81 \text{ ton/day}$$

## **VOLATILE ORGANIC COMPOUNDS**

Certain components of the proposed amendments may result in a slight increase in VOC emissions. The proposed amendments in their entirety, however, will result in a net reduction in VOC emissions.

### **VOC Emissions Reduction**

Requiring cold cleaners and open top vapor degreasers to use solvents containing no more than 25 grams per liter of VOC will result in a decrease in VOC emissions from these sources.

#### **Cold Cleaning Degreasing Operations**

A cold cleaner is a degreaser that is designed to contain liquid solvent either at ambient conditions or heated at a temperature below its boiling point. Currently, Rule 1122 requires that all cold cleaners use cleaning materials with a VOC content limit of 50 grams per liter or less. In spite of the low VOC limit, a majority of the VOC emissions in solvent degreasing come from cold cleaning operations mainly due to the large number of cold cleaners being used for solvent degreasing operations.

As discussed in Chapter 1, the VOC emissions in 2001 from cold cleaning operations are 6.24 tons per day. Staff is proposing to lower the VOC limit for solvents used in cold cleaning from 50 grams per liter to 25 grams per liter by January 1, 2003. The emission reduction expected from the lower VOC limit for cold cleaners beginning in 2003 is:

$$(6.24 \text{ tons/day}) \times [1 - (25 \text{ g/l} / 50 \text{ g/l})] = 3.12 \text{ tons per day}$$

### **Open-Top Vapor Degreasers Using VOC Solvents**

The survey conducted by the SCAQMD indicated that there are about 92 facilities (150 units) currently using open-top vapor degreasers with VOCs in their cleaning operations. Of these, about 52 facilities (90 units) use exempt solvents or solvents with low-VOC content (50 grams per liter or less). About 40 facilities (60 units) use high-VOC solvents such as n-propyl bromide, isopropyl alcohol, and blends of designer (exempt) chemicals with high VOC solvents. In terms of emissions, however, these high-VOC solvent users account for nearly 99 percent of the total VOC emissions of 0.07 ton per day. Low-VOC solvents account for the remaining one percent of the emissions.

Staff's proposal will provide additional VOC emission reductions from vapor degreasing operations through the use of an airless/air-tight system or conversion to aqueous cleaning systems (25 grams per liter VOC limit) by January 1, 2006. Facilities may continue to use open-top vapor degreasers provided the solvent used has a VOC content of no more than 25 grams per liter. With the advancement in aqueous cleaning technology, staff expects that a majority of the high-VOC solvent users will switch to aqueous cleaning system by 2006, while a few facilities will use exempt/ultra-low VOC solvents. Staff does not anticipate conversion to an airless/air-tight system.

#### ***Conversion to Conveyorized (In-Line) Aqueous Cleaning System***

Staff estimates that about seven facilities, currently using isopropyl alcohol, n-propyl bromide, and blends of exempt compounds (VOCs greater than 50 grams per liter), can convert to a conveyorized (in-line) aqueous cleaning system. From survey data and CLASS database, the estimated emissions from these facilities are 0.009 ton per day. The density of isopropyl alcohol is 6.6 pounds per gallon while n-propyl bromide has a density of 11.2 pounds per gallon. Blends of exempt compounds have an average density of 11 pounds per gallon. Based on the amount and densities of chemicals used by facilities expected to convert to aqueous cleaning systems in 2006, the weighted-average density is about 9.4 pounds per gallon of solvent. The equivalent volume of replaceable solvent is:

$$(0.009 \text{ ton/day}) \times (2000 \text{ lbs/ton}) / (9.4 \text{ lbs/gal}) = 1.91 \text{ gal/day}$$

The ratio of the volume of replacement aqueous material to VOC solvent is 1.5:1. The equivalent volume of replacement aqueous material is:

$$(1.91 \text{ gal/day}) \times (1.5) = 2.87 \text{ gallons/day}$$

The equivalent VOC emissions due to conversions to conveyorized (in-line) aqueous cleaning systems (25 grams per liter) in 2006 are:

$$(2.87 \text{ gal/day}) \times (0.21 \text{ lb/day}) / (2000 \text{ lbs/ton}) = 0.0003 \text{ ton/day}$$

The emission reduction due to the conversion to conveyorized (in-line) aqueous cleaning systems in 2006 is:

$$(0.009 \text{ ton/day}) - (0.0003 \text{ ton/day}) = 0.0087 \text{ ton/day}$$

#### ***Conversion to Ultrasonic Aqueous Cleaning System***

Eleven facilities are expected to convert to an ultrasonic aqueous cleaning system. These facilities are currently using n-propyl bromide (11.2 pounds per gallon) in solvent degreasing operation. From survey data and CLASS database, the VOC emissions from these facilities are estimated at 0.023 ton per day. The equivalent volume of replaceable solvent is:

$$(0.023 \text{ ton/day}) \times (2000 \text{ lbs/ton}) / (11.2 \text{ lbs/gal}) = 4.11 \text{ gallons/day}$$

The ratio of the volume of replacement aqueous material to VOC solvent is 1.5:1. The equivalent volume of replacement aqueous material is:

$$(4.11 \text{ gal/day}) \times (1.5) = 6.17 \text{ gallons/day}$$

The equivalent VOC emissions due to conversions to ultrasonic aqueous cleaning systems (25 grams per liter) in 2006 are:

$$(6.17 \text{ gal/day}) \times (0.21 \text{ lb/day}) / (2000 \text{ lbs/ton}) = 0.0007 \text{ ton/day}$$

The emission reduction due to the conversion to ultrasonic aqueous cleaning systems in 2006 is:

$$(0.023 \text{ ton/day}) - (0.0007 \text{ ton/day}) = 0.0223 \text{ ton/day}$$

#### ***Conversion to Spray/Agitation Aqueous Cleaning System***

Staff estimates eleven facilities are expected to convert to a spray/agitation aqueous cleaning system. These facilities currently use n-propyl bromide (11.2 pounds per gallon) and isopropyl alcohol (6.6 pounds per gallon). From survey data and CLASS database, the VOC emissions from these facilities are about 0.021 ton per day. Using a weighted-average solvent density of 10.6 pounds per gallon, the equivalent volume of replaceable solvent is:

$$(0.021 \text{ ton/day}) \times (2000 \text{ lbs/ton}) / (10.6 \text{ lbs/gal}) = 3.96 \text{ gallons/day}$$

The ratio of the volume of replacement aqueous material to VOC solvent is 1.5:1. The equivalent volume of replacement aqueous material is:

$$(3.96 \text{ gal/day}) \times (1.5) = 5.94 \text{ gallons/day}$$

The equivalent VOC emissions due to conversion to a spray/agitation aqueous cleaning system (25 grams per liter) in 2006 are:

$$(5.94 \text{ gal/day}) \times (0.21 \text{ lb/day}) / (2000 \text{ lbs/ton}) = 0.0006 \text{ ton/day}$$

The emission reduction due to conversion to a spray/agitation aqueous cleaning system (25 grams per liter) in 2006 is:

$$(0.021 \text{ ton/day}) - (0.0006 \text{ ton/day}) = 0.0204 \text{ ton/day}$$

#### ***Switch to Ultra-Low-VOC Solvents***

Staff estimates that 11 facilities may switch to exempt/low-VOC solvents (25 grams per liter) in 2006. These facilities currently use n-propyl bromide and blends of exempt compounds in their cleaning operations. The weighted-average density of the solvents used by these facilities is about 11.1 pounds per gallon. From survey data and CLASS database, the VOC emissions

from these facilities are about 0.016 ton per day. The equivalent volume of replaceable solvent is:

$$(0.016 \text{ ton/day}) \times (2000 \text{ lbs/ton}) / (11.1 \text{ lbs/gal}) = 2.88 \text{ gallons/day}$$

The emission reduction due to the switch to exempt/low-VOC solvents (25 grams per liter) in 2006 is:

$$(2.88 \text{ gal/day}) \times (11.1 \text{ lbs/gal} - 0.21 \text{ lb/day}) / 2000 \text{ lb/ton} = 0.0157 \text{ ton/day}$$

As earlier mentioned, survey data indicated that there are 52 facilities that are currently using exempt/low-VOC solvents (50 grams per liter VOC). These facilities account for 0.001 ton per day of VOC emissions. By January 1, 2006, the VOC limit is reduced to 25 grams per liter. The expected VOC emission reduction is:

$$(0.001 \text{ ton/day}) \times [1 - (25 \text{ g/l} / 50 \text{ g/l})] = 0.0005 \text{ ton per day}$$

The total 2006 VOC emission reduction from conversions of open-top vapor degreasers to aqueous cleaning systems and ultra-low VOC solvents is:

$$(0.0087 \text{ ton/day}) + (0.0223 \text{ ton/day}) + (0.0204 \text{ ton/day}) + (0.0157 \text{ ton/day}) + (0.0005 \text{ ton/day}) = 0.0676 \text{ ton/day}$$

The total VOC emission reduction for the rule is the sum of the net emission reductions from cold cleaning and open-top vapor degreasing in 2003 and 2006:

$$(3.12 \text{ tons/day}) + (0.0676 \text{ ton/day}) = 3.188 \text{ tons/day}$$

### **VOC Emissions Increases**

Staff expects the large majority of NESHAP users to switch to aqueous cleaners (at 25 grams of VOC per liter or less), with the remainder converting to airless/airtight systems. The VOC emission associated with conversion of NESHAP halogenated solvents to aqueous cleaners is presented below in the subsection entitled “Anticipated VOC Emissions Increases.” In order to provide a conservative CEQA analysis, staff has also estimated the increase in VOC emissions that would occur if users of NESHAPS in open-top vapor degreasers switched to VOC solvents rather than aqueous or airless/airtight or equivalent systems<sup>3</sup>. In addition, staff has estimated the VOC emissions that could occur if film cleaning operations using perchloroethylene (subject to SCAQMD Rule 1425 – Film Cleaning and Printing Operations) were to switch to a VOC solvent. These emission increases are discussed in the subsection entitled “‘Worst-case’ VOC Emission Increases.”

#### **Anticipated VOC Emissions Increases**

<sup>3</sup> Starting January 1, 2003, those facilities previously using NESHAP halogenated solvents in cold cleaners do not have the option of switching to solvents with a VOC content greater than 25 grams per liter. Thus, the potential VOC emission increase from cold cleaners currently using NESHAP halogenated solvents does not change between “anticipated” and “worst-case” VOC emission increases.

The conversion of NESHAP halogenated solvents to aqueous cleaners and the possible conversion of perchloroethylene for film cleaning operations to isopropyl alcohol could result in an increase in VOC emissions.

#### **Vapor Degreasing Operations Currently Using NESHAP Solvents**

As previously discussed, staff estimates that the majority of the degreasing operations currently using NESHAP halogenated solvents will convert to aqueous cleaning systems (25 grams per liter VOC or 0.21 pound per gallon) by 2003. The TAC emissions from facilities expected to convert to aqueous cleaners are 0.73 ton per day. Using a weighted-average solvent density of 13.5 pounds per gallon, the equivalent solvent volume is:

$$[(0.73 \text{ ton/day}) \times (2000 \text{ lbs/ton})] / 13.5 \text{ lbs/gal} = 108 \text{ gallons per day}$$

Based on case studies of companies that successfully converted to aqueous cleaners, staff has determined that the average ratio of aqueous cleaner volume to that of the replaceable solvent is 1.5:1, i.e., one and one-half gallons of aqueous cleaners for every gallon of solvent replaced. The conversion of NESHAP halogenated solvents to aqueous cleaners in 2003 will result in a VOC emission increase of:

$$(108 \text{ gal/day}) \times (1.5) \times (0.21 \text{ lb/day}) \times (1 \text{ ton}/2000 \text{ lbs}) = 0.017 \text{ ton per day}$$

#### **Cold Cleaning Operations Currently Using NESHAP Solvents**

The conversion of NESHAP halogenated solvents to aqueous cleaners for cold cleaning operations would result in a minor increase in VOC emissions. Using a solvent density of 13.5 pounds per gallon (perchloroethylene), the volume of organic solvent equivalent to the emissions for NESHAP cold cleaning operations is:

$$(3 \text{ tons/yr}) \times (2000 \text{ lbs/ton}) \times (1 \text{ yr}/365 \text{ days}) \times (1 \text{ gal}/13.5 \text{ lbs}) = 1.21 \text{ gallons per day}$$

Based on case studies of companies that successfully converted to aqueous cleaners, staff has determined that the average ratio of aqueous cleaner volume to that of replaceable solvent is 1.5:1, i.e., one and one-half gallons of aqueous cleaners are used for every gallon of solvent replaced. The VOC content limit for aqueous cleaners in 2003 is 0.21 pound per gallon. Therefore, the increase in VOC emissions is:

$$(1.21 \text{ gal/day}) \times (1.5) \times (0.21 \text{ lb/day}) \times (1 \text{ ton}/2000 \text{ lbs}) = 0.0002 \text{ ton/day}$$

Accounting for both the expected emission reductions and emission increases as presented above, the net VOC emission reductions in 2003 and 2006 is:

Year 2003 VOC Emissions Reductions:

$$(3.12 \text{ tons/day}) - (0.017 \text{ ton/day}) - (0.0002 \text{ ton/day}) = 3.103 \text{ tons/day}$$

Year 2006 VOC Emissions Reductions:

$$(3.103 \text{ tons/day}) + (0.0676 \text{ ton/day}) = 3.171 \text{ tons/day}$$



### **“Worst-case” VOC Emissions Increases**

In order to provide a conservative CEQA analysis, staff has also estimated the increase in VOC emissions that would occur if: (1) users of NESHAPS in open-top vapor degreasers switched to VOC solvents rather than aqueous or airless/airtight or equivalent systems, and (2) film cleaning operations using perchloroethylene (subject to SCAQMD Rule 1425) were to switch to a VOC solvent.

#### ***Switch from NESHAP to VOC Solvents***

A switch from a NESHAP solvent to a VOC solvent is considered an NSR event and a BACT determination would be required. BACT determination for vapor degreasers is a tiered evaluation starting with airless/airtight systems or equivalent emissions. If the first tier determination is not feasible, the second tier evaluation would proceed.

It should be noted that an applicant seeking to continue using an open-top vapor degreaser by switching from a NESHAP solvent to a VOC solvent could accept a VOC emission cap of one pound per day and be relieved from the BACT evaluation since BACT applies to emission increases greater than one pound per day. As a conservative analysis, however, it is assumed that applicants would not choose the emission cap, but instead would be subject to second tier BACT. It is further assumed that BACT can only achieve 70 percent reduction (equivalent to existing Rule 1122, instead of 95 percent reduction provided by airless/airtight systems).

Assuming 50 percent of users of NESHAPS in open-top vapor degreasers switched to VOC solvents in 2003 with a density of 8.9 pounds per gallon (average of n-propyl bromide and isopropyl alcohol densities), the VOC emission increase would be:

$$(108 \text{ gal/day}) \times (8.9 \text{ pounds/gal}) \times (50\%) / 2000 \text{ pounds/ton} = 0.24 \text{ ton/day}$$

#### ***Motion Picture Film Cleaning Switching from Perchloroethylene to VOC Solvents***

SCAQMD Rule 1425 applies to film cleaning and printing equipment that uses perchloroethylene or solvents containing perchloroethylene to process motion picture film. The proposed amendments to Rule 1122 would exempt motion picture film cleaning using VOC solvents from requirements of the Rule 1122. If film cleaning operations using perchloroethylene were to switch to a VOC solvent (i.e., isopropyl alcohol) to avoid the requirements set forth in either Rule 1425 or Rule 1122, they would be subject to New Source Review. The requirements of New Source Review include BACT evaluation and offsets for any emission increases greater than one pound. These requirements would likely limit the amount of conversions from perchloroethylene to isopropyl alcohol. As a CEQA conservative analysis, however, the following details the VOC emissions that could theoretically occur if motion picture film cleaning operations using perchloroethylene were to switch to a VOC solvent.

The perchloroethylene inventory under Rule 1425 for film cleaning is 47,000 pounds per year from approximately 65 film cleaners. Of that, 34,000 pounds per year were emitted uncontrolled from about 50 film cleaners. It is assumed that all controlled perchloroethylene machines are Rule 1425 compliant and therefore would not switch to another cleaning compound.

In general, film cleaners for perchloroethylene and isopropyl alcohol have the same operating speed and consumption rate. Therefore, the potential emissions of isopropyl alcohol due to a conversion from perchloroethylene prior to BACT (i.e., carbon adsorption at 85 percent reduction) are a strict ratio of the chemical emission factors (i.e., 13.5 pounds per gallon for perchloroethylene and 6.6 pounds VOC per gallon for isopropyl alcohol). If all uncontrolled perchloroethylene film cleaners were replaced with isopropyl alcohol machines, the potential VOC increase after BACT would be approximately 2,550 pounds per year or 0.0035 ton per day, with a corresponding decrease in perchloroethylene emissions of 0.047 ton per day.

As a “worst-case,” assuming 50 percent of the users of NESHAP halogenated solvents converted to VOC solvents (i.e., do not convert to aqueous and airless/airtight as staff expects) and all uncontrolled perchloroethylene film cleaning operations switched to isopropyl alcohol, the increase in VOC emissions would be:

$$(0.24 \text{ ton/day}) + (0.0035 \text{ ton/day}) = 0.2435 \text{ ton per day}$$

For the purposes of a conservative CEQA analysis, accounting for both the expected emission reductions and the “worst-case” potential emission increases, the net VOC emission reductions in 2003 and 2006 is:

Year 2003 VOC Emissions Reductions:

$$(3.12 \text{ tons/day}) - (0.2435 \text{ ton/day}) - (0.0002 \text{ ton/day}) = 2.8767 \text{ tons/day}$$

Year 2006 VOC Emissions Reductions:

$$(2.8767 \text{ tons/day}) + (0.0676 \text{ ton/day}) = 2.9445 \text{ tons/day}$$

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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"/>
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) Conflicting 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"/>

IV. a) - f): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. The

proposed project has no provisions that would have direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely. A conclusion of the 1997 AQMP EIR was that population growth in the in the SCAQMD’s jurisdiction would have greater adverse effects on plant species and wildlife dispersal or migration corridors in the region than SCAQMD regulatory activities, (e.g., air quality control measures or regulations). The current and expected future land use development to accommodate population growth is primarily due to economic considerations or local government planning decisions.

There are no provisions in the proposed rule that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed project. The proposed amendments to Rule 1122 would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. Furthermore, the reduction of VOC and toxic air pollutant emissions due to the proposed project will provide a health benefit to plant and animal species as well as the human residents in the district.

	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 §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 as defined in §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 a formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

V. a) - d): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. The proposed amendments to the air quality regulation for existing degreasing operations have no potential to disturb cultural resources. The proposed project has no potential to cause a substantial adverse change a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human

remains, including those interred outside a formal cemeteries. The proposed amendments to Rule 1122 are, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the district.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>VI. ENERGY.</b> Would the project:			
a) Conflict with adopted energy conservation plans?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the need for new or substantially altered power or natural gas utility systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Create any significant effects on local or regional energy supplies and on requirements for additional energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create any significant effects on peak and base period demands for electricity and other forms of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with existing energy standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VI. The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. The following analyzes whether implementation of the proposed project would require additional energy over existing conditions and, if so, whether the additional energy requirement is significant.

The proposed project is expected to result in owners/operators of degreasers using NESHAP halogenated solvents or VOC solvents to either switch to exempt solvents or to convert to aqueous or airless/airtight or equivalent systems. The power consumption (heater and chiller) of an averaged-size open-top vapor degreaser is estimated to be 19 kilowatts (kW). The energy consumption per day is:

$$(19\text{kW}) \times (8 \text{ hrs/day}) = 152 \text{ kW-hours (kWh)/day/unit}$$

The switching of NESHAP halogenated solvents or VOC solvents to exempt solvents would incur no energy penalty since the same degreasing equipment would be used. Similarly, the use of airless/airtight systems would not be expected to require additional energy since the energy requirement for such a system is generally equivalent to that of a vapor degreaser.

The conversion of vapor degreasers using NESHAP halogenated solvents or VOC solvents to aqueous degreasing systems would have a slight, but not significant energy penalty. Three types of aqueous systems may be used in lieu of open-top vapor degreasers: (1) conveyORIZED cold cleaners, (2) ultrasonic cleaners, and (3) spray cabinet/immersion/agitation cleaning systems. The energy requirements of spray cabinet/immersion/agitation cleaning systems are generally the same as those of the average-size open-top vapor degreaser. Therefore, there is no incremental increase in the energy requirement for these types of systems.

The average energy requirements for conveyORIZED cold cleaners and ultrasonic cleaners are slightly greater than that of open-top vapor degreasers. A conveyORIZED cold cleaner requires, on average, 80 kW of power to operate the unit. Half of the power requirement is need to run the heater. Assuming the washer is operated continuously for six hours per day and the heater is on 25 percent of the time, the average energy consumption per day is:

$$[(40 \text{ kW}) \times (6 \text{ hrs/day}) + (40 \text{ kW}) \times (2 \text{ hrs/day})] = 320 \text{ kWh/day/unit}$$

Staff estimates that approximately eight open-top units currently using NESHAP solvents would switch to conveyORIZED cold cleaners in 2003. Thus, the potential additional energy requirement for these units beginning 2003 would be:

$$(320 \text{ kWh/day/unit} - 152 \text{ kWh/day/unit}) \times 8 \text{ units} = 1,344 \text{ kWh/day}$$

The energy requirements of small- and medium-size ultrasonic cleaning systems are generally the same as those of an average-size open-top vapor degreaser. Therefore, there is no incremental increase in the energy requirement for these sized of systems. A large ultrasonic unit, however, requires more energy than an average-size vapor degreaser. For the purposes of presenting a conservative analysis, this report assumes that a few large ultrasonic degreasers would be used. The energy requirement of a large ultrasonic unit is:

$$(41\text{kW}) \times (8 \text{ hrs/day}) = 328 \text{ kWh/day/unit}$$

Staff estimates that approximately three open-top units currently using NESHAP solvents would switch to large ultrasonic equipment in 2003. Thus, the potential additional energy requirement for these units beginning 2003 would be:

$$(328 \text{ kWh/day/unit} - 152 \text{ kWh/day/unit}) \times 3 \text{ units} = 528 \text{ kWh/day}$$

Staff has identified 29 tabletop ultrasonic cleaners (without heaters) currently being used with NESHAP halogenated solvents in cold cleaning operations. Twenty of the cleaners are sized 5"W x 9"L x 8"H; nine of the units are sized 10"W x 12"L x 11"H. Staff assumes that the facilities would convert to aqueous cleaning using similar-sized tabletop ultrasonic cleaners equipped with heaters.

The power requirements of the replacement equipment are as follows:

$$\underline{5\text{''W} \times 9\text{''L} \times 4\text{''H unit} \sim 0.2 \text{ kW/unit}}$$

$$\underline{10\text{''W} \times 12\text{''L} \times 6\text{''H unit} \sim 0.4 \text{ kW/unit}}$$

Thus, the potential additional energy requirement for these units beginning 2003 would be:

$$(0.2 \text{ kW/unit} \times 20 \text{ units} \times 8 \text{ hrs/day}) + (0.4 \text{ kW/unit} \times 9 \text{ units} \times 8 \text{ hrs/day}) = 61 \text{ kWh/day}$$

Based on the above, the total estimated additional energy requirement for the proposed project beginning in 2003 is:

$$1,344 \text{ kWh/day} + 528 \text{ kWh/day} + 61 \text{ kWh/day} = \underline{1,933} \text{ } \cancel{1,872} \text{ kWh/day}$$

In 2006, open-top vapor degreasers using VOC solvents would be limited to the use of solvents containing no more than 25 grams VOC per liter. Staff estimates that 13 open-top vapor degreasing units would be replaced by seven conveyORIZED cold cleaning units. The estimated additional energy requirement for this component of the proposed amendments is:

$$(320 \text{ kWh/day/unit} \times 7 \text{ units}) - (152 \text{ kWh/day/unit} \times 13 \text{ units}) = 264 \text{ kWh/day}$$

Thus, in 2006, the total estimated additional energy requirement for the proposed project is:

$$\underline{1,933} \text{ } \cancel{1,872} \text{ kWh/day} + 264 \text{ kWh/day} = \underline{2,377} \text{ } \cancel{2,316} \text{ kWh/day}$$

As shown in Table 2-1, the proposed project's potential incremental increase in electricity demand relative to projected demand is negligible and considered insignificant. The incremental increase in electricity would not result in the need for new or substantially altered power systems, create any significant effects on local or regional energy supplies and on requirements for additional energy, or create any significant effects on peak and base period demands for electricity and other forms of energy. The proposed project is not expected to conflict with adopted energy conservation plans, result in the need for new or substantially altered utility systems, or be out of compliance with existing energy standards. Furthermore, an increase in the consumption of electricity for air pollution control is not considered wasteful. It must also be acknowledged that there are numerous projects under expedited approval or construction that will provide additional electricity to the region.

For the reasons discussed above, proposed amended Rule 1122 is not expected to result in significant adverse energy impacts.

**Table 2-1  
Estimated PAR 1122 Energy Use Compared to Baseline Consumption  
(gigawatt-hour/year)**

	Year 2003	Year 2006
PAR 1122 Consumption <sup>a</sup>	<u>0.50258</u> 0.48672	<u>0.61802</u> 0.60216
SCE/LADWP Service Area Consumption <sup>b,c</sup>	123,259	130,961
Project Consumption as % of SCE/LADWP Service Area Consumption	<u>0.0004 %</u> 0.00039%	<u>0.00047 %</u> 0.00045%
State Consumption <sup>b,c</sup>	273,839	293,172
Project Consumption as % of State Consumption	<u>0.00018 %</u> 0.00017 %	<u>0.00021 %</u> 0.00025 %

<sup>a</sup> Assumes a five-day work week.

<sup>b</sup> Does not include consumption in Burbank, Glendale, Pasadena utility service areas.

<sup>c</sup> Source: California Energy Commission, Staff Report – California Energy Demand 2000-2010, June 2000  
SCE = Southern California Edison; LADWP = Los Angeles Department of Water and Power

	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>VII. GEOLOGY AND 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"/>
• 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Landslides?	<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"/> |

VII. a) - e): The proposed amendments modify air pollution control requirements for degreasing operations and have no potential to generate adverse effects on geophysical formations in the district. There are no provisions in the proposed amendments that would result in additional exposure of people to potential impacts involving seismicity, landslides, mudslides or erosion as no new development is anticipated. The proposed project would not result in significant disruption or overcovering of soil, or changes in topography or surface relief features. The proposal would not result in the erosion of beach sand, or a change in existing siltation rates.

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	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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**VIII. HAZARDS AND HAZARDOUS MATERIALS.** 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  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

school?

- |    |   |                          |                          |                                     |
|----|---|--------------------------|--------------------------|-------------------------------------|
| 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 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"/> |
| 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"/> |
| i) | Significantly increased fire hazard in areas with flammable materials?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

VIII. a), b): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. As discussed in Chapter 1, facilities that use toxic halogenated solvents for their degreasing operations are currently exempt from the provisions of Rule 1122, but are subject to the federal NESHAP for halogenated solvent cleaners. The NESHAP for halogenated solvent cleaning applies to solvent cleaning machines using any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform, or any combination of these halogenated solvents in a total concentration greater than five percent by weight.

The proposed project would amend the applicability of Rule 1122 to include degreasers using NESHAP solvents; i.e., perchloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform. Users of NESHAP solvents who wish to continue using these solvents would be required to convert to airless/airtight or equivalent systems. Otherwise, degreaser operators would have to cease the use of NESHAP solvents.

Staff anticipates that the large majority of current users of NESHAP solvents would convert to aqueous systems. The conversion of current users of NESHAP solvents to aqueous systems would result in an even greater reduction of hazards associated with these degreasing operations, including reductions in the emissions of toxic air contaminants, and reductions in the routine transport, use, and disposal of hazardous materials.

A small number are anticipated to convert to airless/airtight systems. The conversion of degreasers using NESHAP solvents to airless/airtight or equivalent systems would result in a reduction in emissions of these hazardous solvents.

Those users of NESHAP solvents wishing to continue using open-top vapor degreasers may consider switching to a VOC solvent. A switch to a low-VOC solvent with an exempt compound base is unlikely since the non-precision cleaning typically performed by current users of NESHAP solvents is generally not well suited to cleaning with exempt compound-based solvents. As discussed in the air quality subsection above, a switch to a high-VOC solvent (e.g., n-propyl bromide, isopropyl alcohol) would be considered an NSR event. Those seeking to continue using open-top vapor degreasers would be subject to BACT review and have a permit condition to reflect BACT. Such a scenario would not be expected to create a significant hazard to the public since: (1) the permit condition would substantially limit emissions, and (2) the hazards associated with the NESHAP compounds being replaced would be eliminated.

The conversion of open-top vapor degreasers using VOC solvents to aqueous systems or switching to exempt compounds is also expected to result in a reduction of hazards associated with these degreasing operations. Approximately 80 percent of the VOC solvent used in open-top vapor degreasers is n-propyl bromide. Approximately 10 percent of the VOC solvent used is isopropyl alcohol. Staff has also identified two facilities using perchloroethylene in cold cleaning equipment. These substances are generally more flammable or otherwise hazardous than the aqueous degreasers or other low-VOC solvents that will replace them.

Furthermore, businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. Local fire departments ensure that adequate permit conditions are in place to protect against potential risk of upset. The Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations.

Based on the above considerations, the proposed amendments are not expected to increase the risk of an accident involving the release of hazardous materials into the environment. Indeed, the anticipated conversion of degreasers using NESHAP or VOCs to aqueous systems would reduce the risk of an accident involving the release of hazardous materials.

VIII. c), d), e), f), h), i) The proposed project will take place in existing facilities and will likely result in the usage of less toxic, less hazardous materials. Overall, emissions of toxic air pollutants from the affected facilities will be reduced. Therefore, no new hazards impacts are

expected to be generated on local schools, existing hazardous material sites, airport use plans, people residing or working within the vicinity of a private airstrip, or wildlands subject to fire hazards. The proposed project will generally reduce hazards associated with degreasing operations and would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

In conclusion, potential hazard impacts resulting from adopting and implementing the proposed project are not expected to be significant.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>IX. HYDROLOGY AND 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 uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/> |
| k) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| l) 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"/> |
| m) 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"/> |
| n) 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"/> |
| o) Require 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"/> |

IX. a), f), k), l), o): Due to technological advancements in degreasing systems primarily resulting from air quality and other regulations pertaining to hazardous solvents, there has been

a large-scale transition to aqueous-based cleaning solvents over the last five years. Consequently, starting with the 1996 amendments to Rule 1171 – Solvent Cleaning Operations, the SCAQMD has worked with the local publicly owned treatment works (POTWs) to ensure the increased use of aqueous cleaning solvents does not result in adverse water quality impacts. Concern had been raised by the POTWs during the development of the 1996 amendments to Rule 1171 that illegal disposal of used aqueous cleaning solution could adversely effect the ability of POTWs to comply with the effluent limits set forth by the Regional Water Quality Control Board (RWQCB).

As part of their continuous, routine monitoring of wastewater constituents, the POTWs looked for influent containing detectable levels of aqueous cleaning solutions and the contaminants typically cleaned with aqueous systems. To date, the POTWs have not detected any significant change in water quality.

At the May 30, 2001, Public Workshop, a representative of a local POTW expressed support for the proposed amendments and stated that “. . . we don’t anticipate any significant detrimental changes to water quality based on the rule.” The representative also stated that a transition away from degreasing with NESHAP solvents may result in water quality benefits since significant concentrations of some of these hazardous materials, especially perchloroethylene, are often detected in wastewater streams sent to the POTWs.

IX. b), n): An increase in the use of aqueous products for degreasing operations would not be expected to result in a substantial reduction in the amount of water otherwise available for public water supplies. The quantity of water associated with an increased use of aqueous cleaning systems as a result of the proposed amendments is estimated to be approximately 95,420 ~~95,155~~ gallons per year (see Appendix B for assumptions and calculations). This amount of water is insignificant relative to the projected year 2003 water supply of 1,267 billion gallons (Final Subsequent EA for PAR 1113, SCAQMD, 1999) and to the SCAQMD’s water demand significance threshold of 5,000,000 gallons per day.

IX. c), d): The proposed amendments further control emissions from degreasing operations at existing facilities and would not require any construction or grading. Consequently, the proposed project would not alter existing drainage patterns nor 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.

IX. g), h), i), j): The proposed project has no provisions that would place housing within a 100-year flood hazard area, expose people to new flooding, seiche, tsunami or mudflow conditions.

In conclusion, no significant adverse hydrology/water quality impacts will result from implementation of the proposed amendments.

<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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**X. LAND USE AND PLANNING.** 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"/> |

X. a) - c): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. There are no provisions of the proposed project that would affect land use plans, policies, or regulations because the proposed amendments merely modify the air pollution control requirements for degreaser operations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed project. The proposed project would not affect in any way habitat conservation or natural community conservation plans, agricultural resources or operations, and would not create divisions in any existing communities. No new development or alterations to existing land designations will occur as a result of the implementation of the proposed amendments. Therefore, no significant adverse impacts affecting existing or future land uses are expected.

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	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>XI. 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"/>

XI. a), b): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. There are no provisions of the proposed project that would result in the loss of availability of a known mineral resource of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The proposed amendments would merely modify the emission control requirements for degreaser operations.

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	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>XII. 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 noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 airship, 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"/> |

XII. a) - f): Proposed amended Rule 1122 would modify the emission control requirements for degreaser operations. The amendments would require stricter control standards for vapor degreasing operations and extend the rule’s applicability to include NESHAP compounds. A change to existing equipment that may result from the proposed project is the conversion of degreasers to either aqueous or airless/airtight systems. An airless/airtight system may generate slightly greater noise than conventional degreasers since it includes a compressor and a pump to automatically clean the parts (analogous to a dishwasher). An airless/airtight system, however, would not generate noise levels in excess of standards established in the local general plan or noise ordinance or other applicable standards. In addition, degreasers are typically located inside industrial facilities, which substantially attenuates any noise from the equipment. Therefore, no significant changes in noise levels from degreasing operations are anticipated.

Furthermore, degreasing operations are generally located in existing industrial or commercial areas where noise levels are already relatively high. It is assumed that operations in these areas are subject to and in compliance with existing community noise ordinances and applicable Occupational Safety and Hazard Administration (OSHA) or Cal/OSHA workplace noise reduction requirements. In addition to noise generated by current operations, noise sources in each area may include nearby freeways, truck traffic to adjacent businesses, and operational noise from adjacent businesses.

	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>XIII. POPULATION AND HOUSING.</b> Would the project:			
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. 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"/>

XIII. a) –c): Proposed amended Rule 1122 merely modifies air pollution control requirements of degreasing operations and, therefore, is not expected to affect in any way population growth or the supply and/or availability of houses. Human population in the SCAQMD’s jurisdiction is anticipated to grow regardless of implementing the proposed project. The proposal would not result in the creation of any industry that would induce or inhibit population growth or distribution. Because the proposed project has no effect on population growth or distribution, the proposed rule would not directly or indirectly induce the construction of single- or multiple-family housing units. Accordingly, no significant adverse impacts on human population or housing are expected.

	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>XIV. PUBLIC SERVICES.</b> Would the proposal 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 order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:			

- |                             |                          |                          |                                     |
|-----------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Fire protection?         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection?       | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools?                 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks?                   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XIV. a) - e): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. There is no expected change to degreasing operations as a result of the proposed amendments that could pose a need for additional public services above what is currently expected from the fire department, police, schools, parks, government, etc. The proposal would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times or other performance objectives.

As discussed in the air quality and hazards subsections above, overall risk associated with the use of degreasing solvents is not expected to appreciably change as a result of the proposed amendments. In fact, risks associated with degreasing operations are likely to be reduced. The proposed amendments to Rule 1122 will not generate significant adverse impacts to local fire departments requiring new or additional fire fighting resources. Any increase in the storage or accidental releases of compliant cleaning materials would be expected to result in a concurrent reduction in the storage and number of accidental releases of existing degreasing materials. As a result, need for inspections and the net number of accidental releases would be expected to remain approximately constant. Furthermore, any transition to compliant aqueous cleaning materials is expected to be a benefit since, in general, aqueous cleaners are less flammable as compared to conventional solvents.

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	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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**XV. RECREATION.**

- |   |                          |                          |                                     |
|---|--------------------------|--------------------------|-------------------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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"/> |

XV. a) - c): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. As discussed under “Land Use” above, there are no provisions to the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposal. The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>XVI. SOLID/HAZARDOUS WASTE.</b> Would the project:			
a) 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"/>
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVI. a), b) : The proposed amendments are expected to result in a conversion of degreasers to airless/airtight or aqueous systems or a switch of the solvent to exempt compounds or ultra-low VOC solvents. The conversion to airless/airtight or equivalent systems would have no affect on the generation of wastes from degreasing operations since the solvent would not change. A greater use of aqueous cleaners would not generate solid waste and, as discussed under “Hydrology and Water Quality”, is not be expected to result in detrimental changes to wastewater quality. Exempt compounds used as degreasing solvents are typically expensive and are thus collected after their useful life and recycled to recover the solvent.

The proposed project would also establish VOC limits of 25 grams per liter for batch-loaded and conveyorized cold cleaners effective January 1, 2003. The proposed requirement to lower the allowable VOC concentration from 50 grams per liter to 25 grams per liter would have no affect on the generation of wastes from degreasing operations. Many Clean Air Solvents already meet the 25 grams per liter limit and no change to the formulations of these solvents would be required. Modifications to those formulations that exceed the 25 grams per liter limit would not be expected to alter the waste stream from degreasing operations. Any changes in composition of the degreasing solvent would generally be to a less hazardous material and, thus, may reduce the generation of hazardous waste.

Overall waste generation associated with the use of degreasing solvents is not expected to appreciably change as a result of the proposed amendments. Thus, the proposed amended rule

is not expected to significantly increase the volume of solid or hazardous wastes, require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations.

	<b>Potentially Significant Impact</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
<b>XVII. 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 levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>

XVII. a) - g): The proposed amendments to Rule 1122 would require stricter control standards for degreasing operations and extend the rule’s applicability to include NESHAP compounds. The proposed amendments will not increase the amount of businesses or equipment in the district. The proposed amendments will result in the conversion of degreasers to aqueous or

airless/airtight or equivalent systems or a switch in the type solvent used. There are no provisions in the proposed amendments that would increase existing traffic load, worker commute trips, raw material or finished product transport trips, adversely affect parking, or conflict with adopted policies associated with alternative transportation. There would be no adverse affect on the existing level of service, traffic congestion, or existing emergency accesses.

	Potentially Significant Impact	Less Than Significant Impact	No Impact
<b>XVIII. 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 that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVIII. a) –c): As discussed above, the proposed project is not expected to create significant adverse impacts to any environmental area. The project is not expected to degrade the quality of the environment; have impacts that are individually limited, but cumulatively considerable, or have environmental effects that will cause substantial adverse effects on human beings.

## **APPENDIX A**

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### **PROPOSED AMENDED RULE 1122**

*To avoid repetition, proposed amended Rule 1122 is not included here, but can be found elsewhere in this Governing Board Adopt Hearing Package*

**APPENDIX B**

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**WATER USAGE CALCULATIONS**



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 Assumptions and Calculations

114 units converted to spray cabinet degreasers

average spray cabinet degreaser: uses 80 gallons of water per unit  
changeout bath once per 60 days

81 units converted to ultrasonic degreaser

average ultrasonic degreaser: uses 62 gallons of water per unit  
changeout bath once per 60 days

15 units converted to conveyORIZED cold cleaner

average conveyORIZED cold cleaner: uses 100 gallons of water per unit  
changeout bath once per 60 days

29 units converted to table-top ultrasonic aqueous system

20 table-top ultrasonic aqueous cleaners: use 0.78 gallon of water per unit

9 table-top ultrasonic aqueous cleaners: use 3.12 gallons of water per unit  
changeout bath once per 60 days

$80 \text{ gal/unit} \times 114 \text{ units} \times 1 \text{ changeout/60 days} \times 365 \text{ days/year} = 55,480 \text{ gal/yr}$

$62 \text{ gal/unit} \times 81 \text{ units} \times 1 \text{ changeout/60 days} \times 365 \text{ days/year} = 30,550 \text{ gal/yr}$

$100 \text{ gal/unit} \times 15 \text{ units} \times 1 \text{ changeout/60 days} \times 365 \text{ days/year} = 9,125 \text{ gal/yr}$

$0.78 \text{ gal/unit} \times 20 \text{ units} \times 1 \text{ changeout/60 days} \times 365 \text{ days/year} = 95 \text{ gal/yr}$

$3.12 \text{ gal/unit} \times 9 \text{ units} \times 1 \text{ changeout/60 days} \times 365 \text{ days/year} = 171 \text{ gal/yr}$

$55,480 + 30,550 + 9,125 + 95 + 171 = \underline{\underline{95,421}} \text{ } \underline{\underline{95,155}} \text{ gal/yr}$