2004 ANNUAL PROGRESS REPORT ON IMPLEMENTING THE REGIONAL AIR QUALITY STRATEGY FOR SAN DIEGO COUNTY

This report presents the status of the San Diego County Air Pollution Control District's efforts in 2004 to implement the Regional Air Quality Strategy (RAQS). The RAQS was developed pursuant to state law[1] and identifies emission control measures to provide expeditious progress in San Diego County toward attaining the state ambient air quality standard for ozone. Pollutants addressed are volatile organic compounds (VOC) and oxides of nitrogen (NOx), precursors to the photochemical formation of ozone. San Diego County does not yet attain the state ozone standard and is designated a serious ozone nonattainment area.

The RAQS was initially adopted by the District Board on June 30, 1992, and amended on March 2, 1993, in response to California Air Resources Board (ARB) comments. Pursuant to state law, the District Board updated the RAQS with triennial revisions on December 12, 1995; June 17, 1998; August 8, 2001; and July 28, 2004.

This 2004 annual progress report fulfills requirements of state law[2] and ARB policy guidance.[3] Specifically, it addresses: (1) the status of District control measures scheduled in the RAQS for adoption in 2004; (2) initial evaluation and prioritization of "Further Study Measures"; and (3) progress in implementing the Indirect Source Program and transportation control measures contained in the RAQS.

2004 CONTROL MEASURE ADOPTION STATUS

Summary Table

Table 1 summarizes the status of control measures scheduled in the 2004 RAQS for development in 2004. A detailed discussion of the status of each control measure is presented after Table 1.

Table 1
Status Of Control Measures
Scheduled For Development In 2004

Rule Number	Control Measure	Pollutant	Rescheduled Adoption Date
61.3.1 & 61.4.1	Enhanced Vapor Recovery Program	VOC	Fall 2005
69.2	Further Control of Industrial and Commercial Boilers, Process Heaters and Steam Generators	NOx	Determined Not Cost-effective

[1] California Health and Safety Code (H&SC) Section 40911 et seq.
[2] H&SC Section 40924(a)
[3] "Guidance for Annual and Triennial Progress Reports Under the California Clean Air Act," ARB, August 1993.

Enhanced Vapor Recovery Program (Adopt New Rules 61.3.1 and 61.4.1)

The 2004 RAQS included a District commitment to develop two new District rules in 2004 to implement feasible or mandatory elements of ARB's Enhanced Vapor Recovery (EVR) regulations, which control gasoline vapor emissions from gasoline service stations. Proposed Rule 61.3.1 (Transfer of Gasoline into Stationary Underground Storage Tanks) will address the EVR requirements for Phase I (bulk transfer) vapor recovery systems. Proposed Rule 61.4.1 (Transfer of Gasoline from Stationary Underground Storage Tanks into Vehicle Fuel Tanks) will address the EVR requirements for Phase II (vehicle refueling) vapor recovery systems, as they become applicable.

Current Status of Proposed Rules 61.3.1 and 61.4.1. Draft proposed Rules 61.3.1 and 61.4.1 were developed for public review. A public workshop was held on September 13, 2004. A socioeconomic impact assessment is currently being prepared, and is expected to be complete in Summer 2005. During this time, ARB has revised its Onboard Refueling Vapor Recovery and EVR Phase II compliance dates. District Board consideration of the proposed rules is anticipated by Fall 2005, providing sufficient lead time for completion of the socioeconomic impact assessment, final changes to the proposed rules to be considered, and public noticing requirements.

Further Control of Industrial and Commercial Boilers, Process Heaters and Steam Generators (Amend Rule 69.2)

Rule 69.2 (Industrial and Commercial Boilers, Process Heaters and Steam Generators) regulates NOx emissions from boilers with rated heat inputs of 5 million (MM) BTU per hour or more. Currently, Rule 69.2 exempts from NOx emission standards any unit with an annual heat input of less than 220,000 therms (for units with a heat input rating of less than or equal to 50 MMBTU per hour). These units are subject only to operational standards, such as unit maintenance, recordkeeping, and an annual boiler tune-up to minimize NOx emissions to the extent feasible. Facilities with annual heat inputs of 220,000 therms or more (or greater than 10% capacity factor for units with heat input ratings greater than 50 MMBtu per hour) must comply with NOx emission standards of 30 ppmv for gas-fired units and 40 ppmv for oil-fired units. Estimated NOx emissions from this source category are about 69 tons per year with over 99% of the emissions from gas-fired units.

The 2004 RAQS included a conditional commitment to amend Rule 69.2 to lower the exemption level to 90,000 therms/year (consistent with ARB's Reasonably Available Control Technology/Best Available Retrofit Control Technology (RACT/BARCT) Guidance Document for boilers), provided additional analyses showed the resulting emission reductions to be cost-effective. There was also a commitment to evaluate the local feasibility of more stringent emission limits recently adopted by the San Joaquin Valley Air Pollution Control District.

The additional analyses have been conducted. To determine local feasibility of these measures, the District evaluated the cost-effectiveness for the following three cases for gas-fired boilers:

1. Lower Exemption Threshold/Retain Existing Emission Standards. Require that all boilers with annual heat input between 90,000 and 220,000 therms meet the 30-ppmv

NOx standard of existing Rule 69.2, and retain the existing 30-ppmv NOx standard for higher usage boilers. This measure would apply to about 40 units with annual heat input between 90,000 and 220,000 therms, requiring installation of low NOx burners and/or flue gas recirculation to meet the 30-ppmv NOx standard.

2. Lower Exemption Threshold/Tighten Emission Standards. Require that all boilers with annual heat input of 90,000 therms or more meet more stringent standards of 15 ppmv NOx for units rated at less than or equal to 20 MMBtu per hour heat input, and 9 ppmv NOx for units rated at greater than 20 MMBtu per hour heat input. These NOx standards are consistent with those for San Joaquin Valley Rule 4306, adopted on September 18, 2003, and those proposed in Sacramento Rule 411. This measure would require about 110 units with annual heat input of 90,000 therms or more to install emission controls such as ultra-low NOx burners and flue gas recirculation to meet the more stringent limits.

3. Retain Existing Exemption Threshold/Tighten Emission Standards. Require that boilers with annual heat input of 220,000 therms or more meet the more stringent (15 ppmv / 9 ppmv) NOx standards. Units with annual heat input rates of less than 220,000 therms would remain subject to the current exemption. This measure would require only the approximately 70 units with annual heat input of 220,000 therms or more to install additional or replacement emission controls to meet the more stringent limits.

For each case, cost-effectiveness values were estimated for each affected boiler. The potential emission reductions (averaged over 365 days of operation per year) and overall cost-effectiveness values for each of the three cases are summarized in Table 2.

Table 2
Overall Cost-Effectiveness

Case	Potential NOx Emission Reductions (tons/day)	Overall Cost-Effectiveness ($/lb NOx reduced)
1	0.03	12
2	0.10	24
3	0.05	18

For all three cases, the estimated overall cost-effectiveness significantly exceeds (by 100% to 300%) the District's rule development cost-effectiveness reference level of $6.00 per pound of NOx emission reductions for BARCT for small sources. An investigation of whether there is any subset of units for which further controls would be cost-effective determined that none of the further control measures were cost-effective for any individual boiler. Based on the poor cost-

effectiveness and small emission-reduction potential, none of these further control measures are feasible and therefore none will be further considered at this time.

PRIORITIZATION OF RAQS FURTHER STUDY MEASURES

The 2004 RAQS also identifies Further Study Measures to be evaluated for potential feasibility pursuant to a requirement of the California Air Resources Board. Measures that are determined feasible during the 2004-2006 period are to be scheduled for rule development in a subsequent triennial revision, which is anticipated in 2007. The RAQS calls for an initial screening assessment in 2004 to determine which measures merit priority evaluation for San Diego County.

An initial screening assessment has been conducted and the results are presented below. Table 3 indicates the priority assigned to each Further Study Measure based on the results. A discussion of the assessment of each measure is presented after Table 3.

Table 3
Prioritization of Further Study Measures
For Further Evaluation

Control Measure	Other District Rule Number*	San Diego Rule Number	Estimated Emission Reduction Potential (Tons/Day)	Priority
Adhesive and Sealant Applications	SC 1168	67.21	1.4	High
Solvent Wipe Cleaning Operations	SC 1171	Various Rules	0.57	High
Wood Products Coating Operations	SC 1136	67.11-67.11.1	0.25	Medium
Graphic Arts	SC 1130	67.16	0.23	Medium
High Emitting Spray Booth Facilities	SC 1132	Various Coating Rules	0.15	Low to Medium
Equipment Leaks	BA 8-18	Various Rules	Not Available	Low
Petroleum Storage Tanks	SC 1178	61.1	0.03	No Further Evaluation
Mobile Transport Tanks Loading	SJV 4621	61.2	0.02	No Further Evaluation
Automotive Refinishing	SJV 4602	67.20	0.02	No Further Evaluation
Food Products Manufacturing/Processing	SC 1131	No comparable rule	0.02	No Further Evaluation
Polyester Resins Operations	SC 1162	67.12	0.02	No Further Evaluation
Aerospace Manufacturing Operations	SC 1124	67.9	<0.01	No Further Evaluation

*SC = South Coast air district; BA = Bay Area air district; SJV = San Joaquin Valley air district.

Adhesive and Sealant Applications *(High Priority)*

This source category is regulated by District Rule 67.21 (Adhesive Material Application Operations). Potential emission reductions were estimated by comparison with South Coast Rule 1168 (Adhesive and Sealant Applications), which has more stringent VOC content limits than Rule 67.21 in several adhesive categories. Total VOC emissions in San Diego County from this category are estimated at approximately 1302 tons per year, based on the 1998 Rule 67.21 rule development emission inventory and projected emission reductions from adoption of Rule 67.21 in 1998. Nearly all of the emissions (1249 tons per year) and potential emission reductions (512 tons per year, or 1.4 tons per day) that would be affected by adoption of Rule 1168 requirements are from nonpermitted sources such as construction operations. Although the estimated emission reductions are relatively large, the estimate does not account for penetration of the current San Diego market by low VOC adhesives sold in South Coast. Information from

adhesive suppliers indicates that they typically provide all of Southern California with the same products. Emission reductions from permitted sources are not anticipated to be significant (total estimated emissions are only 53 tons per year).

This category will be given a high priority for evaluation for future rule development, especially with regards to refining the emission inventory and assessing availability of low VOC adhesives. Because of the relatively large emission reduction potential, the District may proceed with rule development (District resources permitting) before the next RAQS triennial period.

Solvent Wipe Cleaning Operations *(High Priority)*

Solvent wipe cleaning (also called surface preparation or solvent cleaning) is defined in Rule 67.6 (Solvent Cleaning Operations) and similar rules in other California air districts as a method of cleaning a surface by physically rubbing it with a material such as a rag wetted with a solvent. This source category does not include the cleaning of coating application equipment, which has separate standards. It also does not include cleaning of parts in tanks or basins regulated by Rule 67.6. Further VOC reductions under Rule 67.6 are currently being evaluated.

Presently there are a variety of solvents used in San Diego County for cleaning and preparing surfaces for painting or for general maintenance cleaning. These solvents include isopropyl alcohol (IPA), methyl ethyl ketone (MEK), mineral spirits, xylene, lacquer thinner, etc. The VOC content of surface preparation and cleaning solvents are regulated under the District's source-specific coating Rules 67.3 (metal parts and products), 67.4 (can and coil), 67.5 (paper, film, and fabric), 67.9 (aerospace), 67.11 (wood), 67.12 (polyester resin), 67.18 (marine coating), 67.20 (automotive refinishing) and 67.21 (adhesives). These rules limit either the VOC content or vapor pressure (or boiling point) of solvents used for wipe cleaning operations. Those wipe cleaning operations that are not covered by source-specific rules are regulated by Rule 66 (organic solvents). Rule 66 does not limit the VOC content of solvents. Instead it requires the use of add-on control equipment for sources emitting certain quantities of specified organic solvents.

Based on available emission inventory data and, in some cases, engineering permit files, the estimated VOC emissions from wipe cleaning operations subject to Rule 66 are about 48 tons per year. The estimated VOC emissions from wipe cleaning operations subject to the source-specific coating rules are approximately 128 tons per year. The bulk of the emissions from operations subject to source-specific coating rules (about 65%) are from marine coating operations (67.18). Some coating operations such as can and coil coating (Rule 67.4), paper, fabric and film coating (Rule 67.5), and adhesive material application operations (Rule 67.21) do not use significant amounts of cleaning solvents containing VOCs. In addition, emissions from aerospace coating operations (Rule 67.9) are not included in the total. Aerospace coating operations are specifically exempt from general wipe cleaning solvent limits in the rules of other districts and the standards for wipe-cleaning in District Rule 67.9 are consistent with the limits in South Coast Rule 1124 (Aerospace Assembly and Component Manufacturing Operations) for aerospace coating operations.

The total estimated VOC emissions from wipe cleaning operations are about 177 tons per year. The estimated potential emission reductions for this source category are about 142 tons per year,

or 0.57 tons per day, based on requiring use of wipe cleaning solvents with a VOC content of 50 grams per liter or less. This would be consistent with the standards for this source category in rules of several other air districts.

This category will be given a high priority to be investigated for future rule development. Because of the relatively large potential emission reductions, the District may proceed with rule development before the next RAQS triennial period, if warranted.

Wood Products Coating Operations *(Medium Priority)*

This source category is regulated by District Rules 67.11 (Wood Products Coating Operations) and 67.11.1 (Large Coating Operations For Wood Products). Rule 67.11 applies to all sources while Rule 67.11.1 only applies to sources emitting more than 25 tons per year of VOCs. Rule 67.11 contains technology forcing VOC content limits for wood coatings. Although the District is currently reviewing their feasibility, these limits are scheduled to be implemented July 1, 2005. Based on emission inventory information, total estimated VOC emissions from this source category are about 335 tons per year of which 12 tons per year are from sources exempt from Rule 67.11. If successful, the projected emission reductions from implementation of the 2005 VOC limits are about 112 tons per year from current emission levels.

South Coast Rule 1136 (Wood Products Coatings) regulates this source category and has lower technology forcing VOC content limits than those in Rule 67.11 in several coating categories. These technology forcing limits are to be implemented on July 1, 2005, and affect the following coating categories: conversion varnishes, fillers, high-solid stains, sealers and low-solids stains, toners or washcoats. If the lower limits in South Coast Rule 1136 were incorporated in Rule 67.11, the potential emission reductions are estimated to be about 57 tons per year, over and above the projected emission reductions from the technology forcing 2005 limits already in Rule 67.11.

In addition, South Coast Rule 1136 limits rule applicability to those sources using more than one gallon per day of wood coating while Rule 67.11 limits rule applicability to those sources using 500 gallons per year or more of wood coatings. If the applicability limit in Rule 67.11 were reduced to the South Coast Rule 1136 limit, which was assumed to be equivalent to an annual limit of 125 gallons per year, the estimated potential emission reductions would be 5.6 tons per year. Thus, the total estimated potential emission reductions would be 63 tons per year, or 0.25 tons per day.

The District is assigning this source category a medium priority for further evaluation for future rule development. The assignment is considered tentative because the estimated emission reduction potential relies on technology forcing limits to be implemented in mid-2005. Therefore, the District will delay evaluating possible rule development for this source category until the effect on emissions of the existing 2005 limits in Rule 67.11 and the feasibility of the South Coast Rule 1136 limits for 2005 can be evaluated. The District anticipates that an evaluation of the effect of the mid-2005 limits can be made in 2007. This allows for the use of coatings complying with the mid-2005 standards in Rule 67.11 and South Coast Rule 1136 for one full calendar year.

Graphic Arts *(Medium Priority)*

This source category is regulated by District Rule 67.16 (Graphic Arts Operations). Based on emission inventory information, total estimated VOC emissions from this source category are about 82 tons per year. The emissions result from printing processes or related coating processes.

South Coast Rule 1130 (Graphic Arts) has lower VOC limits than Rule 67.16 for this source category for fountain solutions. In addition, South Coast Rule 1171 (Solvent Cleaning Operations) has lower VOC limits than Rule 67.16 for cleaning ink application equipment for roller washes and general ink cleaning. If the South Coast Rule 1130 and Rule 1171 VOC limits were incorporated in Rule 67.16, the estimated potential VOC emission reductions would be about 57 tons per year, or 0.23 tons per day. Nearly all (about 98%) of the emission reductions would result from reducing the VOC content of cleaning materials. This assumes that the lower VOC content cleaning materials are as effective as the current cleaning materials and that increased usage is not required. Both South Coast Rules 1130 and 1171 also have lower VOC limits than Rule 67.16 in several specialty ink or solvent cleaning categories (for example, flexographic ink on porous substrates and flexographic printing cleanup) and for adhesives. However, none of these materials have been identified as being used in San Diego County for this source category.

The District is assigning this category a medium priority for evaluation for future rule development, including estimating cost effectiveness and feasibility of more stringent standards. Because nearly all the emission reductions result from cleaning materials, the District may consider those changes as part of possible rule making for the wipe-cleaning source category.

High Emitting Spray Booth Facilities *(Low to Medium Priority)*

South Coast Rule 1132 (Further Control of VOC Emissions from High-Emitting Spray Booth Facilities) applies to spray booths emitting more than 20 tons per year of VOCs. This rule requires a further 65% emission reduction of VOCs from these operations beyond that required by South Coast coating VOC content rules. The District currently has no comparable rule. District emission inventory information indicates that there may be five operations in San Diego for which VOC emissions from one spray booth (or a combination of spray booths) exceed 20 tons per year. However, four of these are wood coating operations and the estimated emission reductions resulting from implementation of Rule 67.11's technology forcing VOC content limits for wood coating operations that take effect July 1, 2005, would bring three of these operations well below the 20 ton per year threshold. Emissions from the remaining two facilities (after adjustment for projected Rule 67.11 reductions in 2005) are about 59 tons per year combined, and the estimated emission reduction potential is about 39 tons per year, or 0.15 tons per day (65% additional control).

The District views this as a low to medium priority measure because more than half the emissions from the remaining two facilities are from one large wood coating operation. These wood coating emissions may be reduced more than projected by the technology forcing 2005 limits in Rule 67.11. Therefore, emission reductions from add-on controls may be significantly

less than the projected 39 tons per year. The District is currently evaluating the feasibility of the Rule 67.11 technology forcing limits. If it is determined that some or all of the limits are not feasible or if the residual emissions warrant further control, the District will reevaluate the priority of this measure.

Equipment Leaks *(Low Priority)*

Bay Area AQMD's Rule 8-18 (Equipment Leaks) establishes vapor and liquid leak standards to reduce emissions of volatile organic compounds from leaking equipment at refineries, bulk terminals, bulk plants and chemical plants. It exempts facilities with fewer than 100 valves or fewer than 10 pumps and compressors (Rule 8-22, Valves and Flanges at Chemical Plants, applies in these cases). It also exempts equipment handling organic liquids having initial boiling points above 302º F. It does not apply to connections between the loading racks at bulk terminals and bulk plants and the vehicle (mobile transports) being loaded. It sets inspection frequency criteria (daily visual, quarterly instrument checks for most components), repair requirements, and leak standards – 3 drops per minute for liquid leaks, 100 ppmv as methane for most vapor leaks, and 500 ppmv as methane for pumps, compressors and pressure relief devices.

The Rule 8-18 definition of Chemical Plants includes any facility engaged in producing organic or inorganic chemicals or the manufacturing of products by chemical processes and having "325" as the first three digits in the applicable NAICS code. This NAICS code applies to dozens of facilities in San Diego County but likely few would have 100 or more valves or 10 or more pumps or compressors in VOC service. San Diego has no petroleum refineries that would be subject to such a rule. Possibly, a rule such as Rule 8-18 could apply to the major gasoline bulk terminals, some of the bulk plants, and two kelp-processing facilities. However, a valve, pump and compressor count would be needed to determine if the rule would apply to facilities in San Diego.

Rule 8-18 establishes the same liquid leak standard (3 drops per minute) as San Diego rules applicable to gasoline bulk terminals and bulk plants (Rules 61.1, 61.2 and 61.7), kelp processing (Rule 67.10), coating and printing ink manufacturers (Rule 67.19), and pharmaceutical and cosmetics manufacturers (Rule 67.15). However, the San Diego rules have a more stringent allowable leak repair period than Rule 8-18 (0-3 days versus 7 days). Rule 8-18 has a more stringent vapor leak standard for equipment at bulk terminals and bulk plants than do San Diego Rules 61.1 and 61.2 (100-500 ppmv @1.0 cm versus 1375 ppmv @1.3 cm as methane). However, San Diego Rule 61.1 applies to the vapor transfer path including the connection to a mobile transport while Bay Area Rule 8-18 specifically exempts such connections. Inspectors in San Diego County generally do not find vapor leaks at the bulk terminals and bulk plants along the hard-piped components. Typically, if vapor leaks are found, it is at the loading rack/mobile transport interface, and from the vapor fittings (e.g. drybreaks) on the mobile transport themselves (under ARB jurisdiction).

More detailed evaluation would be needed to determine the extent to which a rule such as Rule 8-18 would apply to local chemical plants and whether the standards for fugitive vapor leaks are technologically feasible and cost-effective. However, likely emission reductions from bulk plants and bulk terminals would be expected to be far less than 10 tons per year. The most recent inventory of these sources showed approximately 13 tons per year total VOC emissions

from loading rack operations, and fugitive vapor and liquid leak emissions from hard-piped components, pumps and compressors are likely far less than this amount. As to kelp processing facilities, most fugitive vapor emissions are not associated with equipment or piping leaks. Lines used to transport VOC/air streams are operated at only a few inches of water gauge pressure.

Based on this initial evaluation, it does not appear that there is a significant emission reduction potential and therefore this item should be given a low priority for evaluation for future rule development.

Petroleum Storage Tanks *(No Further Evaluation)*

This source category is regulated by District Rule 61.1 (Receiving and Storing Volatile Organic Compounds at Bulk Plants and Bulk Terminals), which is applicable to large storage tanks for gasoline and other high volatility motor vehicle fuels. Based on emission inventory information and updated equipment descriptions, estimated emissions from this source category are about 46 tons per year. Rule 61.1 has standards for fittings for internal floating roof tanks, external floating roof tanks, and fixed roof tanks and requires BACT for new or replacement rim seals for external and internal floating roof tanks.

South Coast 1178 (Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities) has further control measures for this source category. This rule is applicable to above ground storage tanks at petroleum facilities emitting more than 20 tons per year of VOCs. The rule specifies rim seal types and fittings for external and internal floating roof tanks and fixed roof tanks. The rule also requires all external floating roof tanks subject to the rule be domed by July 1, 2008.

San Diego County has two petroleum storage facilities that emit more than 20 tons per year. Examination of the existing rim seals and fittings for the storage tanks at these facilities indicates that most of the existing seals and fittings at these facilities would meet the standards in South Coast Rule 1178. Based on emission factors in the South Coast Rule 1178 staff report, if the standards of South Coast Rule 1178 were incorporated in Rule 61.1 the estimated emission reduction potential would be about 21 tons per year. About 40% of the emission reduction potential (9 tons) would result from upgrading rim seals. However, since BACT is required by Rule 61.1 for rim seal replacement, these emission reductions will be achieved over time by existing Rule 61.1. The remaining potential emission reduction benefit of the Rule 1178 standards would be approximately 12 tons per year, or 0.03 tons per day, from the more stringent requirements for fittings and the requirement for external floating roof tanks to be domed.

Based on this initial evaluation, the District does not plan further evaluation for rule development for this source category because of the very limited VOC emission reduction potential.

Mobile Transport Tanks Loading *(No Further Evaluation)*

This source category is regulated by District Rule 61.2 (Transfer of Organic Compounds into Mobile Transport Tanks). Rule 61.2 controls vapors displaced by loading of mobile transport

tanks with gasoline and other high volatility fuels from bulk terminals and vapor and liquid leaks during the loading process. The primary standard of Rule 61.2 requires a 90% emission reduction for all VOC vapors displaced during the transport tank loading process. Based on emission inventory information, total estimated VOC emissions in San Diego County due to vapor displacement are about 13 tons per year from four bulk terminal loading rack facilities. San Joaquin Valley Rule 4621 (Gasoline Transfer into Stationary Storage Containers, Delivery Vessels and Bulk Plants) requires a 95% emission reduction for displaced VOC vapors. Source testing data for the largest San Diego facility shows that it consistently achieves greater than 99% control of VOC vapors released in the loading process. The estimated emission reduction potential for the three remaining facilities is about 6.4 tons per year, or 0.02 tons per day, if they were required to meet a 95% control level instead of the 90% control level in existing Rule 61.2.

Based on this initial evaluation, the District does not plan further evaluation for rule development for this source category at this time because of the very limited VOC emission reduction potential.

Automotive Refinishing *(No Further Evaluation)*

This source category is regulated by District Rule 67.20 (Motor Vehicle and Mobile Equipment Refinishing Operations). Total VOC emissions from the more than 400 facilities in this source category are about 275 tons per year, based on the 1996 rule development emission inventory and projected emission reductions from rule adoption.

San Joaquin Valley Rule 4602 (Motor Vehicle and Mobile Equipment Refinishing Operations) has lower VOC limits than Rule 67.20 for this source category in the following coating categories: Group I Vehicle primers and primer surfacers, Group II Vehicle primers and primer surfacers, and Group II Vehicle primer sealers. Estimated emissions in San Diego County from these coating categories comprise a small fraction of total emissions from the source category (estimated emissions are less than 11 tons per year from the affected coating categories). Further, San Joaquin Valley Rule 4602 does not have a coating category for multicolored coatings with a separate VOC limit as does Rule 67.20. Nevertheless, emissions in San Diego County from multicolored coatings are not expected to be significant.

If San Joaquin Valley Rule 4602 limits were incorporated in Rule 67.20 the estimated emission reduction potential would be about 6.1 tons per year, or 0.02 tons per day. However, the District specifically did not include lower limits for these coating categories when Rule 67.20 was adopted in 1996 because an extensive socioeconomic impact analysis showed that lower limits would impose an unreasonable burden on many small businesses in San Diego County. San Diego's unique temperate climate allows most automotive refinishing operations to operate without heated spray booths that would have been required, at the time, to successfully use primers and primer sealers meeting lower VOC limits as in San Joaquin Valley Rule 4602. Further, it is worth noting that San Joaquin Valley Rule 4602 allows a higher ratio of high VOC precoat to primer usage than Rule 67.20 (1 gallon of precoat to 1 gallon of primer as compared to 1 gallon of precoat to 4 gallons of primer for Rule 67.20) and higher allowable usage of high VOC specialty coatings (1 gallon per day compared to 3 gallons per month for Rule 67.20). Therefore the overall emission reductions achieved by Rule 67.20 may be equivalent or greater than San Joaquin Valley Rule 4602.

Although it is possible that current technology may allow use of lower VOC content primers without heated spray booths, based on this initial evaluation, the District does not plan further evaluation for rule development for this source category at this time because of the very small emission reduction potential. The District intends to update the emissions inventory for this category in detail by 2006. If the updated emission inventory for automotive refinishing operations indicates the potential for significantly larger emission reductions than currently estimated, the District will reevaluate the priority of this category for further rule development. Lastly, possible emission reductions from surface preparation operations for this source category will be addressed, if warranted, in the wipe cleaning category.

Food Products Manufacturing/Processing *(No Further Evaluation)*

This source category is regulated by South Coast Rule 1131 (Food Product Manufacturing and Processing Operations), which requires use of solvents with less than 120 grams per liter VOC or an 85% emission reduction for nonsterilization operations (emission reductions of about 75% are required for sterilization operations). The staff report for South Coast's Rule 1131 indicates that the two solvents most often used for processing operations and sterilization processes in the food industry are hexane and IPA. Based on AB 2588 Hot Spots program information, total solvent use in San Diego County for facilities that manufacture or process food products is about 0.06 tons per year for hexane and 80 tons per year for IPA. However, more than 90% of these IPA emissions are from two kelp-processing facilities already regulated by District Rule 67.10 (Kelp Processing and Bio-Polymer Manufacturing Operations). Under Rule 67.10, the kelp processing facilities have reduced their VOC emissions more than 90%. If a rule incorporating South Coast standards for VOC emissions for food processing facilities were adopted, estimated potential VOC emission reductions from the remaining unregulated IPA emissions would be about 5.9 tons per year, or 0.02 tons per day.

Based on this initial evaluation, the District does not plan further evaluation for rule development for this source category at this time because of the very limited VOC emission reduction potential.

Polyester Resins Operations *(No Further Evaluation)*

This source category is regulated by District Rule 67.12 (Polyester Resin Operations). Based on emission inventory information, total estimated VOC emissions for this source category are 79 tons per year from resins and gel coats.

South Coast Rule 1162 (Polyester Resins Operations) has slightly lower monomer content limits than Rule 67.12 for some resins and gel coats. If the South Coast monomer content limits were adopted the estimated potential emission reduction would be about 5.7 tons per year, or 0.02 tons per day, for resins and gel coats combined.

Based on this initial evaluation, the District does not plan further evaluation for rule development for this source category at this time because of the very limited VOC emission reduction potential.

Aerospace Manufacturing Operations *(No Further Evaluation)*

Emissions in this category have greatly declined in San Diego County since 1990 due to implementation of District Rule 67.9 (Aerospace Coating Operations), the decline in government funding for aerospace operations and, in particular, the closing of one large facility. Based on emission inventory information, total VOC emissions from this source category are only 35 tons per year.

South Coast Rule 1124 (Aerospace Assembly and Component Manufacturing Operations) has lower VOC limits in several coating categories: adhesive bonding primers, antichafe coatings, dry lubricative materials (nonfastener), form release coatings, fuel tank coatings, and sealants. In addition, South Coast Rule 1124 has a lower VOC limit for paint strippers. Total estimated VOC emissions in San Diego for materials in these coating categories and for strippers that exceed the limits in South Coast Rule 1124 are less than two tons per year. Emission reductions have not been estimated but would be less than two tons per year, or less than 0.01 ton per day.

Based on this initial evaluation, the District does not plan further evaluation for rule development for this source category at this time because of the very limited VOC emission reduction potential.

INDIRECT SOURCE PROGRAM STATUS

The District's Indirect Source Program, adopted by the District Board in December 1997, consists of ongoing outreach and assistance to local governments, land developers, and neighborhood groups to reduce vehicle trips and associated emissions through voluntary land use and street design improvements (i.e., "smart growth"). District efforts in 2004 included:

- Working with the San Diego Association of Governments (SANDAG) on policy and funding programs to encourage smart growth. These included the Regional Comprehensive Plan (RCP) and allocation of the successful TransNet half-cent sales tax ballot measure to include smart growth incentives and funding for walking, bicycling, transit, and neighborhood traffic safety programs.

- Ongoing support and assistance to the City of San Diego in developing its "City of Villages" General Plan element, a 20-year smart growth blueprint.

- Assistance to the City of San Diego in preparing grant applications for smart growth planning efforts in two neighborhoods (San Ysidro and Uptown).

- Presentations to city planning staffs, traffic engineers, developers, merchant organizations, and neighborhood groups that are working on improving conditions for walking, bicycling, and transit.

- Distributing, and giving neighborhood presentations on, a traffic calming "best practices" manual developed by District staff to help communities provide a safe pedestrian and bike environment while reducing automobile traffic.

- Participation in, and assistance to, a regional pedestrian advocacy group, WalkSanDiego, and coordination with affiliated state and national groups (California Walks and America Walks, respectively), as well as the San Diego County Bicycle Coalition.

- Assistance in forming a new advocacy group, Move San Diego, promoting transportation projects to support smart growth.

TRANSPORTATION CONTROL MEASURES STATUS

Implementation continues for the six Transportation Control Measures contained in the RAQS, consistent with program commitments made in the 2030 Regional Transportation Plan (RTP) and the 2004 Regional Transportation Improvement Program (RTIP) adopted and implemented by SANDAG. These are: (1) Transit Improvements; (2) Vanpools; (3) High-Occupancy Vehicle (HOV) Lanes; (4) Park-and-Ride Facilities; (5) Bicycle Facilities; and (6) Traffic Signal Improvements.

- **Transit Improvement and Expansion Program.** The District's Vehicle Registration Funding Program and the state Carl Moyer Program (locally administered by the District) have been utilized to fund the incremental cost of replacing 324 diesel-fueled public transit buses with compressed natural gas (CNG) transit buses. Currently, 55% of all heavy-duty transit buses in the county (647 total) are fueled by CNG. An additional 83 CNG buses are either on order or in negotiations for delivery in 2005. If all of these buses are delivered, the percentage of CNG buses in the total fleet will increase to 68%. Four of the five transit providers in the San Diego region have chosen to adopt the alternative-fuel path of the ARB's Transit Bus Fleet Rule and will purchase CNG buses exclusively in the future.

  Additionally, bus revenue miles[1] in San Diego County have increased eight percent since Fiscal Year 1995 to over 28 million miles in 2004. Further, rail transit services, including the San Diego Trolley[2] and the Coaster express rail service,[3] have grown 84% since 1996 to reach over 8 million revenue miles in 2004. The 6-mile extension of the San Diego Trolley from Qualcomm Stadium in Mission Valley to San Diego State University and to La Mesa is currently under construction and is scheduled to open in 2005. Additionally, construction on the 22-mile Oceanside-Escondido Rail Line ("Sprinter") began in 2004. The Sprinter is scheduled to begin service in 2007.

- **Vanpool Program.** SANDAG operates a Regional Vanpool Program, funded in part by the District's Vehicle Registration Fund. As of September 2004, 363 vanpools were operating in

[1] Revenue (car) miles are the total distance that a fleet travels while available for passenger service.
[2] The San Diego Trolley is a 48-mile light rail transit system serving southern San Diego County.
[3] The Coaster is a 42-mile passenger rail line between Oceanside and Downtown San Diego that began service in FY 1996.

the San Diego region, carrying 3,378 passengers, which is a 20% increase over 2003 levels. Additional vanpools are anticipated as funding becomes available.

- **HOV Lanes.** Currently, there are three freeways in the San Diego region with HOV lanes: (1) State Route (SR) 54 (South Bay Freeway); (2) Interstate (I) 5 (San Diego Freeway); and (3) I-15 (Escondido Freeway). Additional HOV lanes are planned for development as funding becomes available.

  The SR 54 HOV lanes (one lane eastbound and one lane westbound) extend 3.2 miles from I-805 to Briarwood Road and operate during morning and afternoon peak periods. The I-5 HOV lane (northbound only) extends 5.8 miles from the I-5/I-805 junction to Via de la Valle. The I-15 Express Lanes are a two-lane reversible HOV facility in the median of I-15, extending 7.5 miles from SR 163 to SR 56. Access is available only at the north and south ends. Vehicles with two or more occupants, buses, and motorcycles may use the I-15 Express Lanes for free, and solo drivers participating in the FasTrak Program may use the Express Lanes for a per-trip toll. Finally, it is also worth noting that there is a buses-only northbound lane on SR 163, extending 0.4 miles from A Street in downtown San Diego to I-5, enabling buses to bypass general-purpose traffic when entering SR 163.

  Metered Ramps. HOV preferential lanes are provided at 161 (59%) of the 271 metered ramps on the region's freeways. The HOV preferential lanes do not bypass the meters but they do have a shorter queue, reducing travel time.

  HOV Study. SANDAG completed the Regional HOV/Managed Lane Study in 2002. The goal of this long-range transportation study was to identify a cost-effective regional system of HOV/managed lane facilities that would accommodate existing and projected HOV demand, maximize the person-carrying capacity, and provide travel time savings and reliability to HOVs and transit. The study's findings and recommendations for 2020 and beyond also included short-term and interim improvements. The recommendations, which were incorporated into the 2030 RTP, include:

  - Managed lane facilities on I-5, I-15, and I-805, with value pricing;[1]
  - One HOV lane in each direction on SR 54, SR 56, SR 94, and SR 125;
  - Two-lane HOV reversible facility on SR 52; and
  - HOV to HOV connectors.

  I-15 Managed Lanes. The region has committed over $300 million to the I-15 Managed Lanes project to ease traffic congestion in the I-15 corridor from SR 56 to Center City Parkway in Escondido. Construction began in November 2003 and is scheduled for completion in late 2007.

  The project will include four lanes with a moveable barrier in the median of I-15 to accommodate two to three lanes in the peak direction and one to two lanes in the opposite direction. The Managed Lanes facility will provide priority to HOVs such as carpools and vanpools, regular transit services, and a Bus Rapid Transit (BRT) System. Excess capacity

[1] Variable tolls for solo drivers based on traffic congestion in the general lanes.

in these lanes will be "sold" to solo drivers for a fee, as is the case with the FasTrak program. The Managed Lanes will be separated from the general purpose lanes by a barrier with access provided at several locations through openings in the barrier.

I-5 North Coast Managed Lanes. This project will be modeled after the I-15 Managed Lanes project. The I-5 North Coast Managed Lanes will feature multiple access points to/from the facility to the general purpose lanes and direct access ramps that connect local arterials directly to the managed lanes facility. A number of project alternatives are being studied as part of the environmental document that Caltrans is developing. Numerous technical studies also are being developed for this project, including a study to examine the feasibility of value pricing on the I-5 North Coast Managed Lanes.

- **Park-and-Ride Facilities.** Currently, there are 64 park-and-ride lots in the region, with 3,964 spaces available. More lots are anticipated as funding becomes available.

- **Bicycle Facilities.** The bikeway system currently includes 1,030 miles of bikeways in the San Diego region, consisting of Class I (exclusive bicycle path separated from roadway), Class II (striped on-street bicycle lane), and Class III (shared with motor vehicles) facilities. Additionally, front-mounted bike racks are available on nearly all transit buses. SANDAG maintains a system of over 600 bicycle lockers throughout the region available for commuters at transit centers and park-and-ride facilities.

- **Traffic Signal Improvements.** All federally funded traffic signal projects selected with TEA-21 funding have been implemented (117 projects). The 2004 RTIP includes the completion of the federally funded projects that were included in the 2002 RTIP as well as seven locally funded traffic signal improvements.