

## ATTACHMENT II

### 2009 ASSESSMENT OF THE IMPACT OF REPEALING STATE REQUIREMENTS FOR EMISSION OFFSETS

#### EMISSION OFFSET REQUIREMENTS

New Source Review (NSR) Rules 20.1 through 20.4 were amended in 1998 to locally repeal State requirements for emission offsets, as authorized by State law.<sup>1</sup> Offsets are emission reductions provided to mitigate emission increases from new or modified stationary sources. State offset requirements had applied to sources having the potential to emit 15 tons or more per year of oxides of nitrogen (NO<sub>x</sub>) or volatile organic compounds (VOC). The requirements were locally repealed following an evaluation of their impact and a determination by the District and the California Air Resources Board (ARB) that they were not needed to achieve State ambient air quality standards for ozone by the earliest practicable date. Other requirements of NSR rules remain in effect.<sup>2</sup>

To qualify as offsets the emission reductions must not otherwise be required by local, State, or federal mandates; that is, the emission reductions must be “surplus.”<sup>3</sup> Qualifying emission reductions are approved and recorded by the District as “credits” in an offset register (also called a “bank”), and an emission credit certificate is issued to the owner. These credits can later be withdrawn by their owner to satisfy an emission offset requirement, or sold or transferred to a new owner for this purpose. District Rules 26.0-26.10 govern this process.

Stringent District, State and federal requirements for stationary source emission controls leave little opportunity for creating surplus emission reductions for use as offsets. Consequently, most banked emission reduction credits are derived from permanently curtailing or shutting down a permitted facility or equipment.<sup>4</sup> Such shutdowns and resulting air quality benefits routinely occur as a normal course of business activity, independent of offset requirements.<sup>5</sup> No additional air quality benefit is realized (beyond that which occurred at the time of the shutdown) when shutdown-related emission reductions are subsequently banked and used for offset purposes. Consequently, State offset requirements essentially resulted in costly paper transfers of emission reduction credits from one company to another with no corresponding air quality benefit.

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<sup>1</sup> California Health and Safety Code (H&SC) Sections 40918.5 and 40918.6

<sup>2</sup> Ongoing NSR provisions include State requirements for Best Available Control Technology (BACT) on equipment with potential to emit 10 pounds or more per day of VOC or NO<sub>x</sub>, and federal requirements for Lowest Achievable Emission Rate control technology and offsets (at a 1.2-to-1 ratio) for new or modified facilities with potential to emit 50 tons or more per year of VOC or NO<sub>x</sub>.

<sup>3</sup> The emission reductions must also be real, permanent, quantifiable, and enforceable.

<sup>4</sup> Shutdowns are a federally authorized source of offsets. See "Use of Shutdown Credits for Offsets," John Seitz, Director, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, date unknown.

<sup>5</sup> In fact, a majority of shutdown-related emission reductions are never banked.

## **REQUIRED FINDINGS FOR REPEAL**

To streamline regulatory processes and reduce costs without compromising air quality, State law was amended in 1996 (Assembly Bill 3319) to allow an air district to locally repeal State emission offset requirements if the district board and ARB meet stringent health-protective requirements. Before repealing State emission offset requirements, the district board must review an estimate of emissions growth, if any, that is likely to occur as a result of the repeal, and make the findings described below. These findings must be confirmed by ARB and reconsidered when updating the Regional Air Quality Strategy (RAQS).

**All Feasible Control Measures:** The District Board must find that all feasible control measures for emission sources under District purview have been adopted or are scheduled for consideration of adoption. The proposed 2009 RAQS Revision addresses and satisfies this requirement. Consequently, it is not further addressed herein.

**Transport Mitigation:** The District Board must find that State emission offset requirements are not necessary to comply with the ozone transport mitigation requirements of State law. In fact, transport mitigation requirements do not apply to San Diego County, which is not identified in State law as an upwind source of transported air pollution. Consequently, transport mitigation requirements are not further addressed herein.

**Expeditious Ozone Attainment:** The District Board must find that State emission offset requirements are not necessary to attain and maintain State ambient air quality standards for ozone by the earliest practicable date. Pursuant to ARB Guidance,<sup>6</sup> a key criterion is ensuring that the repeal of State offset requirements does not significantly impact a projected trend of decreasing total ozone-precursor emissions in the region.<sup>7</sup> This requirement is the primary focus of the assessment herein.

## **TRACKING REQUIREMENTS**

ARB issued an Executive Order in 1998 specifying requirements for tracking and assessing emission increases associated with permitting actions that would have triggered State offset requirements were they still in place.<sup>8</sup> These requirements are described below.

**Emission Increases from Affected Sources:** Determine the total annual and cumulative increases of VOC and NO<sub>x</sub> emissions associated with permitting actions that would have (or may have) triggered State offset requirements were they in place. This information is used to determine the quantity of offsets foregone as a result of the repeal of State offset requirements.

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<sup>6</sup> "Air Resources Board Staff's Basis For A Determination That A District's No-Net-Increase Permitting Program Is Not Necessary Pursuant to Health and Safety Code §40918.5 and 40918.6" (October 31, 1997).

<sup>7</sup> Page 5 of the ARB guidance

<sup>8</sup> ARB Executive Order G-97-007-02 (December 17, 1998).

**Emission Decreases from Shutdowns:** Determine the annual and cumulative reductions of VOC and NO<sub>x</sub> emissions that resulted from permanent equipment shutdowns that have not been banked as emission reduction credits in the District credit bank. This information is used to determine the level of emission reductions that have continued to occur from shutdowns (following the repeal of State offset requirements), which historically are the primary source of emission offsets. To the extent shutdowns and associated emission benefits continue to occur, the potential air quality impact of the repeal is reduced or eliminated.

**Details:** Tracking details include: (1) the year in which the emission increase or decrease occurred; (2) the source of the emission increase or decrease; (3) the nature of the emission change (e.g., the equipment type, whether it is a new or modified source, whether it is a permanent shutdown); (4) the amount of emission increase or decrease in tons/year; (5) the pollutant type; (6) the amount of offsets, if any, provided pursuant to federal requirements; (7) any adjustments to unbanked shutdowns that would be necessary to qualify the associated reductions as offsets;<sup>9</sup> and (8) any other pertinent information agreed upon by the District and ARB as necessary to assess the impact of the repeal of State offset requirements.

## **TRACKING RESULTS**

The District previously instituted tracking procedures to identify and compile the required data for assessing the impact of the repeal of State offset requirements. The tracking information for the assessment herein (shown in Tables II-1 through II-5, beginning on page II-12) reflects the 3.5-year period from July 1, 2003, through December 31, 2006. Tracking information for earlier periods is reflected in the previous assessments conducted in 1998, 2001, and 2004.

## **EMISSION INCREASES FROM 10-TON SOURCES**

Table II-1 lists permitted and actual emission increases from affected sources for which the District issued permits during the 3.5-year tracking period. Any offsets that were provided, such as to satisfy existing federal offset requirements, are also identified. The listed increases occurred at sources with actual aggregate post-project emissions exceeding 10 tons per year (tpy) of either VOC or NO<sub>x</sub>. As with the previous assessments, the threshold of 10 tons was used as a conservative indicator of sources with a potential to emit 15 tpy, which is the threshold that would have triggered State offset requirements were they still in place.<sup>10</sup>

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<sup>9</sup> Pursuant to Rule 26.0, Banking of Emission Reduction Credits, emission reductions from shutdowns for which credits are granted are discounted by the emission reductions that would have occurred had Reasonably Available Control Technology or Best Available Retrofit Control Technology requirements applied.

<sup>10</sup> In reality, many sources with actual emissions between 10 and 15 tons/year would not have been subject to State offset requirements because of permit conditions capping their potential to emit at 15 tons/year.

**Temporary Growth in Electrical Power Projects.** On January 7, 2001, the Governor proclaimed a State of Emergency resulting from the imminent threat of widespread and prolonged disruption of electrical power. Shortly thereafter, the Governor issued a series of Executive Orders designed, in part, to remove potential obstacles to construction of electrical power projects. In response to the State of Emergency, numerous electrical power projects were implemented during the three-year period 2001-2003, triggering an upsurge in permitted NOx emissions, particularly in year 2002. However, power plants subsequently constructed have operated at a fraction of their permitted capacity and the rate of new power projects in San Diego County returned to more typical levels during the 2003-2006 tracking period. In this analysis of the repeal of State offset requirements, as in the 2004 analysis, the influence of permitted but scarcely operating power projects is accounted for by considering results with and without these projects included. (More discussion of the projects is provided in the 2004 assessment.)

Table II-4A—which excludes electrical 2001-2003 power projects—is considered more representative of potential future emission impacts of the repeal of State offset requirements. This is because rapid growth in the permitting of electrical power projects due to the State of Emergency was an anomaly of the 2001-2003 period, and because actual emissions from the electrical power projects have been a small fraction of their permitted levels.

#### **EMISSION DECREASES FROM UNBANKED SHUTDOWNS**

Table II-2 lists unbanked actual emission reductions from permanent facility or equipment shutdowns, adjusted where necessary for eligibility as emission offsets. The list is not exhaustive, given that additional shutdowns and associated emission reductions likely occurred, particularly from smaller emission sources.<sup>11</sup> Regardless, as indicated in Table II-2, shutdowns and associated emission reductions continue to occur since the repeal of State offset requirements.

Table II-3 identifies the quantity and basis for the adjustments to the unbanked shutdowns that would be necessary to qualify the associated reductions for eligibility as emission offsets. Adjustments reduced the total NOx offset value by 5.67 tpy and total VOC offset value by 0.51 tpy.

#### **NET EMISSIONS DIFFERENTIAL**

Table II-4 combines information from Table II-1 (permitted emission increases from all projects at sites at or above 10 tpy with information from Table II-2 (unbanked actual emission reductions) to show the resulting net emissions differential for each year during the 2003-2006 tracking period. Table II-4A presents the same information but excludes 2001-2003 electrical power projects, as the basis for permitted emission increases. In addition to addressing the recent 2003-2006 tracking period, Tables II-4 and II-4A include information for years 1999-

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<sup>11</sup> Considerable effort is required to accurately quantify unbanked emission reductions from shutdowns, including making adjustments for eligibility as emission offsets. Consequently, likely not all unbanked emission reductions have been uncovered, particularly those from smaller sources.

2003 (which were previously addressed in the 2001 and 2004 assessments) in order to cumulatively address the entire period since the repeal of State emission offset requirements.

Consistent with expectations, the repeal of State offset requirements has not resulted in a significant increase in VOC emissions. Table II-4 indicates that, including 2001-2003 electrical power projects, the average-annual net VOC emissions differential during the July 2003-December 2006 tracking period was a VOC emissions decrease of 7.0 tpy, and over the eight years examined (1999-2006) was a VOC emissions decrease of 10.1 tpy. This net decrease resulted from unbanked actual emission reductions from shutdowns exceeding permitted emission increases from new sources, despite conservative assumptions. (As discussed previously, not all unbanked emission reductions from shutdowns were uncovered, and new sources affected by the repeal of State offset requirements were assumed to include sources with actual VOC emissions of between 10-15 tpy, although many such sources would not have triggered State offset requirements.)

Table II-4 further indicates that, including 2001-2003 electrical power projects, the average-annual net NOx emissions differential during the 2003-2006 tracking period was a NOx emissions increase of 6.7 tpy. The eight-year trend indicates an average-annual NOx emissions increase of 39.2 tpy. The net increase resulted from permitted emission increases from new sources exceeding unbanked actual emission reductions from shutdowns. However, as discussed previously, distortions in the energy market led to permitting of electrical generating equipment during 2001-2003 that has been scarcely used, and consequently actual NOx emission increases are a small fraction of permitted values. Further, not all unbanked emission reductions from shutdowns were uncovered, and affected new sources were conservatively assumed to include sources between 10-15 tpy of NOx.

But for the temporary upsurge in electrical power projects constructed in response to the 2001-2003 State of Emergency, unbanked actual emission reductions from shutdowns virtually matched or exceeded permitted emission increases from new or modified sources during the 2003-2006 tracking period. As shown in Table II-4A, excluding 2001-2003 electrical power projects results in an average-annual VOC emissions decrease of 7.7 tpy and an average-annual NOx emissions increase of 1.1 tpy. Moreover, the eight-year trend indicates an average-annual VOC emissions decrease of 18.9 tpy, and an average-annual NOx emissions decrease of 3.0 tpy.

## **BANK OF EMISSION CREDITS**

Table II-5 is provided for informational purposes to indicate the origin of credits registered in the District's offset bank as of December 31, 2006. Previous trends hold—that is, permanent equipment or facility shutdowns remain the primary source of offsets rather than voluntary process or control technology improvements. Specifically, as indicated in Table II-5, 58.4% of NOx and 72.4% of VOC emission reduction credits registered in the offset bank as of December 31, 2006, were derived from shutdowns.

The mobile source emission reduction credits (MERCs) identified in Table II-5 were created—at substantial cost to the applicant—to help satisfy federal offset requirements for the Otay Mesa Power Plant project. As discussed in the 2004 assessment, these MERCs were the first-ever in the nation to be approved by the U.S. Environmental Protection Agency (EPA) for use as offsets, following a rigorous and lengthy consultation process involving EPA, the District, ARB, and the applicant. Given the painstaking approval process and the considerable burden and expense of creating these MERCs, it is anticipated that MERCs would not be created in any considerable quantities to satisfy State offset requirements, if State emission offset requirements were still in place. Accordingly, if the banked MERCs are not considered for purposes of the assessment herein, then equipment or facility shutdowns account for 91.6% of banked NO<sub>x</sub> emission reduction credits.

### **REQUIRED COMPARISONS**

The ARB Executive Order also requires five specific comparisons addressing emission impacts of the repeal of State offset requirements and the air basin emission inventories. The comparisons are designed to help evaluate whether the predicted minimal impacts of the repeal, projected into the future, continue to be minimal given updated emission inventory and tracking data.

#### **1. CURRENT VERSUS PREVIOUS PROJECTIONS OF EMISSION IMPACTS**

Tables II-6 and II-7 provide updated projections of annual and cumulative VOC and NO<sub>x</sub> emission impacts, respectively, of the repeal of State offset requirements, with and without 2001-2003 electrical power projects. The projections are compared with the modest emission increases conservatively projected in the District's 1998 assessment.

As shown in Table II-6, cumulative VOC impacts exceed the originally projected "expected-case" impacts during the tracking period and in future years, both including and excluding power projects. However, the actual and projected VOC impacts are far below originally projected "worst-case" impacts in any year through 2020.

Table II-7 shows relatively minor NO<sub>x</sub> increases in all years examined except 2002, when there was a temporary upsurge in the permitting of power plants due to the State's emergency efforts to increase electricity supply. This temporary upsurge perturbed average-annual NO<sub>x</sub> emission values for the eight-year period, leading to a worst-case projected 2020 cumulative NO<sub>x</sub> emissions impact of 896.6 tons/year (tpy). However, this value falls below the originally projected worst-case impact of 1201 tpy. In addition, as discussed previously, a projected cumulative NO<sub>x</sub> impact that reflects continued substantial growth in the number of electrical power projects—based on the temporary upsurge that occurred in response to the State of Emergency—cannot be considered a reasonable expectation of future impacts.

Power projects constructed during the previous tracking period continue to contribute relatively little to the actual emissions inventory. Further, the rapid growth in electrical power projects due to the 2001 State of Emergency has not continued. Therefore, the scenario that excludes 2001-2003 electrical power projects—which results in a projected 2020 cumulative NO<sub>x</sub> emissions impact of 30.1 tons—is considered more representative of potential future emission impacts of repeal of State offset requirements.

## **2. IMPACTS AS A PERCENTAGE OF ANNUAL TOTAL EMISSIONS**

As shown in Table II-8, the VOC emissions impact of repealing State offset requirements was close to 0% of total annual permitted VOC emissions during the 2003-2006 tracking period. During all years examined (1998-2020), and for both scenarios (both with and without 2001-2003 electrical power projects), the net VOC impacts fall within the range of 0.06% to 0.14%, a negligible impact.

As shown in Table II-9, the cumulative NO<sub>x</sub> emissions impact of the repeal was below 0.5% of the total NO<sub>x</sub> inventory during the 2003-2006 tracking period. The projected future impact in 2020, based on the eight-year trend, is 1.7% including 2001-2003 electrical power projects. However, as discussed previously, the electrical power projects responsible for this projected impact are operating at a small fraction of permitted levels and are not anticipated to substantially increase the inventory of actual emissions. Excluding power projects—which results in a projected 2020 cumulative impact of 0.06% of the total NO<sub>x</sub> inventory—reflects a more realistic scenario.

These results indicate the impacts of the repeal of State offset requirements continue to constitute a negligible percentage of the total emission inventory. The repeal will not significantly impact an existing trend of decreasing total region-wide emissions.

## **3. IMPACTS AS A PERCENTAGE OF ANNUAL STATIONARY-SOURCE EMISSIONS**

As shown in Table II-10, the cumulative impact of the repeal of State offset requirements was less than 0.7% of the total stationary-source VOC emissions inventories during the 2003-2006 tracking period, under both scenarios (both with and without 2001-2003 electrical power projects). Given the projected future annual impact of zero VOC emissions, the cumulative percentage impact decreases each year through 2020, under both scenarios (both with and without 2001-2003 electrical power projects).

As shown in Table II-11, the cumulative impact of the repeal of State offset requirements, including 2001-2003 electrical power projects, reached a (theoretical) 10.7% of the total stationary-source NO<sub>x</sub> emissions inventory by 2006. Under this scenario (including 2001-2003 electrical power projects), projected impacts would increase to 20.4% of the total stationary-source NO<sub>x</sub> emission inventory through 2020. However, as discussed previously, electrical power projects responsible for this projected impact are operating at a small fraction of permitted levels and are not anticipated to substantially increase the inventory of actual emissions.

Excluding the 2001-2003 power projects—which results in a projected 2020 cumulative impact of 0.7% of the stationary-source NOx emissions inventory—reflects a more realistic scenario.

The projected future cumulative impact of the repeal of State offset requirements is expected to be a negligible percentage of the VOC and NOx stationary-source emissions inventories through 2020. Temporary emission increases could occur, but are not expected to constitute a significant percentage of the stationary-source inventory, nor significantly impact the projected trend of decreasing total emissions. Further, emission increases would be subject to federal offset requirements if specified emission thresholds are exceeded.

#### **4. CURRENT VERSUS PREVIOUS PROJECTIONS OF PERCENTAGE IMPACTS**

**Percent of Total Emissions.** Tables II-12 and II-13 compare the originally projected worst-case and expected-case impacts of the repeal of State offset requirements (as identified in the 1998 assessment) with actual 1998-2006 data and with an update of projected future-year impacts. With the exception of NOx increases when the 2001-2003 power projects are included, the worst-case VOC and NOx increases previously projected for future years did not materialize, as emission increases were mostly compensated by unbanked emission reductions. If the 2001-2003 power projects are included, then NOx impacts during the tracking period are comparable to the originally projected worst-case scenario. However, the projected future impact is less than the worst-case scenario impact. And, as discussed previously, a projected cumulative NOx impact that reflects continued substantial growth in the number of electrical power projects—based on the temporary upsurge that occurred in response to the 2001 State of Emergency—cannot be considered a reasonable expectation of future impacts.

**Percent of Stationary-Source Emissions.** Tables II-14 and II-15 indicate slightly more favorable results in comparing original and updated projections of impacts of the repeal of State offset requirements expressed as a percentage of stationary-source inventories. Originally projected worst-case VOC and NOx emission impacts did not materialize in most years examined, even including the impact of the 2001-2003 power projects. Although modest, projected VOC emission impacts (both with and without all power projects) do slightly exceed the originally projected expected-case impacts. Further, if the 2001-2003 power projects are included, the projected cumulative NOx impacts exceed originally projected expected-case impacts. However, as discussed previously, excluding the 2001-2003 power projects reflects a more realistic scenario. In this case, projected cumulative NOx impacts fall below the original expected-case impacts.

#### **5. CURRENT VERSUS PREVIOUS EMISSIONS INVENTORIES AND PROJECTIONS**

Tables II-16 and II-17 compare updated VOC and NOx emissions inventories and inventory projections with those used in the original 1998 demonstration. For both VOC and NOx, the most recent data provided by ARB indicate mobile source emissions are projected to be higher than previously estimated while stationary and area sources will be lower. Also for both pollutants, the total inventory continues to reflect substantial future decreases in emissions, due

primarily to anticipated reductions in mobile source emissions. Moreover, conclusions of the previous assessments hold true; though not expected, even sizable emission impacts of the repeal of State offset requirements would not significantly impact the trend of decreasing total emissions in the region.

## **CONCLUSION**

As demonstrated in the preceding analysis prepared pursuant to State law and ARB guidance, permanent facility or equipment shutdowns have continued apace since the repeal of State offset requirements, providing substantial emission benefits. But for a temporary upsurge in the permitting of electrical power projects due to the State's emergency efforts to increase electricity supply during 2001-2003, average-annual permitted emission increases from sources that would have (or may have) triggered State offset requirements were compensated by average-annual actual emission reductions from unbanked shutdowns. Even considering the temporary upsurge in power projects, the repeal of State offset requirements has not significantly impacted the projected trend of decreasing total ozone-precursor emissions in San Diego County, nor is it anticipated to in the future. Additionally, all feasible control measures under District purview have been adopted or are scheduled for consideration of adoption, and State emission offset requirements are not necessary to comply with the ozone transport mitigation requirements of State law. Therefore, pursuant to State law and ARB guidance, it is concluded that State emission offset requirements remain unnecessary in San Diego County to attain and maintain the State ambient air quality standard for ozone by the earliest practicable date.

**Table II-1  
Permanent Emission Increases and Offsets Provided From Sources with Actual Aggregate  
Post-Project Emissions Exceeding 10 Tons/Year of VOC or NOx  
July 1, 2003 – December 31, 2006<sup>12</sup>  
(Tons/Year)**

Name	Application Description	VOC Increase (TPY)		NOX Increase (TPY)		Offsets Provided (Pollutant)
		Permitted	Actual	Permitted	Actual	
BAE Systems San Diego Ship Repair, Inc. (Southwest Marine)	IC engine	0.00	0.00	0.40	0.00	0
Kyocera America, Inc.	Vapor degreaser	0.53	0.35	0.00	0.00	0
Otay Landfill, Inc.	Larger flare	5.80	0.00	20.00	0.00	0
Pacific Recovery Corp.	2 LFG electrical generating engines	1.00	0.00	28.00	0.00	0
Solar Turbines, Inc.	IC engine	0.00	0.00	0.16	0.12	0
USMC MCAS Miramar	IC engine	0.00	0.00	0.20	0.00	0
USN Nav. Sta. 1SCE	IC engine	0.00	0.00	0.05	0.03	0
<b>2003 (July-Dec) Totals:</b>		<b>7.33</b>	<b>0.35</b>	<b>48.81</b>	<b>0.15</b>	<b>0</b>
City of San Diego Miramar Landfill	Materials separator	0.01	0.01	1.10	1.10	0
County of San Diego Park and Rec Dept.	Burner	0.00	0.00	12.90	12.90	0
Encina Wastewater Authority	IC Engine	0.01	0.00	0.01	0.26	0
Knight & Carver Yacht Center	Marine coating operation	23.20	0.00	0.00	0.00	0
Space and Naval Warfare Systems Ctr	IC engine	0.01	0.01	0.13	0.01	0
UCSD	IC engine	0.01	0.00	0.09	0.05	0
USMC MCAS Miramar	IC engine	0.00	0.00	0.20	0.00	0
USMC MCAS Miramar	IC engine	0.00	0.00	0.05	0.05	0
<b>2004 Totals:</b>		<b>23.23</b>	<b>0.02</b>	<b>14.48</b>	<b>14.36</b>	<b>0</b>

<sup>12</sup>To be conservative, two landfill-related projects, Otay Landfill, Inc. and Pacific Recovery Corp., have been included. For these projects, the stated emissions increase will reach PTE totals gradually over many years. If state offsets were required, the project proponents would have included the cost of offsets in their economic analysis, likely resulting in a different phasing schedule to avoid triggering offset requirements.

2009 Regional Air Quality Strategy Revision  
Attachment II

CP Kelco US, Inc.	Process change	0.00	0.00	0.01	0.01	0
CP Kelco US, Inc.	Sludge dryer; Increased operations	0.01	0.01	0.00	0.00	0
CP Manufacturing	Cold solvent cleaners	20.80	20.8 0	0.00	0.00	0
Encina Wastewater Authority	IC Engine	2.97	2.97	4.77	4.77	0
Fleet Readiness Center Southwest (USN Aviation Depot)	IC Engine	1.40	0.30	0.00	0.00	0
Qualcomm Inc.	IC Engine	0.00	0.00	0.30	0.30	0
Qualcomm Inc.	Coating operations	0.02	0.02	0.40	0.40	0
San Diego State University	IC engine	0.00	0.00	0.20	0.00	0
Sony Electronics, Inc.	IC engine	1.80	1.80	0.00	0.00	0
UCSD	IC engine	0.01	0.01	0.79	0.59	0
UCSD	Cold solvent cleaner	0.02	0.02	0.99	0.74	0
UCSD	IC engine	0.00	0.00	0.09	0.07	0
UCSD	IC engine	0.00	0.00	0.03	0.02	0
USMC MCAS Miramar 3rd MAW	Cold solvent cleaner	1.60	0.23	0.00	0.00	0
USN Air Station NORIS	IC engine	0.01	0.01	0.10	0.08	0
USN Air Station NORIS	IC engine	0.01	0.01	0.10	0.08	0
<b>2005 Totals:</b>		<b>28.65</b>	<b>26.1 7</b>	<b>7.78</b>	<b>7.05</b>	<b>0</b>
Callaway Golf Co.	Adhesive operation	0.10	0.10	0.00	0.00	0
City of San Diego Miramar Landfill	IC engine	0.01	0.00	1.83	0.92	0
CP Kelco US, Inc.	Heat exchanger	0.40	0.40	0.00	0.00	0
Encina Wastewater Authority	4 engines replaced	2.36	0.59	6.13	1.53	0
Fleet Intelligence Training Center	IC engine	0.00	0.00	0.10	0.10	0
GKN Aerospace Chemtronics, Inc.	Paint spray booth	1.00	1.80	0.00	0.00	0
Miramar Energy Facility I	Peaker Power Plant	2.92	0.40	10.3	0.50	
Palomar Energy Center	Power Plant	47.3	13.6 0	-- <sup>13</sup>	--	(149.3 NOx)
USN Submarine Base	IC engine	0.00	0.00	0.11	0.06	0
Qualcomm Inc.	Gas turbine	0.00	0.00	3.50	3.50	0
San Diego State University	IC engine	0.00	0.00	0.07	0.07	0
UCSD	IC engine	0.00	0.00	0.06	0.00	0
USN Submarine Base Public Works Center	IC engine	0.01	0.01	0.10	0.10	0
<b>2006 Totals:</b>		<b>54.1</b>	<b>16.9</b>	<b>22.2</b>	<b>6.78</b>	<b>0</b>
<b>3 1/2 Year Emission Increases:</b>		<b>113.3 1</b>	<b>43.4 4</b>	<b>93.2 6</b>	<b>28.3 4</b>	<b>0</b>

<sup>13</sup> Palomar Energy Center is permitted to emit 124.4 tpy NOx, which is subject to federal offsets, so its NOx emissions are not counted for purposes of this demonstration. NOx emissions were offset at a 1.2:1 ratio.

**Table II-2  
Unbanked Actual VOC and NO<sub>x</sub> Emission Reductions from  
Equipment and Facility Shutdowns  
July 1, 2003 – December 31, 2006  
(Tons/Year)<sup>14</sup>**

Name	Equipment description	Emission Reductions (TPY)	
		VOC	NO <sub>x</sub>
Wood craft co.	Wood products coating operation	1.03	0.00
SDG&E Overland Electr. Maint. shop	Portable emergency standby gas turbine	0.00	0.00
Superior Ready Mix -- Escondido	Rock drill	0.05	0.58
Otay Mesa Furniture	Wood products coating operation	3.53	0.00
Otay Mesa Furniture	Wood products coating operation	4.12	0.00
Otay Mesa Furniture	Wood products coating operation	6.03	0.00
Otay Mesa Furniture	Wood products coating operation	1.21	0.00
Deutsch Co.	Cold solvent degreaser	0.02	0.00
Northrop Grumman	IC cogeneration engine	0.83	0.99
Northrop Grumman	IC cogeneration engine	0.83	1.09
SDSU	Gas turbine cogeneration unit	1.06	17.93
Wood Craft Co.	Wood products coating operation	5.65	0.00
L3 Communications	Conformal coating operation	0.01	0.00
USMC Camp Pendleton	Boiler	0.00	0.01
USMC Camp Pendleton	Emergency standby IC engine	0.00	0.04
<b>2003 (July-Dec.) Totals (tons):</b>		<b>24.38</b>	<b>20.64</b>
Moon Custom Woodwork Inc.	Wood products coating operation	2.37	0.00
Children's Hospital	IC engine	0.91	0.21
Federal Express	IC engine	0.03	0.38
Federal Express	IC engine	0.06	0.66
Federal Express	IC engine	0.00	0.00
Hotel del Coronado	Gas turbine cogeneration unit	0.00	0.00
USMC Air Station Miramar	Emergency standby IC engine	0.00	0.02
SDG&E -- Mission Switching Ctr	Emergency standby IC engine	0.00	0.05
BAE Systems San Diego Ship Repair	Surface coating operation	1.18	0.00
BAE Systems San Diego Ship Repair	Surface coating operation	0.92	0.00
BAE Systems San Diego Ship Repair	Surface coating operation	0.92	0.00
BAE Systems San Diego Ship Repair	Surface coating operation	1.24	0.00
Osmonics	Filtration membrane manufacturing operation	0.01	0.02
USN Naval Station 32nd Street	Soil remediation equipment	0.11	0.07
USMC Camp Pendleton	Soil remediation equipment	0.20	0.00
USMC Camp Pendleton	Soil remediation equipment	0.14	0.00
USMC Camp Pendleton	Soil remediation equipment	0.00	0.00

<sup>14</sup> Includes RACT-adjustments from Table II-3.

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Precision Litho	Graphic arts operation	0.74	0.00
Taylor Dykema Mfg. Co.	Wood products coating operation	1.58	0.00
Taylor Dykema Mfg. Co.	Wood products coating operation	1.48	0.00
Taylor Dykema Mfg. Co.	Adhesive materials application operation	0.49	0.00
Rohr Industries	Epoxy resin layup operation	0.19	0.00
SD City - Pt. Loma WWTF	Emergency standby IC engine	0.00	0.03
Marine Service/Commercial Diving	Abrasive blasting booth	0.00	0.05
Deutsch Co.	Cold solvent degreaser	0.02	0.00
Buck Knives Inc.	Adhesive materials application operation	0.23	0.00
Powerware	Foam product process line	0.00	0.00
Salk Institute	IC cogeneration engine	0.76	2.25
Salk Institute	IC cogeneration engine	0.75	3.00
Union Tribune Publishing	IC engine	0.01	0.06
United Airlines	Portable IC engine	0.00	0.05
<b>2004 Totals (tons):</b>		<b>14.37</b>	<b>6.84</b>
L3 Communications	Conformal coating operation	0.01	0.00
Sempra Energy	IC engine	0.01	0.22
Sempra Energy	IC engine	0.01	0.21
Calmat - Pala	Remote reservoir cleaner	0.02	0.00
Palomar Plating Co. Inc.	Surface coating operation	0.46	0.00
SD Marriott Hotel	IC cogeneration engine	11.14	10.25
SD Marriott Hotel	IC cogeneration engine	9.70	9.46
SDG&E Overland Electr. Maint. shop	Emergency standby IC engine	0.00	0.01
Sloan Canyon Sand	IC engine	0.14	3.27
Union Tribune Publishing	Cold solvent degreaser	0.12	0.00
USMC Camp Pendleton	Boiler	0.03	0.14
USMC Camp Pendleton	Boiler	0.03	0.14
USMC Camp Pendleton	Soil remediation equipment	0.01	0.00
USMC Camp Pendleton	Boiler	0.01	0.30
USMC Camp Pendleton	Boiler	0.01	0.25
USMC Camp Pendleton	Two portable IC engines	0.01	0.07
Caspian Inc.	Surface coating operation	2.18	0.01
Caspian Inc.	Surface coating operation	0.79	0.00
Caspian Inc.	Boiler	0.01	0.15
Cleator Corp.	Wood products coating operation	10.50	0.08
Cleator Corp.	Wood products coating operation	3.76	0.08
Cleator Corp.	Wood products coating operation	1.88	0.08
Organic Recycling West, Inc	Trommel screen	0.01	0.18
SDG&E -- Mission Switching Ctr	Emergency standby IC engine	0.01	0.09
UNISYS	Solder leveler	0.33	0.00
Vulcan Materials -- Miss. Ctr. Rd.	Portable sand/aggregate screening unit	0.00	0.01
GKN Aerospace Chemtronics	Cold solvent degreaser	0.01	0.00
Scripps Mercy Hospital	Emergency standby IC engine	0.03	0.33
SDG&E - Century Park Ct	Emergency standby IC engine	0.01	0.12
Upper Deck / Graphic Converting	Graphic arts operation	0.50	0.00
SD City Miramar Landfill	Portable IC engine	0.01	0.07
BAE Systems San Diego Ship Repair	Remote reservoir cleaner	0.02	0.00

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BAE Systems San Diego Ship Repair	Boiler	0.01	0.12
USN Naval Station 32nd Street	IC engine	0.01	0.13
USN North Island	Emergency standby IC engine	0.00	0.00
BAE Systems (RB)	Conformal coating operation	0.08	0.00
BAE Systems (RB)	Vapor degreaser	0.01	0.00
NASSCO	Portable IC engine	0.11	2.10
Liberty Pultrusions West	Fiberglass product process line	3.09	0.00
Liberty Pultrusions West	Fiberglass product process line	2.29	0.00
Liberty Pultrusions West	Polyester resin operation	2.36	0.00
USMC Camp Pendleton	Emergency standby IC engine	0.00	0.01
USN Amphib Base	Surface coating operation	0.19	0.00
USN Amphib Base	IC engine	0.10	1.41
USN Amphib Base	IC engine	0.15	2.08
USN Amphib Base	IC engine	0.00	0.03
USN Amphib Base	IC engine	0.04	0.62
USN North Island	Emergency standby IC engine	0.00	0.00
USN North Island	Emergency standby IC engine	0.00	0.01
USN North Island	Emergency standby IC engine	0.00	0.00
USN North Island	Emergency standby IC engine	0.00	0.04
Caldera Spas	Polyester resin operation	9.46	0.00
Caldera Spas	Wood products coating operation	1.37	0.00
Caldera Spas	Wood products coating operation	0.12	0.00
Caldera Spas	Wood products coating operation	0.14	0.00
<b>2005 Totals (tons):</b>		<b>61.27</b>	<b>32.07</b>
NASSCO	Remote reservoir cleaner	0.10	0.00
NASSCO	Remote reservoir cleaner	0.07	0.00
Walker Wood	Wood products coating operation	19.08	0.00
Ketema/A&E Division	Plastic mold manufacturing operation	0.03	0.00
USMC Air Station Miramar	Boiler	0.02	0.41
SDSU	Emergency standby IC engine	0.00	0.06
UCSD Medical Center	Wood products coating operation	0.04	0.00
UCSD Medical Center	Remote reservoir cleaner	0.05	0.00
USN Sub Base	Cold solvent degreaser	0.02	0.00
NASSCO	Remote reservoir cleaner	0.08	0.00
NASSCO	Portable emergency standby IC engine	0.00	0.01
NASSCO	Portable IC engine	0.00	0.03
Signet Armorlite	Cold solvent degreaser	0.18	0.00
Signet Armorlite	Cold solvent degreaser	0.27	0.00
Signet Armorlite	Lens casting line	0.81	0.00
Signet Armorlite	Soil remediation equipment	0.00	0.00
Organic Recycling West, Inc	IC engine	0.04	1.74
USN Amphib Base	Emergency standby IC engine	0.00	0.06
BAE Systems San Diego Ship Repair	Remote reservoir cleaner	0.04	0.00
Continental Maritime	Emergency standby IC engine	0.01	0.00
Continental Maritime	Emergency standby IC engine	0.00	0.02
USMC Recruit Depot	Surface coating operation	0.00	0.00
Northrop Grumman	Vapor degreaser	0.19	0.00

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SD Zoological Society	Incinerator	0.00	0.09
Kyocera America	Emergency standby IC engine	0.00	0.00
Orion Custom Boats	Polyester resin operation	0.90	0.00
Orion Custom Boats	Polyester resin operation	0.52	0.00
Cabrillo Power -- Division GT	Gas turbine	0.06	6.34
Cabrillo Power -- Division GT	Emergency standby IC engine	0.00	0.06
Clarus Energy Partners LP	IC cogeneration engine	0.04	0.04
Real Energy Inc	IC cogeneration engine	0.02	0.01
Real Energy Inc	IC cogeneration engine	0.01	0.01
Real Energy Inc	IC cogeneration engine	0.02	0.06
UNISYS	Boiler	0.01	0.11
UNISYS	Boiler	0.01	0.09
UNISYS	Emergency standby IC engine	0.00	0.04
UNISYS	Emergency standby IC engine	0.01	0.31
United Airlines	Portable IC engine	0.01	0.13
USN North Island	Emergency standby IC engine	0.00	0.01
SD Design II	Adhesive materials application operation	0.06	0.00
Kyocera International	Graphic arts operation	0.07	0.00
Exponents Inc.	Adhesive materials application operation	2.19	0.00
Precision Litho	Graphic arts operation	1.05	0.00
Wilson & Hampton Refinishing Inc.	Surface coating operation	0.89	0.00
Hamilton Sundstrand	Gas turbine test cell	0.00	0.01
Sony Electronics	Emergency standby IC engine	0.01	0.20
Sony Electronics	Electronic component coating operation	10.8	0.00
Sony Electronics	Emergency standby IC engine	0.01	0.42
Sony Electronics	Emergency standby IC engine	0.00	0.04
Sony Electronics	Emergency standby IC engine	0.00	0.01
Sony Electronics	Emergency standby IC engine	0.00	0.01
<b>2006 Totals (tons):</b>		<b>26.93</b>	<b>10.38</b>
<b>3 1/2 Year Overall Totals (tons):</b>		<b>126.95</b>	<b>69.87</b>

**Table II-3**  
**Adjustment of Table 2 Unbanked Shutdowns**  
**(Tons/Year)**

<b>Name</b>	<b>Year</b>	<b>Equipment or Process</b>	<b>Pollutant</b>	<b>Initial Reduction</b>	<b>Adjusted Reduction</b>	<b>Change</b>	<b>Adjustment Reason</b>
UNISYS	2006	Emergency IC engine	NOx	0.09	.04	-0.05	ATCM Stationary Compression Ignition Engines

**Table II-4**  
**Net Emissions Differential:**  
**Comparing Permitted Emission Increases from Sources > 10 Tons/Year**  
***Including 2001-2003 Electrical Power Projects***  
**to Unbanked Actual Emission Reductions from Shutdowns (Tons/Year)**

<u>Year</u>	<u>Pollutant</u>	<u>Increase from Sources &gt;10 tons</u>	<u>Unbanked Reduction From Shutdowns</u>	<u>Emissions Differential</u>
1999	VOC	30.2	-51.3	-21.1
	NOx	20.3	-16.6	3.7
2000	VOC	47.5	-67.6	-20.1
	NOx	0	-9.8	-9.8
2001	VOC	124.2	-73.8	50.4
	NOx	16.2	-10.7	5.5
2002	VOC	85.1	-124.1	-39.0
	NOx	286.7	-17.5	269.2
2003 (Jan-June)	VOC	81.1	-107.2	-26.1
	NOx	24.7	-3.0	21.7
2003 (July-Dec)	VOC	7.3	-24.4	-17.1
	NOx	48.8	-20.6	28.2
2004	VOC	23.2	-14.4	8.9
	NOx	14.5	-6.8	7.6
2005	VOC	28.7	-61.3	-32.6
	NOx	7.8	-32.1	-24.3
2006	VOC	54.1	-37.7	16.4
	NOx	22.2	-10.3	11.9
<b>3.5-Year Annual Average 07/03-12/06<sup>2</sup></b>	VOC	32.4	-39.4	-7.0
	NOx	26.7	-19.9	6.7
<b>8-Year Annual Average 01/99-12/06</b>	VOC	60.2	-70.2	-10.1
	NOx	55.2	-15.9	39.2

**Table II-4A**  
**Net Emissions Differential:**  
**Comparing Permitted Emission Increases from Sources > 10 Tons/Year**  
***Excluding 2001-2003 Electrical Power Projects<sup>15</sup>***  
**to Unbanked Actual Emission Reductions from Shutdowns (Tons/Year)**

<u>Year</u>	<u>Pollutant</u>	<u>Increase from Sources &gt;10 tons</u>	<u>Unbanked Reduction From Shutdowns</u>	<u>Emissions Differential</u>
1999	VOC	30.2	-51.3	-21.1
	NOx	20.3	-16.6	3.7
2000	VOC	47.5	-67.6	-20.1
	NOx	0	-9.8	-9.8
2001	VOC	121.5	-73.8	47.7
	NOx	5.0	-10.7	-5.7
2002	VOC	49.6	-124.1	-74.5
	NOx	3.0	-17.5	-14.5
2003 (Jan-June)	VOC	50.3	-107.2	-56.9
	NOx	1.2	-3.0	-1.8
2003 (July-Dec)	VOC	5.5	-24.4	-18.9
	NOx	29.3	-20.6	8.7
2004	VOC	23.2	-14.4	8.9
	NOx	14.5	-6.8	7.6
2005	VOC	28.7	-61.3	-32.6
	NOx	7.8	-32.1	-24.3
2006	VOC	54.1	-37.7	-16.4
	NOx	22.2	-10.3	11.9
<b>3.5-Year Average 07/03-12/06</b>	VOC	<b>31.9</b>	<b>-39.4</b>	<b>-7.7</b>
	NOx	<b>21.1</b>	<b>-19.9</b>	<b>1.1</b>
<b>8-Year Average 01/99-12/06</b>	VOC	<b>51.3</b>	<b>-70.2</b>	<b>-18.9</b>
	NOx	<b>12.9</b>	<b>-15.9</b>	<b>-3.0</b>

<sup>15</sup> Among the excluded projects is a 2003 cogeneration project (the only new power project) permitted during the tracking period, Pacific Recovery Corp., with permitted emissions of 28 tons/year NOx and 1 ton/year VOC. There were no actual emissions from this project.

**Table II-5  
Banked Emission Reduction Credits, Amount, and Source  
as of December 31, 2006**

<b>Company Name</b>	<b>NOx</b>	<b>VOC</b>	<b>Reduction Source</b>
Cabrillo Power II, LLC	35.3	--	Shutdown (Equipment)
Carpenter Special Projects Corp.	--	7.2	Shutdown (Equipment)
Caspian	--	16.9	Process modification <sup>1</sup>
City of San Diego, MWD	--	0.4	Shutdown (Equipment)
City of San Diego, MWD	--	22.8	Process modification <sup>1</sup>
COMCABWEST USMC	4.3	--	MERCs
General Dynamics	1.3	--	Shutdown (Facility)
General Dynamics	--	0.2	Shutdown (Facility)
Grey K. Environmental Fund	4.1	42.5	Shutdowns (facility)
Grey K. Environmental Fund	--	25.1	Process modification
Hanson Aggregates	0.9	--	Modification - Engine
Hanson Aggregates	--	0.3	Modification - Engine
Hughes Aircraft	--	1.3	Shutdown (Equipment)
Muht-Hei, Inc.	--	9.1	Shutdown (Equipment)
NAS North Island	30.0	--	Shutdown (Facility)
National Steel & Shipbldg.	0.5	--	Shutdown (Equipment)
National Steel & Shipbldg.	--	0.6	Shutdown (Equipment)
Naval Station, San Diego	5.5	--	Shutdowns (Equipment)
Naval Station, San Diego	--	0.1	Shutdown (Equipment)
Navy Region Southwest	12.0	--	Shutdown (Equipment)
Northrop-Grumman Ryan	--	1.2	Shutdown (Facility)
Otay Mesa Generating Co.	--	65.4	Shutdown (Facility)
Otay Mesa Generating Co.	5.7	--	Shutdown (Facility.)
Otay Mesa Generating Co.	1.5	--	Shutdown (Equipment)
Otay Mesa Generating Co.	2.4	--	Process modification
Otay Mesa Generating Co.	--	17.1	Process modification
Otay Mesa Generating Co.	74.3	--	MERCs
PGET		20.7	Shutdown (Equipment)
Rohr (BF Goodrich)	--	5.5	Shutdown (Equipment)
Rohr (BF Goodrich)	1.1	--	Shutdown (Facility)
SDG&E	--	0.4	Shutdown (Equipment)
SDG&E	23.9	--	Shutdown (Equipment)
SDG&E	14.7	--	Modification - Turbine
Shipyard Supplies, Inc.	--	1.0	Equipment modification
Solar Turbines	--	0.6	Shutdown (Equipment)
Solar Turbines	10.0	--	Shutdown (Facility)
Southern CA Edison	0.5	--	Shutdown (Equipment)
ST Microelectronics	1.2	--	Shutdown (Facility)
ST Microelectronics	--	0.1	Shutdown (Facility)

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ST Microelectronics	--	12.3	Shutdown (Equipment)
Surface Technologies	--	1.5	Shutdown (Equipment)
SW Division, NFEC	--	7.4	Shutdown (Facility)
SW Division, NFEC	--	2.0	Process modification
SW Division, NFEC	--	9.0	Shutdown (Station)
SW Division, NFEC	--	13.0	Shutdown (Station)
SW Division, NFEC	--	3.2	Shutdown (Facility)
SW Division, NFEC	--	13.3	Shutdown (Facility)
U.S. Navy Comm. Station	2.6	--	Shutdown (Equipment)
U.S. Navy Comm. Station	--	0.1	Shutdown (Equipment)
Unisys Corporation	--	8.0	Shutdown (Equipment)
US Foam	--	0.1	Shutdown (Facility)
USMC	3.0	--	Shutdown (Station)
VA Hospital	1.9	--	Modification - Engine
<b>TOTAL:</b>	<b>236.7</b>	<b>308.4</b>	
<b>Permanent Shutdowns:</b>	<b>138.3</b> <b>(58.4%)</b>	<b>222.9</b> <b>(72.4%)</b>	
<b>From Process or Equipment Modifications:</b>	<b>19.9</b> <b>(8.4%)</b>	<b>85.1</b> <b>(27.6%)</b>	
<b>From MERCs:</b>	<b>78.6</b> <b>(33.2%)</b>	<b>0</b> <b>(0%)</b>	

**Table II-6**  
**Updated VOC Emissions Impact**  
**Resulting from Repeal of State Offset Requirements (Tons/Year)**

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Year	<i>Actual or Projected Impact</i> <sup>16</sup>				1998 Assessment Worst- Case <sup>17</sup> (Cumulative )	1998 Assessment Expected- Case <sup>18</sup> (Cumulative )
	Including 2001-2003 Power Projects		Excluding 2001-2003 Power Projects			
	Annual	Cumulative	Annual	Cumulative		
1998	0	0	0	0	0	0
1999	0	0	0	0	32	2
2000	0	0	0	0	64	4
2001	50.4	50.4	47.7	47.7	96	5
2002	0	50.4	0	47.7	128	7
2003	0	50.4	0	47.7	161	9
2004	8.9	59.3	8.9	56.6	193	11
2005	0	59.3	0	56.6	225	12
2006	16.4	75.7	16.4	73.0	257	14
2010	0	75.7	0	73.0	385	21
2015	0	75.7	0	73.0	546	30
2020	0	75.7	0	73.0	706	39

<sup>16</sup> 1998-2006 data from Tables 4 and 4A. 2010-2020 projections based on average-annual net emissions change through 2006, Table 4, 4A. Since repeal of State offset requirements has not "caused" emission reductions, any negative values (indicating unbanked shutdowns had exceeded new sources) were replaced with zero values.

<sup>17</sup> 1998 worst-case scenario did not consider emission benefits from shutdowns. Conservatively assumed annual increase of historic-high, 32.11 tons/yr starting in 1999.

<sup>18</sup> 1998 expected-case scenario assumed repeal of State offset requirements would result in foregoing offsetting reductions from voluntary process or control technology improvements. Assumed annual net increase of 1.78 tons/yr starting in 1999.

**Table II-7**  
**Updated NOx Emissions Impact**  
**Resulting from Repeal of State Offset Requirements (Tons/Year)**

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Year	<i>Emissions Differential or Projected Impact</i> <sup>19</sup>				1998 Assessment Worst- Case <sup>20</sup> (Cumulative )	1998 Assessment Expected- Case <sup>21</sup> (Cumulative )
	Including 2001-2003 Power Projects		Excluding 2001-2003 Power Projects			
	Annual	Cumulative	Annual	Cumulative		
1998	0	0	0	0	0	0
1999	3.7	3.7	3.7	3.7	55	3
2000	0	3.7	0	3.7	109	6
2001	5.5	9.2	0	3.7	164	9
2002	269.2	278.4	0	3.7	218	12
2003	49.9	328.3	6.9	10.6	273	15
2004	7.6	335.9	7.6	18.2	328	18
2005	0	335.9	0	18.2	382	21
2006	11.9	347.8	11.9	30.1	437	24
2010	39.2	504.6	0	30.1	655	36
2015	39.2	700.6	0	30.1	928	52
2020	39.2	896.6	0	30.1	1201	67

<sup>19</sup> 1998-2006 data from Tables 4 and 4A. Since repeal of State offset requirements has not "caused" emission reductions, any negative values (indicating unbanked shutdowns had exceeded new sources) were replaced with zero values. 2010-2020 projections based on average-annual net emissions change through 2006, Tables II-4 and II-4A, estimated by multiplying the 8-year average net NOx emissions by the appropriate number of years.

<sup>20</sup> 1998 worst-case scenario did not consider emission benefits from shutdowns. Assumed annual increase of 54.57 tons/yr starting in 1999

<sup>21</sup> 1998 expected-case scenario assumed repeal of State offset requirements would result in foregoing offsetting reductions from voluntary process or control technology improvements. Assumed annual net increase of 3.03 tons/yr starting in 1999.

**Table II-8  
Cumulative VOC Emissions Impact of the Repeal of State Offset Requirements  
as a Percentage of Annual Total Emissions Inventory  
(Tons/Year)**

Year	Total Inventory <sup>22</sup>	Actual or Projected Net Impact <sup>23</sup> (% of Total Inventory)	
		Including Power Projects	Excluding Power Projects
1998	82,138	0 (0%)	0 (0%)
1999	81,735	0 (0%)	0 (0%)
2000	77,952	0 (0%)	0 (0%)
2001	74,377	50.4 (0.07%)	47.7 (0.06%)
2002	69,764	50.4 (0.07%)	47.7 (0.06%)
2003	67,225	50.4 (0.07%)	47.7 (0.06%)
2004	66,088	59.3 (0.09%)	56.6 (0.09%)
2005	63,093	59.3 (0.09%)	56.6 (0.09%)
2006	61,035	75.7 (0.12%)	73.0 (0.129%)
2010	55,185	75.7 (0.14 %)	73.0 (0.13%)
2015	51,692	75.7 (0.15%)	73.0 (0.14%)
2020	50,829	75.7 (0.15%)	73.0 (0.14%)

<sup>22</sup> ARB emissions inventory (December 6, 2007); average daily values multiplied by 365.

<sup>23</sup> From Tables 4 and 4A. Since repeal of State offset requirements has not "caused" emission reductions, any negative values (indicating unbanked shutdowns had exceeded new sources) were replaced with zero values.

**Table II-9  
Cumulative NOx Emissions Impact of the Repeal of State Offset Requirements  
as a Percentage of Annual Total Emissions Inventory  
(Tons/Year)**

Year	Total Inventory <sup>24</sup>	Actual or Projected Net Impact <sup>25</sup> (% of Total Inventory)	
		Including Power Projects	Excluding Power Projects
1998	92,728	0 (0%)	0 (0%)
1999	92,154	3.7 (0.00%)	3.7 (0.00%)
2000	90,926	3.7 (0.00%)	3.7 (0.00%)
2001	88,596	9.2 (0.01%)	3.7 (0.00%)
2002	83,183	278.4 (0.36%)	3.7 (0.00%)
2003	82,142	328.3 (0.40%)	10.6 (0.01%)
2004	79,309	335.9 (0.42%)	18.2 (0.02%)
2005	79,584	335.9 (0.42%)	18.2 (0.02%)
2006	76,929	347.8 (0.45%)	30.1 (0.03%)
2010	66,584	504.6 (0.76%)	30.1 (0.05%)
2015	56,872	700.6 (1.23%)	30.1 (0.05%)
2020	53,669	896.6 (1.67%)	30.1 (0.06%)

<sup>24</sup> ARB emissions inventory (December 6, 2007); average daily values multiplied by 365

<sup>25</sup> From Tables 4 and 4A. Since repeal of State offset requirements has not "caused" emission reductions, any negative values (indicating unbanked shutdowns had exceeded new sources) were replaced with zero values.

**Table II-10**  
**Cumulative VOC Emissions Impact of the Repeal of State Offset Requirements**  
**as a Percentage of Annual Stationary-Source Emissions Inventory**  
**(Tons/Year)**

Year	Stationary Source Inventory <sup>26</sup>	Actual or Projected Net Impact <sup>27</sup> (% of Total Inventory)	
		Including Power Projects	Excluding Power Projects
1998	10,053	0 (0%)	0 (0%)
1999	11,512	0 (0%)	0 (0%)
2000	11,342	0 (0%)	0 (0%)
2001	11,040	50.4 (0.46%)	47.7 (0.43%)
2002	11,063	50.4 (0.46%)	47.7 (0.43%)
2003	11,141	50.4 (0.45%)	47.7 (0.43%)
2004	11,283	59.3 (0.53%)	56.6 (0.50%)
2005	11,328	59.3 (0.52%)	56.6 (0.50%)
2006	11,405	75.7 (0.66%)	73.0 (0.64%)
2010	12,220	75.7 (0.62 %)	73.0 (0.60%)
2015	13,167	75.7 (0.57%)	73.0 (0.55%)
2020	14,096	75.7 (0.54%)	73.0 (0.52%)

<sup>26</sup> ARB emissions inventory (December 6, 2007); average daily values multiplied by 365

<sup>27</sup> From Tables 4 and 4A. Since repeal of State offset requirements has not "caused" emission reductions, any negative values (indicating unbanked shutdowns had exceeded new sources) were replaced with zero values.

**Table II-11**  
**Cumulative NOx Emissions Impact of the Repeal of State Offset Requirements**  
**as a Percentage of Annual Stationary-Source Emissions Inventory**  
**(Tons/Year)**

Year	Stationary Source Inventory <sup>28</sup>	Actual or Projected Net Impact <sup>29</sup> (% of Total Inventory)	
		Including Power Projects	Excluding Power Projects
1998	5,227	0 (0%)	0 (0%)
1999	5,011	3.7 (0.07%)	3.7 (0.07%)
2000	5,062	3.7 (0.07%)	3.7 (0.07%)
2001	4,817	9.2 (0.19%)	3.7 (0.08%)
2002	3,311	278.4 (8.41%)	3.7 (0.11%)
2003	3,126	328.3 (10.50%)	10.6 (0.34%)
2004	3,191	335.9 (10.53%)	18.2 (0.57%)
2005	3,191	335.9 (10.53%)	18.2 (0.57%)
2006	3,236	347.8 (10.74%)	30.1 (0.93%)
2010	3,967	504.6 (12.72%)	30.1 (0.76%)
2015	4,054	700.6 (17.28%)	30.1 (0.74%)
2020	4,396	896.6 (20.40%)	30.1 (0.68%)

<sup>28</sup> ARB emissions inventory (December 6, 2007); average daily values multiplied by 365

<sup>29</sup> From Tables 4 and 4A. Since repeal of State offset requirements has not "caused" emission reductions, any negative values (indicating unbanked shutdowns had exceeded new sources) were replaced with zero values.

**Table II-12**  
**2008 Versus 1998<sup>30</sup> Projections of Cumulative VOC Emissions Impact of Repeal as a Percentage of Annual Total Emissions Inventory (Tons/Year)**

<b>Year</b>	<b><i>Actual or Projected Impact</i></b>		<b>1998 Worst-Case Assessment</b>	<b>1998 Expected-Case Assessment</b>
	<b>Including Power Projects</b>	<b>Excluding Power Projects</b>		
1998	<i>0%</i>	<i>0%</i>	0.00%	0.00%
1999	<i>0%</i>	<i>0%</i>	0.04%	0.00%
2000	<i>0%</i>	<i>0%</i>	0.08%	0.01%
2001	<i>0.07%</i>	<i>0.06%</i>	0.13%	0.01%
2002	<i>0.07%</i>	<i>0.06%</i>	0.18%	0.01%
2003	<i>0.07%</i>	<i>0.06%</i>	0.24%	0.01%
2004	<i>0.09%</i>	<i>0.09%</i>	0.29%	0.02%
2005	<i>0.09%</i>	<i>0.09%</i>	0.36%	0.02%
2006	<i>0.12%</i>	<i>0.12%</i>	0.42%	0.02%
2010	0.14 %	0.13%	0.70%	0.04%
2015	0.15%	0.14%	1.06%	0.06%
2020	0.15%	0.14%	1.39%	0.08%

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<sup>30</sup> Percentages updated to reflect December 6, 2007, ARB emission inventory and projections.

**Table II-13**  
**2008 Versus 1998<sup>31</sup> Projections of Cumulative NOx Emissions Impact of Repeal as a Percentage of Annual Total Emissions Inventory (Tons/Year)**

<b>Year</b>	<b><i>Actual or Projected Impact</i></b>		<b>1998 Worst-Case Assessment</b>	<b>1998 Expected-Case Assessment</b>
	<b>Including Power Projects</b>	<b>Excluding Power Projects</b>		
1998	<i>0%</i>	<i>0%</i>	0.00%	0.00%
1999	<i>0.00%</i>	<i>0.00%</i>	0.06%	0.00%
2000	<i>0.00%</i>	<i>0.00%</i>	0.12%	0.01%
2001	<i>0.01%</i>	<i>0.00%</i>	0.19%	0.01%
2002	<i>0.36%</i>	<i>0.00%</i>	0.26%	0.01%
2003	<i>0.40%</i>	<i>0.01%</i>	0.33%	0.02%
2004	<i>0.42%</i>	<i>0.02%</i>	0.41%	0.02%
2005	<i>0.42%</i>	<i>0.02%</i>	0.48%	0.03%
2006	<i>0.45%</i>	<i>0.03%</i>	0.57%	0.03%
2010	<i>0.76%</i>	<i>0.05%</i>	0.98%	0.05%
2015	<i>1.23%</i>	<i>0.05%</i>	1.63%	0.09%
2020	<i>1.67%</i>	<i>0.06%</i>	2.24%	0.12%

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<sup>31</sup> Percentages updated to reflect December 6, 2007, ARB emission inventory and projections.

**Table II-14**  
**2008 Versus 1998 Projections of Cumulative VOC Emissions Impact of Repeal as a Percentage of Annual Stationary-Source Emissions Inventory (Tons/Year)**

Year	<i>Actual or Projected Impact</i>		1998 Worst-Case Assessment	1998 Expected-Case Assessment
	<b>Including Power Projects</b>	<b>Excluding Power Projects</b>		
1998	0%	0%	0.00%	0.00%
1999	0%	0%	0.28%	0.02%
2000	0%	0%	0.56%	0.04%
2001	0.46%	0.43%	0.87%	0.05%
2002	0.46%	0.43%	1.16%	0.06%
2003	0.45%	0.43%	1.45%	0.08%
2004	0.53%	0.50%	1.71%	0.10%
2005	0.52%	0.50%	1.99%	0.11%
2006	0.66%	0.64%	2.25%	0.12%
2010	0.62%	0.60%	3.15%	0.17%
2015	0.57%	0.55%	4.15%	0.23%
2020	0.54%	0.52%	5.01%	0.28%

**Table II-15**  
**2008 Versus 1998 Projections of Cumulative NOx Emissions Impact of Repeal as a Percentage of Annual Stationary-Source Emissions Inventory (Tons/Year)**

<b>Year</b>	<b>Actual or Projected Impact</b>		<b>1998 Worst-Case Assessment</b>	<b>1998 Expected-Case Assessment</b>
	<b>Including Power Projects</b>	<b>Excluding Power Projects</b>		
1998	0%	0.00%	0.00%	0.00%
1999	0.07%	0.07%	1.10%	0.06%
2000	0.07%	0.07%	2.15%	0.12%
2001	0.19%	0.08%	3.40%	0.19%
2002	8.41%	0.11%	6.58%	0.36%
2003	10.50%	0.34%	8.73%	0.48%
2004	10.53%	0.57%	10.28%	0.56%
2005	10.53%	0.57%	11.97%	0.66%
2006	10.74%	0.93%	13.50%	0.74%
2010	12.72%	0.76%	16.51%	0.91%
2015	17.28%	0.74%	22.89%	1.28%
2020	20.40%	0.68%	27.32%	1.52%

**Table II-16**  
**Comparison of Original 1998 and 2008<sup>32</sup> VOC Emissions Inventories**  
**and Inventory Projections for San Diego County**  
**(Tons/Year)**

Year	Stationary		Area		Mobile		Total Inventory	
	1998 Demo	2008 Update	1998 Demo	2008 Update	1998 Demo	2008 Update	1998 Demo	2008 Update
1998	18,710	10,053	17,155	14,091	49,246	57,994	85,111	82,138
1999	18,900	11,512	16,863	14,337	44,771	55,885	80,534	81,735
2000	19,090	11,342	16,571	14,240	40,296	52,370	75,957	77,952
2001	--	11,040	--	14,379	--	48,958	--	74,377
2002	--	11,063	--	14,405	--	44,297	--	69,764
2003	--	11,141	--	13,554	--	42,530	--	67,225
2004	--	11,283	--	13,308	--	41,497	--	66,088
2005	20,973	11,328	17,411	13,045	30,003	38,720	68,387	63,093
2006	--	11,405	--	13,081	--	36,549	--	61,035
2010	25,769	12,220	17,958	13,428	23,360	29,536	67,087	55,185
2015	--	13,167	--	14,033	--	24,492	--	51,692
2020	--	14,096	--	14,667	--	22,067	--	50,829

**Table II-17**  
**Comparison of Original 1998 and 2008<sup>33</sup> NOx Emissions Inventories**  
**and Inventory Projections for San Diego County**  
**(Tons/Year)**

Year	Stationary		Area		Mobile		Total Inventory	
	1998 Demo	2008 Update	1998 Demo	2008 Update	1998 Demo	2008 Update	1998 Demo	2008 Update
1998	4,855	5,227	2,139	988	66,766	86,513	73,760	92,728
1999	4,599	5,011	2,183	989	62,729	86,153	69,511	92,154
2000	4,344	5,062	2,227	990	58,692	84,874	65,262	90,926
2001	--	4,817	--	991	--	82,789	--	88,596
2002	--	3,311	--	992	--	78,879	--	83,183
2003	--	3,126	--	994	--	78,023	--	82,142
2004	--	3,191	--	996	--	75,122	--	79,309
2005	3,614	3,191	2,409	995	50,042	75,398	56,064	79,584
2006	--	3,236	--	996	--	72,697	--	76,929
2010	4,088	3,967	2,519	1,002	45,114	61,615	51,721	66,584
2015	--	4,054	--	1,010	--	51,808	--	56,872
2020	--	4,396	--	1,017	--	48,256	--	53,669

<sup>32</sup> Source: California Air Resources Board, December 6, 2007.

<sup>33</sup> Ibid.

