BOARD MEETING DATE: March 7, 2014 AGENDA NO. 28

REPORT: Annual RECLAIM Audit Report for 2012 Compliance Year

SYNOPSIS: The annual report on the NOx and SOx RECLAIM program is prepared in accordance with Rule 2015 - Backstop Provisions. The report assesses emission reductions, availability of RECLAIM Trading Credits (RTCs) and their average annual prices, job impacts, compliance issues, and other measures of performance for the nineteenth year of this program. In addition, recent trends in trading future year RTCs are analyzed and presented in this report. Further, a list of facilities that did not reconcile their emissions for the 2012 Compliance Year is included with the report.

COMMITTEE: Stationary Source, February 21, 2014, Reviewed

RECOMMENDED ACTION:
Approve the attached annual report.

Barry R. Wallerstein, D.Env.
Executive Officer

MN:JW:DL

Background

The Board adopted the RECLAIM program on October 15, 1993 to provide a more flexible compliance program than command-and-control for specific facilities, which represent SCAQMD's largest emitters of NOx and SOx. Although RECLAIM was developed as an alternative to command-and-control, it was designed to meet all state and federal Clean Air Act and other air quality regulations and program requirements, as well as a variety of performance criteria in order to ensure public health protection, air quality improvement, effective enforcement, and the same or lower implementation costs and job impacts. RECLAIM is what is commonly referred to as a "cap and trade" program: facilities subject to the program were initially allocated declining annual balances of RECLAIM Trading Credits (RTCs, denominated in pounds of emissions in a specified year) based upon their historical production levels and upon emissions factors established in the RECLAIM regulation. RECLAIM facilities are required to reconcile their emissions with their RTC holdings on a quarterly basis (*i.e.*, hold RTCs equal to or

greater than their emissions). These facilities have the flexibility to manage how they meet their emission goals by installing emission controls or trading RTCs amongst themselves. RECLAIM achieves its overall emission reduction goals provided aggregate RECLAIM emissions are no more than aggregate allocations.

RECLAIM Rule 2015 - Backstop Provisions requires SCAQMD to conduct annual program audits to assess various aspects of the program and to verify that program objectives are met. SCAQMD staff has completed audits of facility records and completed the annual audit of the RECLAIM program for Compliance Year 2012 (which extends from January 1, 2012, start of Cycle 1, through June 30, 2013, end of Cycle 2). Based on audited emissions in this report and previous annual reports, SCAQMD staff has determined that RECLAIM met its emissions goals for Compliance Year 2012, as well as for all previous compliance years with the only exception of NOx emissions in Compliance Year 2000. For that year, NOx emissions exceeded programmatic allocations (by 11%) primarily due to emissions from electric generating facilities during the California energy crisis. For Compliance Year 2012, audited NOx emissions were 19% less than programmatic NOx allocations and audited SOx emissions were 40% less than programmatic SOx allocations.

Audit Findings

The audit of the RECLAIM Program's Compliance Year 2012 and trades of RTCs that occurred during calendar year 2013 show that:

- ***Overall Compliance*** – Audited NOx and SOx emissions from RECLAIM facilities were significantly below programmatic allocations.

- ***Universe*** – The RECLAIM universe consisted of 276 facilities as of June 30, 2012. Two facilities were included, no facility was excluded, and five facilities shut down in the RECLAIM universe between July 1, 2012 and the end of Compliance Year 2012. Thus, 273 facilities were in the RECLAIM universe on June 30, 2013, the end of the Compliance Year 2012. Of the two newly included facilities, one facility elected to enter the RECLAIM program, whereas the other facility was created through the partial change of operator of an existing RECLAIM facility. Of the five shutdown facilities, two facilities consolidated their operations with two other existing RECLAIM facilities within the SCAQMD. The third facility shut down as air quality mitigation for the start-up of a new power plant located in the SCAQMD. The fourth facility shut down their operation, sold the property to a university, and became RECLAIM exempt and categorically excluded from RECLAIM. The last facility moved its operation to a new plant in a different state.

- ***Facility Compliance*** – The vast majority of RECLAIM facilities complied with their allocations during the 2012 compliance year (96% of NOx facilities and 97% of SOx facilities). Twelve facilities (4% of total facilities) exceeded their NOx allocations and one of the 12 facilities also exceeded its SOx allocation during Compliance Year 2012. These 12 NOx facilities had total NOx emissions of 832 tons and did not have adequate allocations to offset 125.9 of those tons. The exceedances represent 15.1% of the sum of the NOx emissions from the 12 facilities and 1.3% of total RECLAIM NOx allocations. One facility had SOx emissions that exceeded its SOx allocations by only three pounds. Pursuant to Rule 2010(b)(1)(A), all 12 facilities had their respective exceedances deducted from their annual allocations for the compliance year subsequent to SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations.

- ***Job Impacts*** – Based on a survey of the RECLAIM facilities, the RECLAIM program had minimal impact on employment during the 2012 compliance year, which is consistent with previous years. RECLAIM facilities reported an overall net gain of 2,026 jobs, representing 2% of their total employment. All of the facilities that reported job losses and job gains cited factors other than RECLAIM as the reasons for these job losses and job gains. None of the five RECLAIM facilities listed as shutdown during Compliance Year 2012 cited RECLAIM as a contributing factor to the decision to shut down. The job loss and job gain data are compiled strictly from reports submitted by RECLAIM facilities, and SCAQMD staff is not able to verify the accuracy of the reported data.

- ***Trading Activity*** – The RTC trading market activity during calendar year 2013 was comparable in terms of number of trades, but substantially higher in total value (by 62%) and volume (by 42%) compared to calendar year 2012. A total of over $1.05 billion in RTCs has been traded since the adoption of RECLAIM, of which $30.4 million occurred in calendar year 2013 (compared to $18.8 million in calendar year 2012), excluding swaps.

  The average annual prices of infinite-year block and all compliance years' discrete-year NOx and SOx RTCs traded in calendar year 2013 were below the applicable review thresholds for average RTC prices. The average annual prices of RTCs traded during calendar years 2012 and 2013 are summarized and compared to the applicable thresholds in Tables 1 and 2 below:

Table 1 – Average Prices for Discrete-Year RTCs Traded during Calendar Years 2012 and 2013

	Average Price ($/ton)				Review Thresholds ($/ton)	
Year Traded	**2011 NOx RTC**	**2012 NOx RTC**	**2013 NOx RTC**	**2014 NOx RTC**	**Rule 2015(b)(6)**	**Health and Safety Code §39616(f)**
2012	$578	$1,162	$4,053	None traded	$15,000	$40,067
2013		$549	$1,080	$1,881		
Year Traded	**2011 SOx RTC**	**2012 SOx RTC**	**2013 SOx RTC**	**2014 SOx RTC**	**Rule 2015(b)(6)**	**Health and Safety Code §39616(f)**
2012	$450	$759	None traded	None traded	$15,000	$28,848
2013		$291	$485	None traded		

Table 2 – Average Prices for IYB RTCs Traded during Calendar Years 2012 and 2013

	Average Price ($/ton)		Review Threshold ($/ton)
RTCs	**Traded in 2012**	**Traded in 2013**	**[Health and Safety Code §39616(f)]**
NOx	$48,146	$45,914	$601,010
SOx	$125,860	$181,653	$432,727

- ***Role of Investors*** – Investors were active in the RTC market. Based on both overall trading values and volume of trades with price, investors' involvement in 2013 was relatively less when compared to calendar year 2012. Investors were involved in 133 of the 223 discrete NOx trades with price and 1 of the 6 discrete SOx trades with price. With respect to IYB trades, investors' participation was significant and they were involved with 16 of 17 IYB NOx trades with price, and 3 of the 4 IYB SOx trades with price. Excluding sales due to a change of operator, investors were involved in 100% of the IYB NOx and SOx trades with price. Compared to calendar year 2012, investor RTC holdings of total IYB NOx and SOx RTCs remained unchanged at 4.9% for IYB NOx RTCs and increased slightly from 0.7% to 0.9% for IYB SOx RTCs at the end of calendar year 2013.

- ***Other Findings*** – RECLAIM also met other applicable requirements including meeting the applicable federal offset ratio under New Source Review and having no significant seasonal fluctuation in emissions. Additionally, there is no evidence that RECLAIM resulted in any increase in health impacts due to emissions of air toxics. RECLAIM facilities and non-RECLAIM facilities are subject to the same requirements for controlling toxic emissions.

Attachment
Annual RECLAIM Audit Report for 2012 Compliance Year

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Annual RECLAIM Audit Report for 2012 Compliance Year

March 4, 2014

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SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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EXECUTIVE OFFICER
Barry R. Wallerstein, D.Env.

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LIST OF ABBREVIATIONS

ACEMS	Alternative Continuous Emissions Monitoring System(s)
AER	Annual Emission Report
APEP	Annual Permit Emissions Program
SCAQMD	South Coast Air Quality Management District
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BARCT	Best Available Retrofit Control Technology
CAA	Clean Air Act
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CEMS	Continuous Emissions Monitoring System(s)
CGA	Cylinder Gas Audit
CPMS	Continuous Process Monitoring System(s)
EDR	Electronic Data Reporting
ERC	Emission Reduction Credit
IYB RTC	Infinite-Year Block RECLAIM Trading Credit
LAER	Lowest Achievable Emission Rate
LAP	Laboratory Approval Program
MDP	Missing Data Procedures
MRR	Monitoring, Reporting and Recordkeeping
MSERC	Mobile Source Emission Reduction Credit
NAAQS	National Ambient Air Quality Standard
NNI	No Net Increase
NOx	Oxides of Nitrogen
NSR	New Source Review
QCER	Quarterly Certification of Emissions Report
RACT	Reasonably Available Control Technology
RATA	Relative Accuracy Test Audit
RECLAIM	REgional CLean Air Incentives Market
RTC	RECLAIM Trading Credit
RTU	Remote Terminal Unit
SIP	State Implementation Plan
SOx	Oxides of Sulfur
SSC	Stationary Source Committee
SWG	Standing Working Group
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
WATERS	Web Access To Electronic Reporting System

EXECUTIVE SUMMARY

Introduction

The South Coast Air Quality Management District (SCAQMD) Governing Board adopted the REgional CLean Air Incentives Market (RECLAIM) program on October 15, 1993. The RECLAIM program represented a significant departure from traditional command-and-control regulations. RECLAIM's objective is to provide facilities with added flexibility in meeting emissions reduction requirements while lowering the cost of compliance. This is accomplished by establishing facility-specific emissions reduction targets without being prescriptive regarding the method of attaining compliance with the targets. Each facility may determine for itself the most cost-effective approach to reducing emissions, including reducing emissions at their facility, and/or purchasing RECLAIM Trading Credits (RTCs) from other RECLAIM facilities, or from other RTC holders.

Rule 2015 - Backstop Provisions includes provisions for annual program audits focusing on specific topics, as well as a one-time comprehensive audit of the program's first three years, to ensure that RECLAIM is meeting all state and federal requirements and other performance criteria. Rule 2015 also provides backstop measures if the specific criteria are not met. This report constitutes the Rule 2015 annual program audit report for Compliance Year 2012 (January 1 through December 31, 2012 for Cycle 1 and July 1, 2012 through June 30, 2013 for Cycle 2 facilities). This annual audit report covers activities for the 19th year of the program.

Chapter 1: RECLAIM Universe

When RECLAIM was adopted in October 1993, a total of 394 facilities were identified as the initial "universe" of sources subject to the requirements of RECLAIM. From program adoption through June 30, 2012, the overall changes in RECLAIM participants were 121 facilities included into the program, 70 facilities excluded from the program, and 169 facilities ceased operation. Thus, the RECLAIM universe consisted of 276 active facilities on July 1, 2012. From July 1, 2012 through the end of Compliance Year 2012 (December 31, 2012 for Cycle 1 facilities and June 30, 2013 for Cycle 2 facilities), two facilities were included into the RECLAIM universe, no facility was excluded, and five facilities (one facility in both the NOx and SOx universes and four in the NOx universe only) either shut down or consolidated their operations at other facilities and are no longer in the active RECLAIM universe. These changes resulted in a net decrease of three facilities in the universe, bringing the total number of active RECLAIM facilities to 273 as of the end of Compliance Year 2012.

Chapter 2: RTC Allocations and Trading

The allocation reduction in NOx RTCs adopted by the Governing Board on January 7, 2005 was completed in Compliance Year 2011. The amendments to SOx RECLAIM, which the Governing Board adopted on November 5, 2010 to phase in SOx reductions, will commence in Compliance Year 2013 and continue through Compliance Year 2019. That rule amendment will result in an overall

reduction of 5.7 tons/day (or 48.4%) in SOx allocations when fully implemented (for Compliance Year 2019 and beyond). As a result, there were no programmatic allocation reductions in NOx or SOx RTCs during Compliance Year 2012.

The NOx RTC supply increased by 12.2 tons and the SOx RTC supply decreased by 16.2 tons during Compliance Year 2012. All of these changes, except 0.7 tons of NOx RTCs, were due to allocation adjustments for clean fuel production pursuant to Rule 2002(c)(12). The remaining 0.7 tons of increased NOx RTC supply was issued as the result of a merger between a RECLAIM facility and an adjacent non-RECLAIM facility (issued based on the operational history of the previously non-RECLAIM facility pursuant to Rule 2002). As a result, the NOx and SOx RTC supplies for Compliance Year 2012 were 9,689 tons and 4,283 tons, respectively.

During calendar year 2013, there were 367 registered RTC transactions with a total value of almost $30.4 million traded, excluding the values reported for "swap" transactions (exchange of RTCs for other RTCs, rather than for money). Since the inception of the RECLAIM program in 1994, a total value of over $1.05 billion dollars has been traded in the RTC trading market, excluding swaps. In terms of volume traded in calendar year 2013, a total of 4,443 tons of discrete NOx RTCs, 557 tons of discrete SOx RTCs, 1,779 tons of infinite-year block (IYB) NOx RTCs and 438 tons of IYB SOx RTCs were traded. RTC trading market activity during calendar year 2013 was comparable in terms of number of trades, but substantially higher in total value (by 62%) and volume (by 42%) compared to calendar year 2012.

The average annual prices of discrete-year NOx RTCs traded during calendar year 2013 were $549 per ton for Compliance Year 2012 RTCs, $1,080 per ton for Compliance Year 2013 RTCs, and $1,881 per ton for Compliance Year 2014 RTCs. The average annual prices for discrete-year SOx RTCs traded during the same period were $291 per ton for Compliance Year 2012 RTCs and $485 per ton for RTCs for Compliance Year 2013. Therefore, the average annual prices for discrete NOx and SOx RTCs for all compliance years remained well below the $15,000 per ton threshold to evaluate and review the compliance aspects of the program set forth by SCAQMD Rule 2015, as well as the $40,067 per ton of NOx and $28,848 per ton of SOx discrete RTCs pre-determined overall program review thresholds established by the Governing Board pursuant to Health and Safety Code §39616(f).

The average annual price during calendar year 2013 for IYB NOx RTCs was $45,914 per ton, and the average annual price for IYB SOx RTCs was $181,653 per ton. Therefore, average annual IYB RTC prices did not exceed the $601,010 per ton of IYB NOx RTCs or the $432,727 per ton of IYB SOx RTCs pre-determined overall program review thresholds established by the Governing Board pursuant to Health and Safety Code §39616(f).

Investors were again active in the RTC market during calendar year 2013. They were involved in 134 of the 229 discrete NOx and SOx trade registrations with price and 19 of 21 IYB NOx and SOx trades with price. Excluding one set of trades resulting from a set of changes of operator between two companies, investors were involved in 31% of total value and 44% of total volume for discrete NOx trades, and 2% of total value and 1% of total volume for discrete SOx

trades. Investors were involved in 100% of the IYB NOx and SOx trades with price. At the end of calendar year 2013, investors' holdings of IYB NOx RTCs and IYB SOx RTCs were 4.9% and 0.9% of the total RECLAIM RTCs, respectively.

Chapter 3: Emission Reductions Achieved

For Compliance Year 2012, aggregate NOx emissions were below total allocations by 19% and aggregate SOx emissions were below total allocations by 40%. No emissions associated with breakdowns were excluded from reconciliation with facility allocations in Compliance Year 2012. Accordingly, no mitigation is necessary to offset excluded emissions due to approved Breakdown Emission Reports. Therefore, based on audited emissions, it can be concluded that RECLAIM achieved its targeted emission reductions for Compliance Year 2012. With respect to the Rule 2015 backstop provisions, Compliance Year 2012 aggregate NOx and SOx emissions were both well below aggregate allocations and, as such, did not trigger the requirement to review the RECLAIM program.

Chapter 4: New Source Review Activity

The annual program audit assesses New Source Review (NSR) activity from RECLAIM facilities in order to ensure that RECLAIM is complying with federal NSR requirements and state no net increase (NNI) in emissions requirements, while providing flexibility to facilities in managing their operations and allowing new sources into the program. In Compliance Year 2012, a total of 46 NOx RECLAIM facilities had NSR NOx emission increases, and four SOx RECLAIM facilities had NSR SOx emission increases due to expansion or modification. Consistent with all prior compliance years, there were sufficient NOx and SOx RTCs available to allow for expansion, modification, and modernization by RECLAIM facilities.

RECLAIM is required to comply with federal NSR emissions offset requirements at a 1.2-to-1 offset ratio programmatically for NOx emission increases and a 1-to-1 offset ratio for SOx emission increases on a programmatic basis. In Compliance Year 2012, RECLAIM provided an offset ratio based on the compliance year's total unused allocations and total NSR emission increases of 9-to-1 for NOx, demonstrating federal equivalency. RECLAIM inherently complies with the federally-required 1-to-1 SOx offset ratio for any compliance year, provided aggregate SOx emissions under RECLAIM are lower than or equal to aggregate SOx allocations for that compliance year. As shown in Chapter 3, there was no programmatic SOx exceedance during Compliance Year 2012; in fact, there was a surplus of SOx RTCs. Therefore, RECLAIM more than complied with the federally-required SOx offset ratio and further quantification of the SOx offset ratio is unnecessary. Compliance with the federally-required offset ratio also demonstrates compliance with any applicable state NNI requirements for new or modified sources. In addition, RECLAIM requires application of, at a minimum, California Best Available Control Technology (BACT), which is very similar to federal Lowest Achievable Emission Rate (LAER), for all new or modified sources with emission increases. In addition, more stringent control technology can be required pursuant to RECLAIM if it is

determined to be cost effective as compared to AQMP measures or adopted SCAQMD rules.

Chapter 5: Compliance

Of the 278 NOx RECLAIM facilities during Compliance Year 2012, a total of 266 facilities (96%) complied with their NOx allocations, and all but one of the 33 SOx facilities (97%) complied with their SOx allocations. The 12 NOx facilities that exceeded their NOx allocations had aggregate NOx emissions of 832 tons and did not have adequate allocations to offset 125.9 tons (or 15.1%) of their combined emissions. This exceedance amount is small compared to the overall allocations for Compliance Year 2012 (1.3% of total NOx allocations). One SOx facility had SOx emissions that exceeded its SOx allocations by only three pounds. The exceedances from these 12 facilities (11 NOx-only facilities and one NOx and SOx facility) did not impact the overall RECLAIM emission reduction goals. Pursuant to Rule 2010(b)(1)(A), all 12 facilities had their respective exceedances deducted from their annual allocations for the compliance year subsequent to the date of SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations. The overall RECLAIM NOx and SOx emission reduction targets and goals were met for Compliance Year 2012 (*i.e.*, aggregate emissions for all RECLAIM facilities were well below aggregate allocations).

Chapter 6: Reported Job Impacts

This chapter compiles data as reported by RECLAIM facilities in their Annual Permit Emissions Program (APEP) reports. The analysis focuses exclusively on job impacts at RECLAIM facilities and determination if those job impacts were directly attributable to RECLAIM as reported by those facilities. There may be additional effects of the RECLAIM program on the local economy outside of RECLAIM facilities (*e.g.*, generating jobs for consulting firms, source testing firms and CEMS vendors) and also factors other than RECLAIM (*e.g.*, the prevailing economic climate), that impact the job market. These factors are not evaluated in this report. Also job losses and job gains are strictly based on RECLAIM facilities' reported information. AQMD is not able to independently verify the reported job impacts information.

According to the Compliance Year 2012 employment survey data gathered from APEP reports, RECLAIM facilities reported a net gain of 2,026 jobs, representing 2% of their total employment. All of the facilities that reported job losses and job gains cited factors other than RECLAIM as the reasons for these changes in employment figures. Furthermore, none of the five RECLAIM facilities listed as shutdown during Compliance Year 2012 cited RECLAIM as a factor contributing to the decision to shutdown.

Chapter 7: Air Quality and Public Health Impacts

Audited RECLAIM emissions have been in an overall downward trend since the program's inception. Compliance Year 2012 NOx emissions increased slightly (7.0%) relative to Compliance Year 2011 and Compliance Year 2012 SOx emissions were 6.4% less when compared to last year. Quarterly calendar year 2012 NOx emissions fluctuated within four percent of the mean NOx emissions for the year. Quarterly calendar year 2012 SOx emissions fluctuated within ten

percent of the year's mean SOx emissions. There was no significant shift in seasonal emissions from the winter season to the summer season.

The California Clean Air Act (CCAA) required a 50% reduction in population exposure to ozone, relative to a baseline averaged over three years (1986 through 1988), by December 31, 2000. The Basin achieved the December 2000 target for ozone well before the deadline. In calendar year 2013, the per capita exposure to ozone (the average length of time each person is exposed) continued to be well below the target set for December 2000.

Air toxic health risk is primarily caused by emissions of certain volatile organic compounds (VOCs) and fine particulates, such as metals. RECLAIM facilities are subject to the same air toxic, VOC, and particulate matter regulations as other sources in the Basin. All sources are subject, where appropriate, to the NSR rule for toxics (Rule 1401). In addition, new or modified sources with NOx or SOx emission increases are required to be equipped with BACT, which minimizes to the extent feasible the increase of NOx and SOx emissions. RECLAIM and non-RECLAIM facilities that emit toxic air contaminants are required to report those emissions to SCAQMD. Those toxics emissions reports are used to identify candidates for the Toxics Hot Spots program (AB2588), which in turn quantifies toxic risk from facilities in the program and identifies those facilities that are required to do public notice and/or reduce their health risk levels to the public. There is no evidence that RECLAIM has caused or allowed higher toxic risk in areas adjacent to RECLAIM facilities.

INTRODUCTION

The South Coast Air Quality Management District (SCAQMD) REgional CLean Air Incentives Market (RECLAIM) program was adopted in October 1993 and replaced certain command-and-control rules regarding oxides of nitrogen (NOx) and oxides of sulfur (SOx) with a new market incentives program for facilities that meet the inclusion criteria. The goals of RECLAIM are to provide facilities with added flexibility in meeting emissions reduction requirements while lowering the cost of compliance. The RECLAIM program was designed to meet all state and federal Clean Air Act and other air quality regulations and program requirements, as well as various other performance criteria, such as equivalent or better air quality improvement, enforcement, implementation costs, job impacts, and no adverse public health impacts.

Since RECLAIM represents a significant change from traditional command-and-control regulations, RECLAIM rules include provisions for program audits in order to verify that the RECLAIM objectives are being met. The rules provide for a comprehensive audit of the first three years of program implementation and for annual program audits. The audit results are used to help determine whether any program modifications are appropriate. SCAQMD staff has completed the initial tri-annual program audit and each individual annual program audit report through the 2012 Compliance Year Audit.

This report presents the annual program audit and progress report of RECLAIM's nineteenth compliance year (January 1 through December 31, 2012 for Cycle 1 and July 1, 2012 through June 30, 2013 for Cycle 2 RECLAIM facilities), also known as Compliance Year 2012. As required by Rule 2015(b)(1) – Annual Audits, this audit assesses:

- Emission reductions;
- Per capita exposure to air pollution;
- Facilities permanently ceasing operation of all sources;
- Job impacts;
- Average annual price of each type of RECLAIM Trading Credit (RTC);
- Availability of RTCs;
- Toxic risk reductions;
- New Source Review permitting activity;
- Compliance issues, including a list of facilities that were unable to reconcile emissions for that compliance year;
- Emission trends/seasonal fluctuations;
- Emission control requirement impacts on stationary sources in the program compared to other stationary sources identified in the Air Quality Management Plan (AQMP); and
- Emissions associated with equipment breakdowns.

The annual program audit report is organized into the following chapters:

1. ***RECLAIM Universe***
   This chapter discusses summarizes changes to the universe of RECLAIM sources that occurred up until July 1, 2012 (covered under the Annual RECLAIM Audit Report for 2011 Compliance Year), then discusses changes to the RECLAIM universe of sources in detail through the end of Compliance Year 2012.
2. ***RTC Allocations and Trading***
   This chapter summarizes changes in emissions allocations in the RECLAIM universe, RTC supply and RTC trading activity, average annual prices, availability of RTCs, and market participants.
3. ***Emission Reductions Achieved***
   This chapter assesses emissions trends and progress towards emission reduction goals for RECLAIM sources, emissions associated with equipment breakdowns, and emissions control requirement impacts on RECLAIM sources compared to other stationary sources. It also discusses the latest amendments to the RECLAIM program.
4. ***New Source Review Activity***
   This chapter summarizes New Source Review (NSR) activities at RECLAIM facilities.
5. ***Compliance***
   This chapter discusses compliance activities and the compliance status of RECLAIM facilities. It also evaluates the effectiveness of SCAQMD's compliance program, as well as the monitoring, reporting, and recordkeeping (MRR) protocols for NOx and SOx.
6. ***Reported Job Impacts***
   This chapter addresses job impacts and facilities permanently ceasing operation of all emission sources.
7. ***Air Quality and Public Health Impacts***
   This chapter discusses air quality trends in the South Coast Air Basin, seasonal emission trends for RECLAIM sources, per capita exposure to air pollution, and the toxic impacts of RECLAIM sources.

CHAPTER 1
RECLAIM UNIVERSE

Summary

When RECLAIM was adopted in October 1993, a total of 394 facilities were identified as the initial "universe" of sources subject to the requirements of RECLAIM. From program adoption through June 30, 2012, the overall changes in RECLAIM participants were 121 facilities included into the program, 70 facilities excluded from the program, and 169 facilities ceased operation. Thus, the RECLAIM universe consisted of 276 active facilities on July 1, 2012. From July 1, 2012 through the end of Compliance Year 2012 (December 31, 2012 for Cycle 1 facilities and June 30, 2013 for Cycle 2 facilities), two facilities were included into the RECLAIM universe, no facility was excluded, and five facilities (one facility in both the NOx and SOx universes and four in the NOx universe only) either shut down or consolidated their operations at other facilities and are no longer in the active RECLAIM universe. These changes resulted in a net decrease of three facilities in the universe, bringing the total number of active RECLAIM facilities to 273 as of the end of Compliance Year 2012.

Background

The RECLAIM program replaced the traditional "command-and-control" rules for a defined list of facilities participating in the program (the RECLAIM "universe"). The criteria for inclusion in the RECLAIM program are specified in Rule 2001 – Applicability. Facilities are generally subject to RECLAIM if they have NOx or SOx emissions greater than or equal to four tons per year in 1990 or any subsequent year. However, certain facilities are categorically excluded from RECLAIM. The categorically excluded facilities include dry cleaners; restaurants; police and fire fighting facilities; construction and operation of landfill gas control, processing or landfill gas energy facilities; public transit facilities, potable water delivery operations; facilities that converted all sources to operate on electric power prior to October 1993; and facilities, other than electric generating facilities established on or after January 1, 2001, located in the Riverside County portions of the Mojave Desert Air Basin or the Salton Sea Air Basin.

Other categories of facilities are not automatically included but do have the option to enter the program. These categories include electric utilities (exemption only for the SOx program); equipment rental facilities; facilities possessing solely "various locations" permits; schools or universities; portions of facilities conducting research operations; ski resorts; prisons; hospitals; publicly-owned municipal waste-to-energy facilities; publically-owned sewage treatment facilities operating consistent with an approved regional growth plan; electrical power generating systems owned and operated by the Cities of Burbank, Glendale, or Pasadena or their successors; facilities on San Clemente Island; agricultural facilities; and electric generating facilities that are new on or after January 1, 2001 and located in the Riverside County portions of the Mojave Desert Air Basin or the Salton Sea Air Basin. An initial universe of 394 RECLAIM facilities was developed using the inclusion criteria initially adopted in the RECLAIM program based on 1990, 1991 and 1992 facility emissions data.

A facility that is not in a category that is specifically excluded from the program may voluntarily join RECLAIM regardless of its emission level. Additionally, a facility may be required to enter the RECLAIM universe if:

- It increases its NOx and/or SOx emissions above the four ton per year threshold; or
- It ceases to be categorically excluded and its reported NOx and/or SOx emissions are greater than or equal to four tons per year; or
- It is determined by SCAQMD staff to meet the applicability requirements of RECLAIM, but was initially misclassified as not subject to RECLAIM.

At the time of joining RECLAIM, each RECLAIM facility is issued an annually declining allocation of emission credits ("RECLAIM Trading Credits" or "RTCs") based on its historic production level (if the facility existed prior to January 1, 1993), external offsets it previously provided, and any Emission Reduction Credits (ERCs) generated at and held by the facility. Each RECLAIM facility's RTC holdings constitute an annual emissions budget. RTCs may be bought or sold as the facility deems appropriate (see Chapter 2 – RTC Allocations and Trading).

RECLAIM facilities that permanently go out of business are removed from the active emitting RECLAIM universe, but may retain their remaining RTCs and participate in the trading market.

Universe Changes

The RECLAIM rules include several mechanisms to exclude facilities originally included in the program and to add new facilities. The overall changes to the RECLAIM universe from the date of adoption (October 15, 1993) through June 30, 2012 (the last day of Compliance Year 2011 for Cycle 2 facilities) were: the inclusion of 121 facilities (including 33 facilities created by partial change of operator of existing RECLAIM facilities), the exclusion of 70 facilities, and the shutdown of 169 facilities. Thus, the net change in the RECLAIM universe from January 1, 1994 through June 30, 2012 was a decrease of 118 facilities from 394 to 276 facilities. From July 1, 2012 through the end of Compliance Year 2012 (December 31, 2012 for Cycle 1 facilities and June 30, 2013 for Cycle 2 facilities), two facilities were included, no facility was excluded, and five facilities shut down. These changes brought the total number of facilities in the RECLAIM universe to 273 facilities. The Compliance Year 2012 RECLAIM universe includes 241 NOx-only, no SOx-only, and 32 both NOx and SOx RECLAIM facilities. The list of active facilities in the RECLAIM universe as of the end of Compliance Year 2012 is provided in Appendix A.

Facility Inclusions and Exclusions

Two facilities were included in the RECLAIM universe from July 1, 2012 through the end of Compliance Year 2012. One of these facilities elected to enter the RECLAIM program and the other was created through the partial change of operator of an existing RECLAIM facility (one facility was split into two). The facility that opted to enter RECLAIM was initially permitted post-October 15, 1993, and is considered "new" as defined by SCAQMD Rule 2000 – General. Appendix B lists these two facilities and the reasons for their inclusion.

Additionally, one existing NOx RECLAIM facility merged with a neighboring non-RECLAIM facility through change of operator of the RECLAIM facility to the operator of the non-RECLAIM facility, bringing the formerly non-RECLAIM facility into the program. However, this did not result in a change to the overall number of facilities in RECLAIM since it was a merger. No facility was excluded from the RECLAIM universe during Compliance Year 2012.

Staff has periodically initiated the process of reviewing past Annual Emission Reports from non-RECLAIM facilities to determine applicability of RECLAIM pursuant to Rule 2001(b) – Criteria for Inclusion in RECLAIM. Commencing in 2012, an annual review process was implemented. This facility inclusion process begins with SCAQMD staff compiling a list of non-RECLAIM (pollutant-specific) facilities that emitted NOx or SOx emissions greater than or equal to four tons per year, as reported under the Annual Emission Reporting (AER) program, for potential inclusion into RECLAIM. This part of the process involves screening for only emissions from equipment that are subject to RECLAIM (*e.g.*, emissions from on-site, off-road mobile sources are not included). From this initial list, each facility's business activity/operations are evaluated based on SCAQMD's records for possible categorical exemption pursuant to Rule 2001(i). Facilities that qualify under these categorical exemptions are removed from the list. The remaining facilities are informed of their potential inclusion into RECLAIM and are given the opportunity to provide records to demonstrate why the facility should not be included under RECLAIM. This may include additional information about the facility's operations that would qualify it for categorical exemption from RECLAIM pursuant to Rule 2001(i), or correcting their AER-reported emissions with supporting documentation. Once a facility has qualified for inclusion, a draft facility permit is prepared, sent to the facility for comments, finalized and issued.

In October 2012, SCAQMD informed 60 facilities in writing of potential inclusion into RECLAIM based upon their reported emissions in past years (58 potential NOx facilities and two potential SOx facilities, both of which were already NOx facilities). No facilities were included into RECLAIM during Compliance Year 2012 as a result of this evaluation process. Three facilities were included into NOx RECLAIM during the 2013 compliance year and are not addressed in this report because they did not impact the RECLAIM universe during Compliance Year 2012. At the time of composing this report, twenty-eight of the 60 facilities remain under review for inclusion. As stated above, the inclusion review process has now been shifted to an annual process. Additionally, 13 facilities identified through this annual process in 2013 are being evaluated for potential inclusion. Additional inclusions will be addressed in future RECLAIM annual program audits as facility eligibility is confirmed.

Facilities Permanently Ceasing Operations

Five RECLAIM facilities permanently ceased operations between July 1, 2012 and the end of Compliance Year 2012. Two of the facilities each consolidated their operations with separate existing RECLAIM facilities within the SCAQMD. One power plant shut down as air quality mitigation for the start-up of a new power plant located in the SCAQMD. Another facility shut down its operation, its only piece of process equipment was rendered inoperable, and it sold the property to an adjacent facility. The facility that bought the property is a university and became RECLAIM exempt, and categorically excluded from

RECLAIM pursuant to Rule 2001(i)(2)(H). The last shutdown facility moved its operation to a new plant in a different state. Four of the five facilities permanently ceasing operations were in NOx RECLAIM, and the remaining shutdown facility was in both NOx and SOx RECLAIM. Appendix C lists these facilities and provides brief descriptions of the reported reasons for their closures.

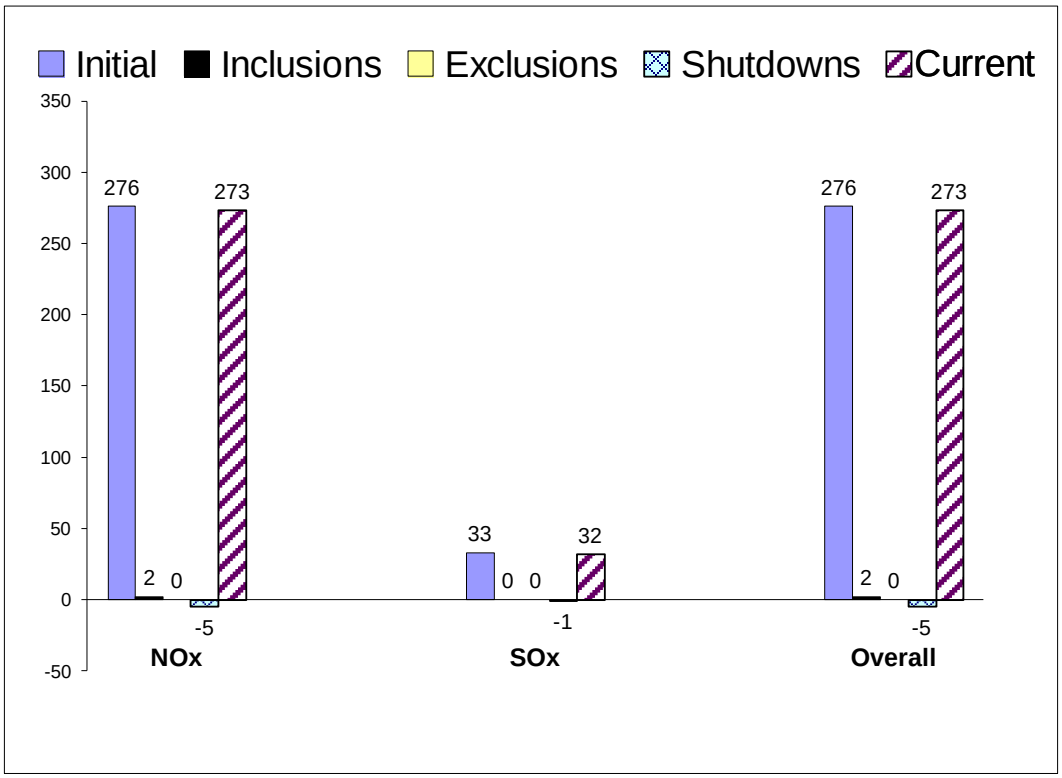
The above mentioned changes to the RECLAIM Universe resulted in a net decrease of three facilities in the RECLAIM universe. Table 1-1 summarizes changes in the RECLAIM universe between the start of the program and June 30, 2013. Overall changes to the RECLAIM universe that occurred from July 1, 2012 through June 30, 2013 are illustrated in Figure 1-1.

Table 1-1
RECLAIM Universe Changes

	NOx Facilities	SOx Facilities	Total* Facilities
Universe – October 15, 1993 (Start of Program)	392	41	394
Inclusions – October 15, 1993 through June 30, 2012	121	12	121
Exclusions – October 15, 1993 through June 30, 2012	-69	-4	-70
Shutdowns – October 15, 1993 through June 30, 2012	-168	-16	-169
Universe – June 30, 2012	276	33	276
Inclusions – July 1, 2012 through end of Compliance Year 2012	2	0	2
Exclusions – July 1, 2012 through end of Compliance Year 2012	0	0	0
Shutdowns – July 1, 2012 through end of Compliance Year 2012	-5	-1	-5
Universe – End of Compliance Year 2012	273	32	273

* Total Facilities is not the sum of NOx and SOx facilities due to the overlap of some facilities being in both the NOx and SOx universes.

Figure 1-1
Universe Changes from July 1, 2012 through End of Compliance Year 2012



CHAPTER 2
RTC ALLOCATIONS AND TRADING

Summary

The allocation reduction in NOx RTCs adopted by the Governing Board on January 7, 2005 was completed in Compliance Year 2011. The amendments to SOx RECLAIM, which the Governing Board adopted on November 5, 2010 to phase in SOx reductions, will commence in Compliance Year 2013 and continue through Compliance Year 2019. That rule amendment will result in an overall reduction of 5.7 tons/day (or 48.4%) in SOx allocations when fully implemented (for Compliance Year 2019 and beyond). As a result, there were no programmatic allocation reductions in NOx or SOx RTCs during Compliance Year 2012.

The NOx RTC supply increased by 12.2 tons and the SOx RTC supply decreased by 16.2 tons during Compliance Year 2012. All of these changes, except 0.7 tons of NOx RTCs, were due to allocation adjustments for clean fuel production pursuant to Rule 2002(c)(12). The remaining 0.7 tons of increased NOx RTC supply was issued as the result of a merger between a RECLAIM facility and an adjacent non-RECLAIM facility (issued based on the operational history of the previously non-RECLAIM facility pursuant to Rule 2002). As a result, the NOx and SOx RTC supplies for Compliance Year 2012 were 9,689 tons and 4,283 tons, respectively.

During calendar year 2013, there were 367 registered RTC transactions with a total value of almost $30.4 million traded, excluding the values reported for "swap" transactions (exchange of RTCs for other RTCs, rather than for money). Since the inception of the RECLAIM program in 1994, a total value of over $1.05 billion dollars has been traded in the RTC trading market, excluding swaps. In terms of volume traded in calendar year 2013, a total of 4,443 tons of discrete NOx RTCs, 557 tons of discrete SOx RTCs, 1,779 tons of infinite-year block (IYB) NOx RTCs and 438 tons of IYB SOx RTCs were traded. RTC trading market activity during calendar year 2013 was comparable in terms of number of trades, but substantially higher in total value (by 62%) and volume (by 42%) compared to calendar year 2012.

The average annual prices of discrete-year NOx RTCs traded during calendar year 2013 were $549 per ton for Compliance Year 2012 RTCs, $1,080 per ton for Compliance Year 2013 RTCs, and $1,881 per ton for Compliance Year 2014 RTCs. The average annual prices for discrete-year SOx RTCs traded during the same period were $291 per ton for Compliance Year 2012 RTCs and $485 per ton for RTCs for Compliance Year 2013. Therefore, the average annual prices for discrete NOx and SOx RTCs for all compliance years remained well below the $15,000 per ton threshold to evaluate and review the compliance aspects of the program set forth by SCAQMD Rule 2015, as well as the $40,067 per ton of NOx and $28,848 per ton of SOx discrete RTCs pre-determined overall program review thresholds established by the Governing Board pursuant to Health and Safety Code §39616(f).

The average annual price during calendar year 2013 for IYB NOx RTCs was $45,914 per ton, and the average annual price for IYB SOx RTCs was $181,653 per ton. Therefore, average annual IYB RTC prices did not exceed the $601,010 per ton of IYB NOx RTCs or the $432,727 per ton of IYB SOx RTCs pre-determined overall program review thresholds established by the Governing Board pursuant to Health and Safety Code §39616(f).

Investors were again active in the RTC market during calendar year 2013. They were involved in 134 of the 229 discrete NOx and SOx trade registrations with price and 19 of 21 IYB NOx and SOx trades with price. Excluding one set of trades resulting from a set of changes of operator between two companies, investors were involved in 31% of total value and 44% of total volume for discrete NOx trades, and 2% of total value and 1% of total volume for discrete SOx trades. Investors were involved in 100% of the IYB NOx and SOx trades with price. At the end of calendar year 2013, investors' holdings of IYB NOx RTCs and IYB SOx RTCs were 4.9% and 0.9% of the total RECLAIM RTCs, respectively.

Background

SCAQMD issues each RECLAIM facility emissions allocations for each compliance year, according to the methodology specified in Rule 2002 – Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx), based on its historic production levels as reported to SCAQMD in its emission inventory reports (if the facility existed prior to January 1, 1993) and its listed starting emission factor in Tables 1 or 2, any qualified[1] external offsets it previously provided, and any unused ERCs generated at and held by the facility. These allocations are issued as RTCs, denominated in pounds of NOx or SOx with a specified 12-month term. Each RTC may only be used for emissions occurring within the term of that RTC. The RECLAIM program has two staggered compliance cycles—Cycle 1 with a compliance period of January 1 through December 31 of each year, and Cycle 2 with a compliance period of July 1 of each year through June 30 of the following year. Each RECLAIM facility is assigned to either Cycle 1 or Cycle 2 and the RTCs it is issued (if any) have corresponding periods of validity.

The issuance of allocations for future years provides RECLAIM facilities guidance regarding their future emission reduction requirements. Facilities can plan their compliance strategies by reducing actual emissions or securing needed RTCs through trade registrations (or a combination of the two), based on their operational needs.

RECLAIM facilities may acquire RTCs issued for either cycle through trading and apply them to emissions, provided that the RTCs are used for emissions occurring within the RTCs' period of validity and the trades are made during the appropriate time period. RECLAIM facilities have until 30 days after the end of each of the first three quarters of each compliance year to reconcile their quarterly and year-to-date emissions, and until 60 days after the end of each compliance year to reconcile their last quarter and total annual emissions by securing adequate RTCs. Please note that, although other chapters in this report

[1] Only external offsets provided at a one-to-one offset ratio after the base year used for allocation quantification purposes.

present and discuss Compliance Year 2012 data, RTC trading and price data discussed in this chapter are for calendar year 2013.

RTC Allocations and Supply

The methodology for determining RTC allocations is established by Rule 2002. According to the rule, allocations may change when the universe of RECLAIM facilities changes, emissions associated with the production of re-formulated gasoline increase or decrease, reported historical activity levels are updated, or starting emission factors are changed. In addition to these SCAQMD-allocated RTCs, RTCs may be generated by conversion of emissions reduction credits from mobile and area sources pursuant to approved protocols. The total RTC supply in RECLAIM is made up of all RECLAIM facilities' allocations, conversions of ERCs owned by RECLAIM and non-RECLAIM facilities (the window of opportunity to convert ERCs to RTCs other than during the process of a non-RECLAIM facility entering the program closed June 30, 1994), emissions associated with the production of re-formulated gasoline, and conversion of emission reduction credits from mobile sources and area sources pursuant to approved protocols. Changes in the RTC supply during Compliance Year 2012 are discussed below.

Allocations Adjustments Due to Inclusion and Exclusion of Facilities

Allocations for a facility are based on the facility's historical operations, their starting emission factor, emission reduction requirements under the command-and-control rules subsumed by RECLAIM, AQMP control measures subsumed by RECLAIM, and adjustments for Best Available Retrofit Control Technology (BARCT) equivalency. Facilities entering RECLAIM after 1994 may receive allocations just like facilities that were included at the beginning of the program. However, allocations issued for these facilities are only applicable for the compliance year upon entry and forward. In addition, these facilities are issued allocations and Non-tradable/Non-usable Credits for Compliance Year 1994 for the sole purpose of establishing their starting allocation to ensure compliance with offset requirements under Rule 2005 - New Source Review for RECLAIM and the trading zone restriction to ensure net ambient air quality improvement within the sensitive zone established by Health and Safety Code §40410.5. These Compliance Year 1994 credits are not allowed to be used to offset current emissions because they are expired.

One new facility opted into the RECLAIM program and another facility was created through a partial change of operator in Compliance Year 2012. Both facilities belong to the NOx RECLAIM program. However, neither facility qualified for allocations pursuant to Rule 2002 – Allocations for Oxides Nitrogen (NOx) and Oxides of Sulfur (SOx). Additionally, one existing NOx RECLAIM facility merged with a neighboring non-RECLAIM facility through change of operator of the RECLAIM facility to the operator of the non-RECLAIM facility. This previously non-RECLAIM facility is an existing facility as defined in Rule 2002 and was therefore eligible for additional allocations. A total of 0.7 tons per year of NOx allocations were issued to the merged facility for the previously non-RECLAIM facility. There were no facilities excluded from the RECLAIM program in Compliance Year 2012.

Allocations Adjustments Due to Clean Fuel Production

Rule 2002(c)(12) – Clean Fuel Adjustment to Starting Allocation, provides refineries with RTCs to compensate for their actual emissions increases caused by the production of CARB Phase II reformulated gasoline. The amount of these RTCs is based on actual emissions for the subject compliance year and historical production data. Based on the historical production data submitted, qualifying refineries were issued in 2000 an aggregate baseline of 86.5 tons of NOx and 42.3 tons of SOx for Compliance Year 1999, 101.8 tons of NOx and 41.4 tons of SOx for Compliance Year 2000, and 98.4 tons of NOx and 40.2 tons of SOx for each subsequent Compliance Year. These refineries are required to submit, at the end of each compliance year in their Annual Permit Emissions Program (APEP) report, records to substantiate actual emission increases due solely to the production of reformulated gasoline. If actual emission increases for a subject year are different than the projected amount, the RTCs issued are adjusted accordingly (*i.e.*, excess RTCs issued are deducted if emissions were less than projected; conversely, additional RTCs are issued if emissions were higher than projected).

As a result of the amendment to Rule 2002 in January 2005 to further reduce RECLAIM NOx allocations, the NOx historical baseline Clean Fuel Adjustments for Compliance Year 2007 and subsequent years held by the facility were also reduced by the appropriate factors as stated in Rule 2002(f)(1)(A). On the other hand, Rule 2002(c)(12) entitles refineries to a Clean Fuels adjustment based on actual emissions. Therefore, each refinery is subject to an adjustment at the end of each compliance year equal to the difference between the amount of actual emission increases due solely to production of reformulated gasoline at each refinery and the amount of credits it was issued in 2000 after discounting by the factors for the corresponding compliance year. For Compliance Year 2012, the overall effect of adjusting NOx allocations to account for these differences was a total of 11.5 tons of NOx RTCs (0.1% of total NOx allocation for Compliance Year 2012) added to, and 16.2 tons of SOx RTCs (0.4% of total SOx allocation for Compliance Year 2012) deducted from refineries' Compliance Year 2012 holdings.

Changes in RTC Allocations Due to Activity Corrections

RECLAIM facilities' allocations are determined by their reported historical activity levels (*e.g.*, fuel usage, material usage, or production). If a facility makes corrections to its reported activity levels, the allocation is adjusted accordingly. There were no changes in RTC allocations due to activity corrections in Compliance Year 2012.

Conversions of Other Types of Emission Reduction Credits

Conversions of Mobile Source Emission Reduction Credits (MSERCs) and other types of emission reduction credits, other than regular stationary source ERCs issued under Regulation XIII – New Source Review, to RTCs are allowed under Rule 2008 – Mobile Source Credits, and several programs under Regulation XVI – Mobile Source Offset Programs and Regulation XXV – Intercredit Trading. Conversion of these credits to RTCs is allowed based on the respective approved protocol specified in each rule. Currently, Rules 1610 – Old-Vehicle Scrapping and 1612 – Credits for Clean On-Road Vehicles allow the creation of

MSERCs. However, there are no State Implementation Plan (SIP) approved protocols for conversion of MSERCs to RTCs. As a result, no new RTCs were issued as a result of conversion of other types of emission reduction credits in Compliance Year 2012.

Net Changes in RTC Allocations

The changes to RTC supplies described in the above sections resulted in a net increase of 12.2 tons of NOx RTCs (0.13% of the total) and a decrease of 16.2 tons of SOx RTCs (0.38% of total) for Compliance Year 2012. Table 2-1 summarizes the changes in NOx and SOx RTC supplies that occurred in Compliance Year 2012 pursuant to Rule 2002.

Table 2-1
Changes in NOx and SOx RTC Supplies during Compliance Year 2012 (tons/year)

Source	NOx	SOx
Universe changes	0.7	0
Clean Fuel/Reformulated Gasoline	11.5	-16.2
Activity corrections	0	0
MSERCs	0	0
Net change	**12.2**	**-16.2**

Note: The data in this table represents the changes that occurred over the course of Compliance Year 2012 to the Compliance Year 2012 aggregate NOx and SOx RTC supplies originally issued pursuant to Rule 2002, not the difference between 2012 aggregate RTC supply and that for any other compliance year.

Allocation Reduction Resulting from BARCT Review

Pursuant to California Health and Safety Code §40440, SCAQMD is required to monitor the advancement in BARCT and periodically re-assess the RECLAIM program to ensure that RECLAIM achieves equivalent emission reductions to the command-and-control BARCT rules it subsumes. This assessment is done periodically as part of AQMP development. This process resulted in 2003 AQMP Control Measure #2003 CMB-10 – Additional NOx Reductions for RECLAIM (NOx) calling for additional NOx reductions from RECLAIM sources. SCAQMD staff then started the rule amendment process, including a detailed analysis of control technologies that qualified as BARCT for NOx, and held lengthy discussions with stakeholders—including regulated industry, environmental groups, the California Air Resources Board (CARB), and the United States Environmental Protection Agency (USEPA). On January 7, 2005, the Governing Board implemented CMB-10 by adopting changes to the RECLAIM program that resulted in a 22.5% reduction of NOx allocations from all RECLAIM facilities. The reductions were phased in commencing in Compliance Year 2007 and have been fully implemented since Compliance Year 2011.

Similarly, on November 5, 2010, the Governing Board adopted changes to the RECLAIM program implementing the 2007 AQMP Control Measure CMB-02 – Further SOx Reductions for RECLAIM (SOx). Specifically, these amendments will result in an overall reduction of 5.7 tons SOx per day when fully implemented in Compliance Year 2019 (the reductions are being phased in from Compliance Year 2013 through Compliance Year 2019: 3.0 tons per day in 2013, 4.0 tons

per day in years 2014 through 2016, 5.0 tons per day in 2017 and 2018, and a cumulative 5.7 tons per day starting in 2019 and continuing thereafter). This reduction in SOx is an essential part of the South Coast Air Basin's effort in attaining the federal 24-hour average PM2.5 standard by the year 2020.

Figures 2-1 and 2-2 illustrate the total NOx and SOx RTC supplies through the end of Compliance Year 2020 incorporating all the changes discussed above.

Figure 2-1
NOx RTC Supply

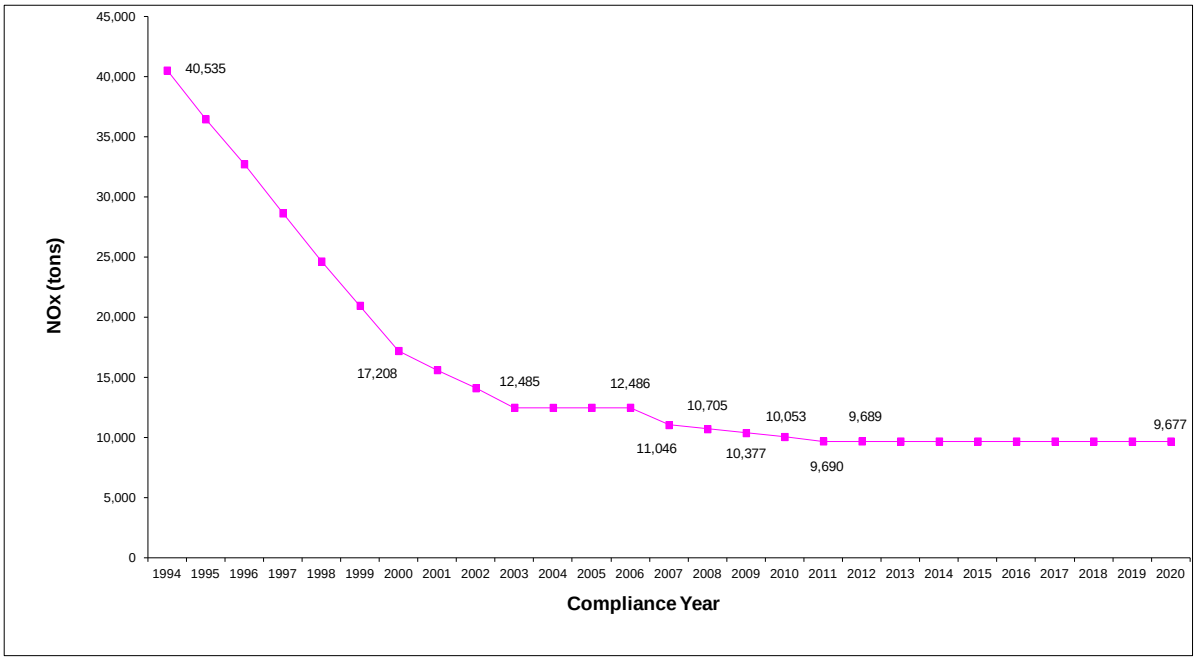
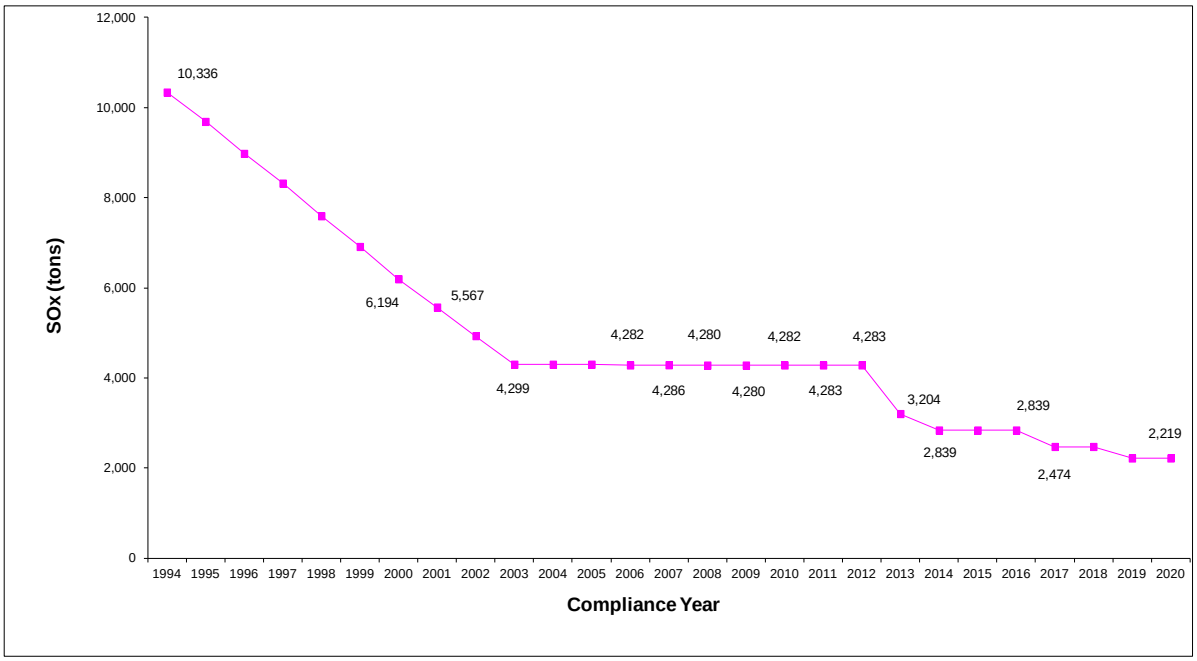


Figure 2-2
SOx RTC Supply



On December 7, 2012 the SCAQMD Governing Board adopted the 2012 AQMP, which includes Control Measure CMB-01 – Further NOx Reductions for RECLAIM, calling for reductions of NOx emissions within the RECLAIM program by 3 to 5 tons per day. The rule development and adoption process for this latest NOx reduction is currently ongoing. The actual amount of NOx reduction will be determined at the completion of the public process and will be submitted to the Governing Board for its consideration at a public hearing later in 2014.

Upcoming Proposal for Credit Generation

Proposed Rule 2511 – Credit Generation Program for Locomotive Head End Power Unit Engines and Proposed Rule 2512 – Credit Generation Program for Ocean-Going Vessels at Berth are two potential rules that could generate credits for the RECLAIM program. Proposed Rule 2511 would allow generation of emission reduction credits through the voluntary repowering of diesel–fueled auxiliary head end power generating units on passenger locomotives with cleaner engines. Proposed Rule 2512 would allow generation of emission reduction credits through the control of exhaust emissions from auxiliary engines and/or boilers used on Ocean-Going Vessels while at berth in a commercial marine port. Both of these two proposed rules are presently targeted for Governing Board consideration as part of the Rule and Control Measure Forecast for calendar year 2014, as approved by the Governing Board at the January 10, 2014 Board meeting.

RTC Price Reporting Methodology

RTC trades are reported to SCAQMD as one of two types: discrete-year RTC transactions or infinite-year block (IYB) transactions (trades that involve blocks of

RTCs with a specified start year and continuing into perpetuity). Prices for discrete-year trades are reported in terms of dollars per pound and prices for IYB trades are reported as total dollar value for total amount of IYB RTCs traded. In addition, the trading partners are required to identify any swap trades because prices reported for swap trades are based on the agreed upon value of the trade by the participants, and do not involve exchange of funds for the total value agreed upon. As such, the reported prices for swap trades may be somewhat arbitrary and are, therefore, excluded from the calculation of annual average prices. In this report, the average annual prices for discrete-year RTCs are averaged in dollars per ton of RTCs for each compliance year, while the average price for IYB RTCs are averaged as a total dollar value per ton of IYB RTCs.

Rule 2015(b)(6) specifies that, if the average annual price of discrete NOx or SOx RTCs exceeds $15,000 per ton, the Executive Officer will conduct an evaluation and review of the compliance and enforcement aspects of RECLAIM. The Governing Board has also established average RTC price overall program review thresholds pursuant to Health and Safety Code §39616(f). Unlike the $15,000 per ton threshold for review of the compliance and enforcement aspects of RECLAIM, these overall program review thresholds are adjusted by CPI each year. For RTC transactions occurring in calendar year 2013, the overall program review thresholds in 2013 dollars are $40,067 per ton of discrete-year NOx RTCs, $28,848 per ton of discrete-year SOx RTCs, $601,010 per ton of infinite-year NOx RTCs, and $432,727 per ton of infinite-year SOx RTCs.

RTC Trading Activity Excluding Swaps

Overall Trading Activity

The RTC market activity in calendar year 2013 was comparable to the market activity in calendar year 2012 in terms of the number of transactions. The calendar year 2013 trading activity—367 total registered trade transactions (344 NOx trades and 23 SOx trades)—was slightly higher than the number of trade transactions in calendar year 2012 (363 total registered trade transactions). These trades included discrete and IYB RTCs traded with prices, discrete and IYB RTC transfers with zero price, and discrete and IYB RTC swap trades.

Although the number of transactions in calendar year 2013 was comparable to that in calendar year 2012, the value and volume (pounds) traded in calendar year 2013 were substantially higher (62% and 42%, respectively) than those traded in calendar year 2012. Excluding swap trades, a total value of almost $30.4 million was traded in calendar year 2013 ($15.9 million for NOx and $14.5 million for SOx)—substantially higher than the total value of $18.8 million traded in calendar year 2012 ($4.2 million for NOx and $14.6 million for SOx). The increase in the total value traded (also total volume) was largely due to the sale of NOx and SOx RTCs resulting from a set of changes of operator between two companies, which accounted for $23.5 million (77.3% of the total value traded). Further details of the trades resulting from these changes of operator between two companies are presented at the end of this section. Figure 2-3 shows historical trading values (excluding swaps). Figure 2-4 summarizes overall trading activity (excluding swaps) in calendar year 2013 by pollutant.

With respect to volume traded (also excluding swap trades), 5,000 tons of discrete RTCs and 2,216 tons of IYB RTCs were traded in calendar year 2013.

This is significantly higher than the volume traded in calendar year 2012 (4,392 tons of discrete RTCs and 700 tons of IYB RTCs). In calendar year 2013, there were 3,370 tons of discrete NOx RTCs and 83 tons of discrete SOx traded with price and 1,073 tons of discrete NOx and 474 tons of discrete SOx traded without price. In addition, there were 261 tons of IYB NOx and 79 tons of IYB SOx traded with price and, 1,518 tons of IYB NOx, and 358 tons of IYB SOx traded with zero price. Additional information on the discrete and IYB trading activities, value, and volume are discussed later in this chapter.

There were 71 trades with zero price in calendar year 2013. RTC transfers with zero price generally occur when a seller transfers or escrows RTCs to a broker pending transfer to the purchaser with price, when there is a transfer between facilities under common operator, when a facility is retiring RTCs for a settlement agreement or pursuant to variance conditions, or when there is a transfer between facilities that have gone through a change of operator. Trades with zero price also occur when the trading parties have mutual agreements where one party provides a specific service (*e.g.,* providing steam or other process components) for the second party. In return, the second party will transfer the RTCs necessary to offset emissions generated from the service.

Figure 2-3
Annual Trading Values for NOx and SOx (Excluding Swaps)

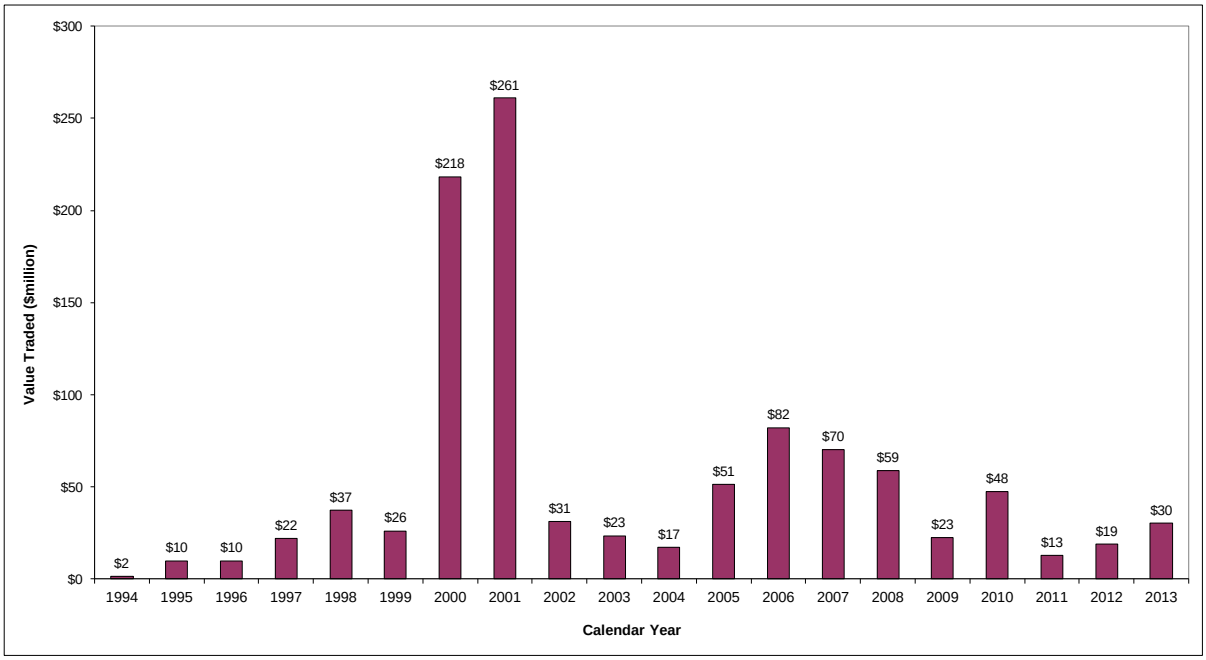
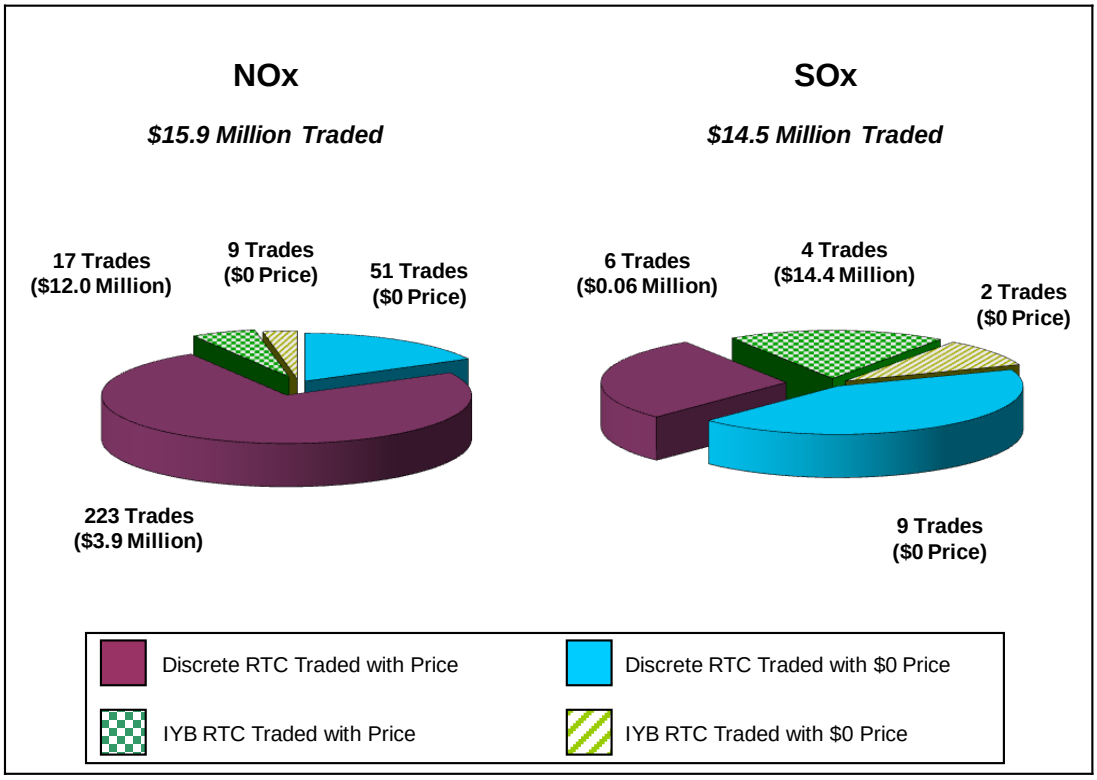


Figure 2-4
Calendar Year 2013 Overall Trading Activity (Excluding Swaps)



Discrete RTC Trading Activity

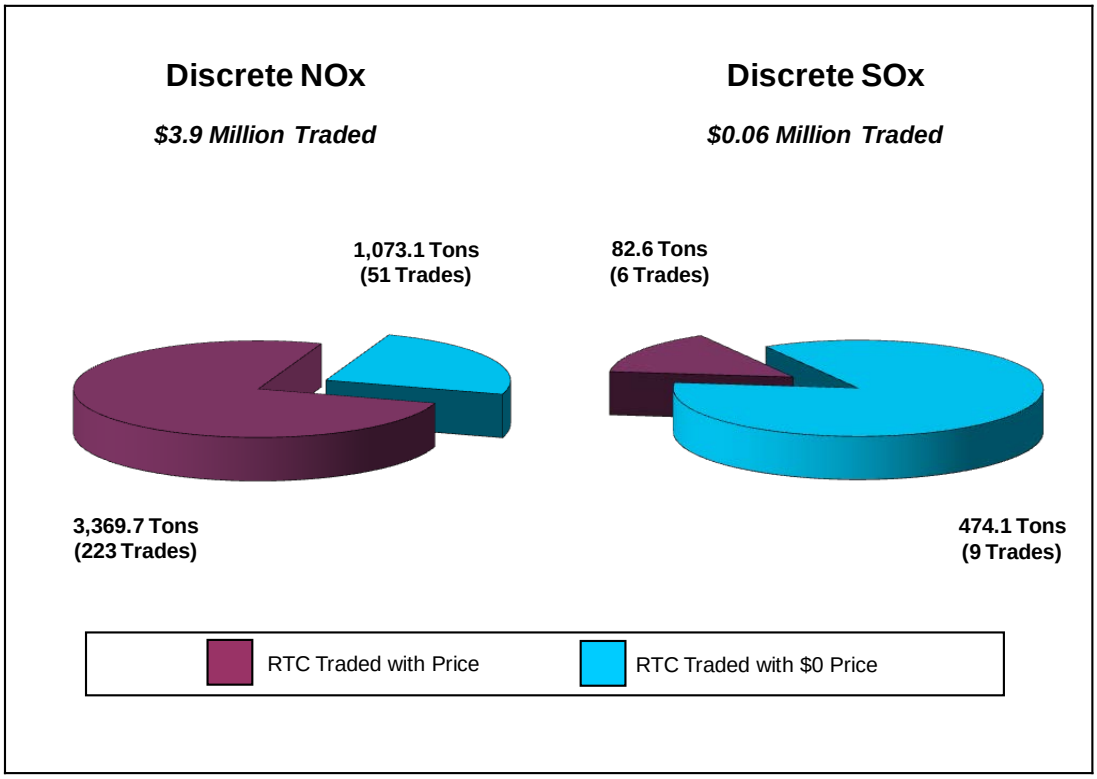
In calendar year 2013, there were a total of 274 discrete NOx RTC trades (223 trades with price and 51 trades with zero price) and 15 discrete SOx RTC trades (six trades with price and nine trades with zero price), excluding swap trades. Most of the trading of discrete NOx RTCs included RTCs for Compliance Years 2012 through 2015. There was one NOx trade that involved RTCs for Compliance Years 2016, 2017, and 2018. Most of the trading of discrete SOx RTCs included RTCs for Compliance Years 2012 and 2013. There was one SOx trade that involved RTCs for Compliance Years 2015 and 2016.

Discrete RTC trading values increased significantly in calendar year 2013. The 223 NOx trades with price totaled $3.9 million in value. This is almost double the $2.0 million in calendar year 2012. The six discrete SOx trades with price totaled $0.06 million in value, which also is double the $0.03 million traded in calendar year 2012.

The overall quantity of discrete NOx RTCs traded in calendar year 2013, 4,443 tons, increased from 3,301 tons traded in calendar year 2012. Total quantity of discrete NOx RTCs traded with price also increased to 3,370 tons in 2013 from 2,150 tons in calendar year 2012. There were a total of 1,073 tons of discrete NOx RTCs traded with zero price in 2013. The overall quantity of discrete SOx RTCs traded decreased from 1,091 tons to 557 tons. However, the quantity of discrete SOx RTCs traded with price more than doubled from 35 tons in 2012 to

83 tons in 2013. There were also 474 tons of discrete SOx RTCs trades with zero price. Figure 2-5 illustrates the trading activity of discrete RTCs (excluding swaps) for calendar year 2013.

Figure 2-5
Calendar Year 2013 Trading Activity for Discrete RTCs (Excluding Swaps)



IYB RTC Trading Activity

In calendar year 2013, there were 26 IYB NOx trades and six IYB SOx trades. The IYB NOx trades included Compliance Years 2012, 2013, 2014, or 2015 as the start year, while the IYB SOx trades included Compliance Years 2013 or 2014 as the start year. Of the 26 IYB NOx trades, 17 trades were with price and 9 trades with zero price. Of the six IYB SOx trades, four trades were with price and two trades were with zero price.

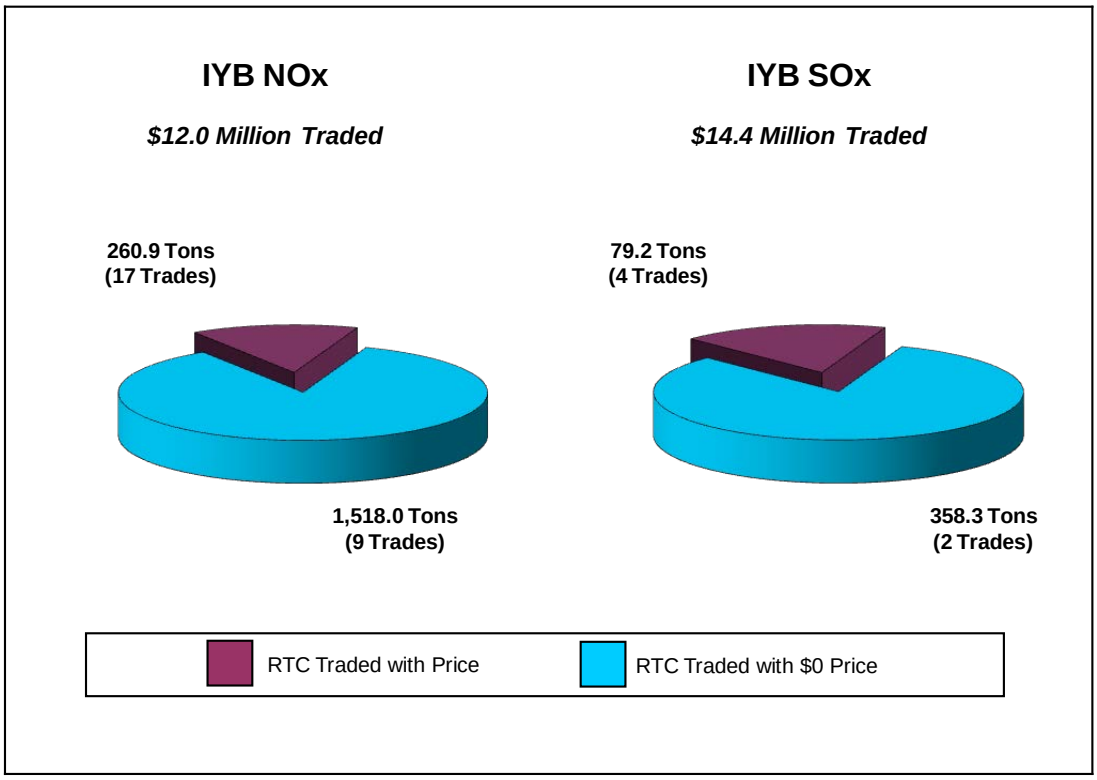
The 17 IYB NOx trades with price totaling $12 million in calendar year 2013 were much higher than the 13 trades with price for $2.2 million in 2012. The four IYB SOx RTC trades with price totaling $14.4 million in calendar year 2013 were just slightly lower than the $14.6 million traded in 2012.

The total quantity of 1,779 tons of IYB NOx traded in Calendar Year 2013 was much higher than the 131 tons traded in Calendar Year 2012. There were 261 tons of IYB NOx traded with price in calendar year 2013 compared to only 47 tons traded in calendar year 2012. The total quantity of IYB SOx traded in Calendar Year 2013 was 438 tons, which is less than the 569 tons traded in

Calendar Year 2012. The 79.2 tons of IYB SOx traded with price in 2013 also was lower than the 116 tons traded in calendar year 2012.

In addition to trades with price, there were also nine IYB NOx trades totaling 1,518 tons and two IYB SOx trades totaling 358 tons traded with zero price in calendar year 2013. Of the IYB NOx RTCs traded without price, 1,496 tons were the result of changes of operator transferring their SCAQMD issued allocations from their old operators to their new operators. All 358 tons of the IYB SOx RTCs traded without price were due to a change of operator and the associated transfer of IYB SOx RTCs that were originally issued by SCAQMD. Figure 2-6 illustrates the calendar year 2013 IYB RTC trading activity excluding swap trades.

Figure 2-6
Calendar Year 2013 Trading Activity for IYB RTCs (Excluding Swaps)



Prior to the amendment of Rule 2007 – Trading Requirements in May 2001, swap information and details of discrete and IYB trades were not required to be provided by trade participants. In compiling data for calendar years 1994 through part of 2001, any trade registration involving IYB RTCs was considered as a single IYB trade and swap trades were assumed to be nonexistent. Trading activity since inception of the RECLAIM program is illustrated in Figures 2-7 through 2-10 (discrete NOx trades, discrete SOx trades, IYB NOx trades, and IYB SOx trades, respectively) based on the trade reporting methodology described earlier in this report.

As mentioned in the beginning of this section, there was a set of changes of operator between two companies in 2013. These changes resulted in significant amounts of RTCs transferred between these two companies both with and without prices and were the main cause in the increased trading activity in 2013. Some of the transfers of RTCs resulting from these changes of operator occurred with price and the others were with $0 price. The transfers with $0 included only RTCs that were originally issued to the facilities by SCAQMD and included 468 tons of discrete NOx RTCs, 128 tons of discrete SOx RTCs, 771 tons of IYB NOx RTCs and 358 tons of IYB SOx RTCs. The other transfers included RTCs that were previously purchased from other sources by the previous operator and included 48 tons of discrete year SOx RTCs (58% of total volume of discrete SOx RTCs traded with price), 202 tons of IYB NOx RTCs (77% of total volume of IYB NOx RTCs traded with price) and 78.7 tons of IYB SOx RTCs (99% of total volume of IYB SOx RTCs traded with price). These transfers totaled $0.04 million for the discrete year SOx RTCs (67% of total value discrete SOx RTCs traded), $9.2 million for the NOx IYB RTCs (77% of total value of NOx IYB RTCs traded) and $14.3 million for the IYB SOx RTCs (84% of total value of SOx IYB RTCs traded).

Figure 2-7
Discrete NOx RTC Trades (Excluding Swaps)

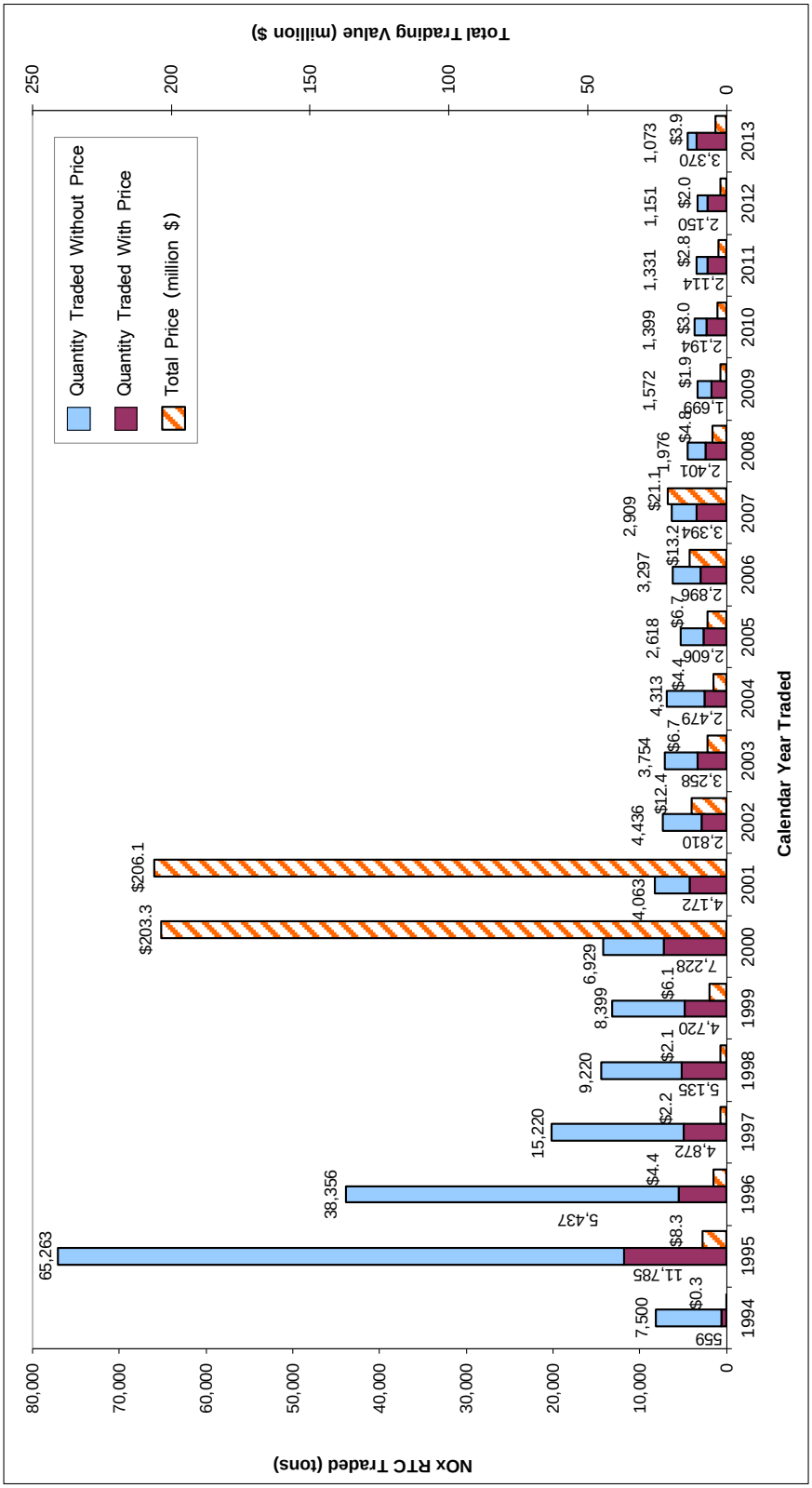


Figure 2-8
Discrete SOx RTC Trades (Excluding Swaps)

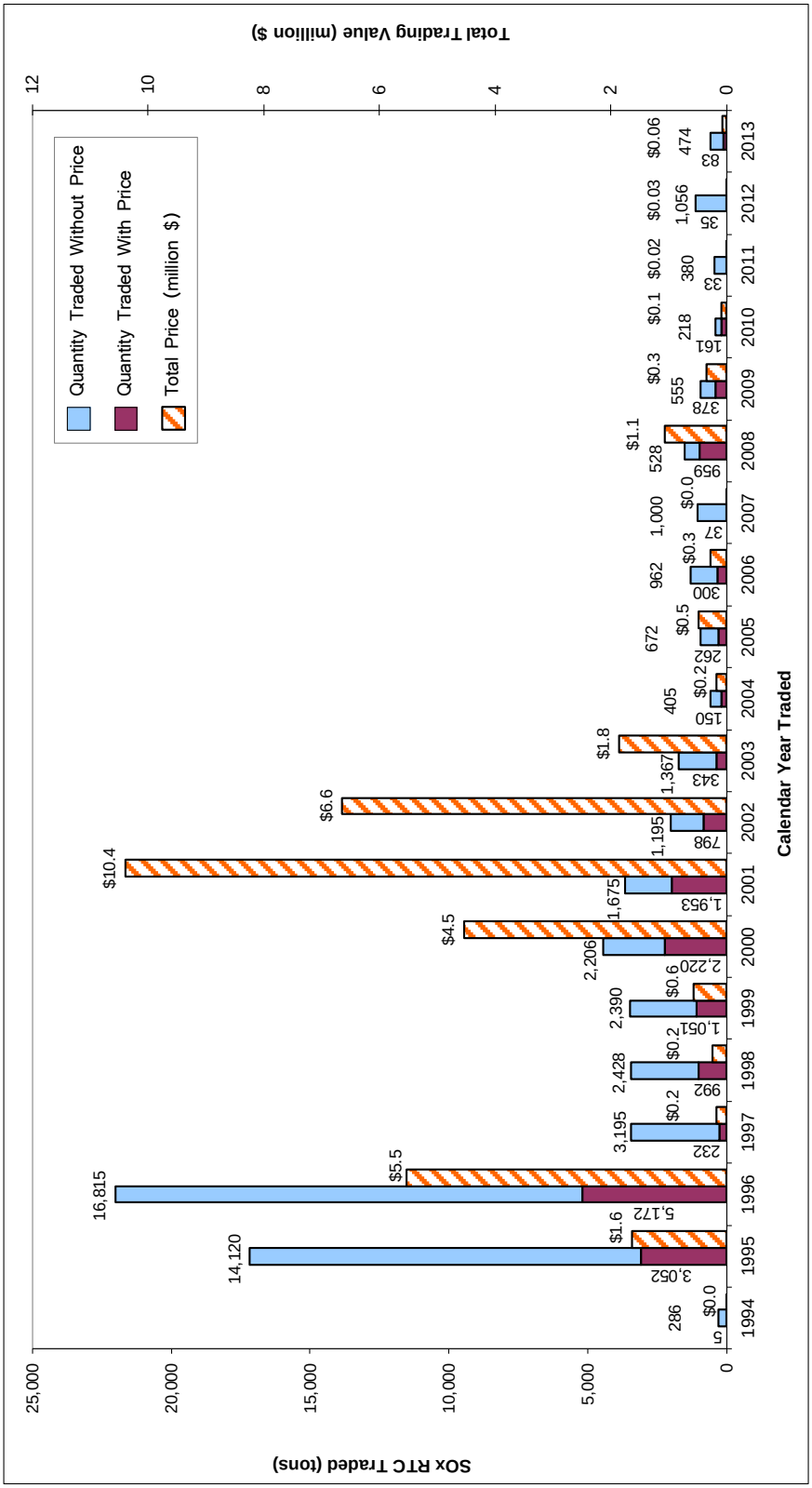


Figure 2-9
IYB NOx RTC Trades (Excluding Swaps)

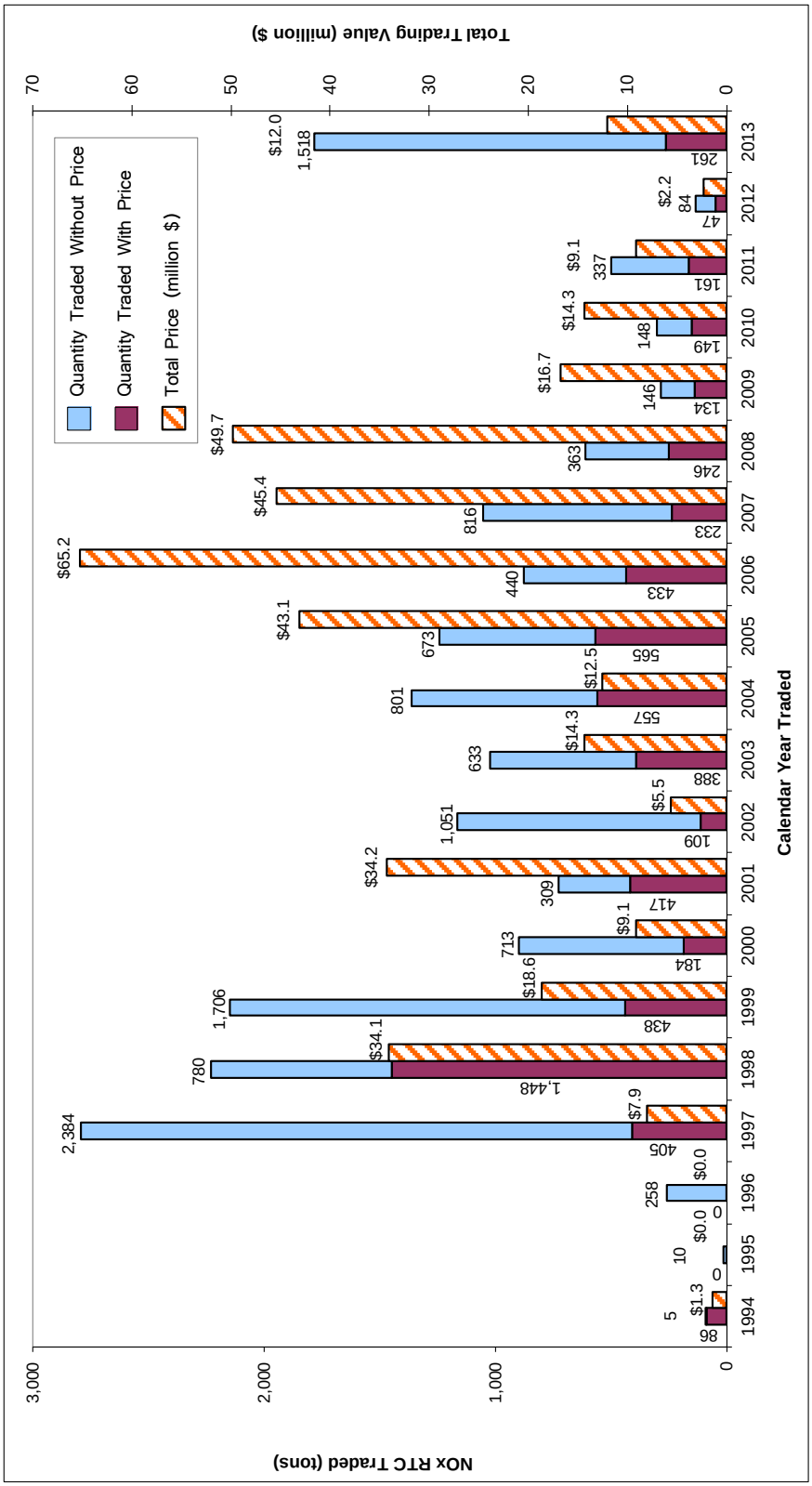
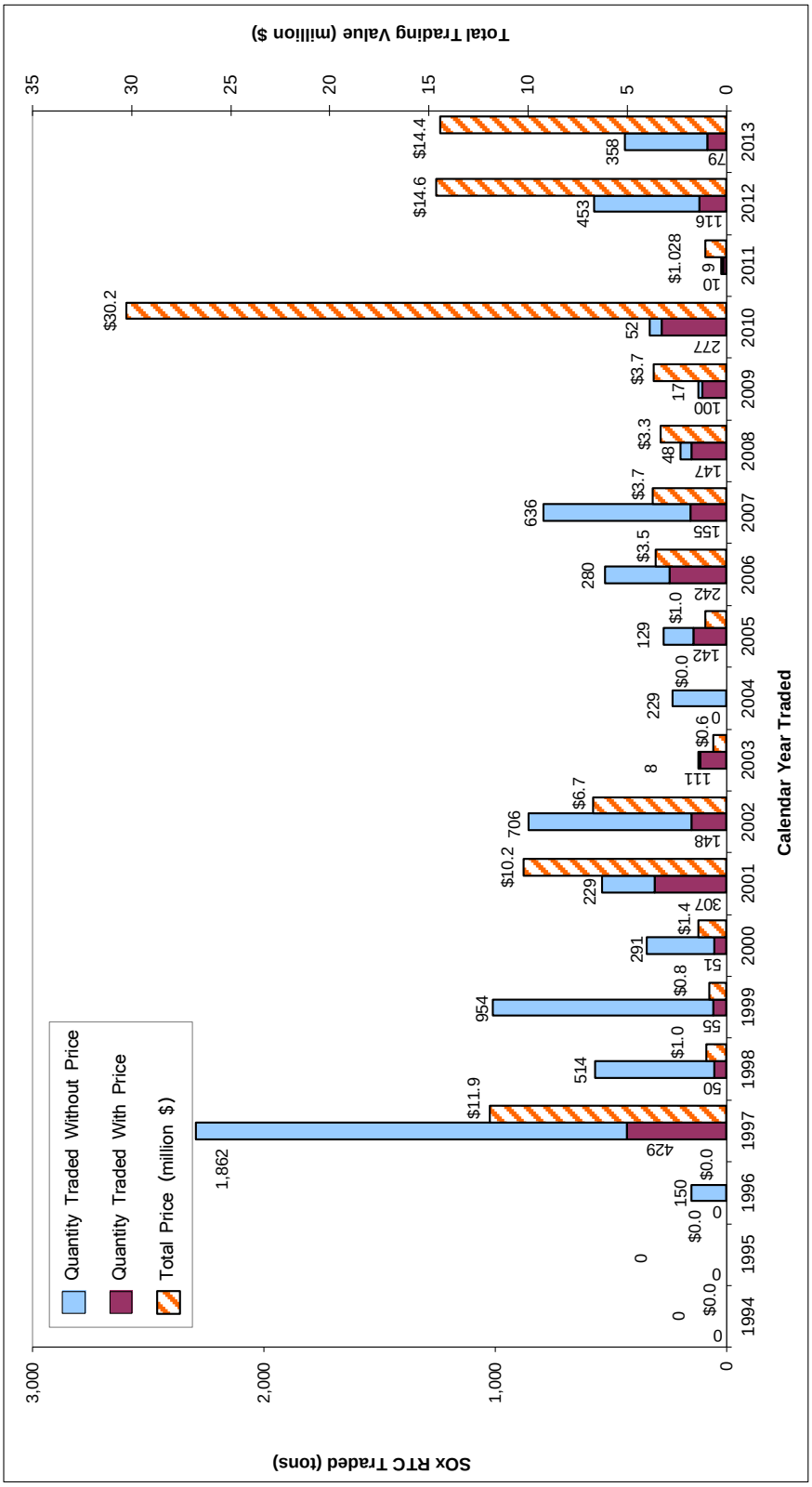


Figure 2-10
IYB SOx RTC Trades (Excluding Swaps)



Swap Trades

In addition to traditional trades of RTCs for a price, RTC swaps also occurred between trading partners. There were swaps of RTCs with different zones, cycles, expiration years, and pollutants. In some cases, swaps involved a combination of RTCs and cash payment as a premium. Trading parties swapping RTCs were required to report the agreed upon price of RTCs for each trade even though, with the exception of the above-described premiums, no money was actually exchanged. Over $2.74 million in total value was reported from RTCs that were swapped in calendar year 2013. The swap values are based on the prices reported on the RTC trade registrations. Since RTC swap trades occur when two trading partners exchange RTCs, values reported on both trades involved in the exchange are included in the calculation of the total value reported. However, in cases where commodities other than RTCs are involved in the swap, these commodity values are not included in the above reported total value (*e.g.,* in the case of a swap of NOx RTCs valued at $10,000 for another set of RTCs valued at $8,000 together with a premium of $2,000, the value of such a swap would have been reported at $18,000 in Table 2-2).

For calendar years that have swap transactions with large values (*e.g.,* 2009) the inclusion of swap transactions in the average trade price calculations would have resulted in calculated average annual prices dominated by swap transactions, and therefore, may not be representative of market prices actually paid for RTCs. Prices of swap trades are excluded from analysis of average trade prices because the values of the swap trades are solely based upon prices agreed upon between trading partners and do not reflect actual funds transferred. Tables 2-2 and 2-3 present the calendar years 2001 through 2013 RTC swaps for NOx and SOx, respectively.

Table 2-2
NOx Registrations Involving Swaps*

Year	Total Value ($ millions)	IYB RTC Swapped with Price (tons)	Discrete RTC Swapped with Price (tons)	Number of Swap Registrations with Price	Total Number of Swap Registrations
2001	$24.29	6.0	612.2	71	78
2002	$14.31	64.3	1,701.7	94	94
2003	$7.70	69.9	1,198.1	64	64
2004	$3.74	0	1,730.5	90	90
2005	$3.89	18.7	885.3	53	53
2006	$7.29	14.8	1,105.9	49	49
2007	$4.14	0	820.0	43	49
2008	$8.41	4.5	1,945.8	48	50
2009	$55.76	394.2	1,188.4	37	42
2010	$3.73	18.2	928.5	25	31
2011	$2.00	0	775.5	25	32
2012	$1.29	0	928.1	36	36
2013	$2.41	11.6	1,273.5	44	44

* There are swaps that are without price. Swaps without price are strictly transfers of RTCs between trading partners and their respective brokers. Information regarding swap trades was not required prior to May 9, 2001.

Table 2-3
SOx Registrations Involving Swaps*

Year	Total Value ($ millions)	IYB RTC Swapped with Price (tons)	Discrete RTC Swapped with Price (tons)	Number of Swap Registrations with Price	Total Number of Swap Registrations
2001	$1.53	18.0	240.0	3	4
2002	$6.11	26.6	408.4	30	30
2003	$5.88	20.9	656.0	32	32
2004	$0.39	0	161.8	13	13
2005	$2.16	43.5	227.8	13	14
2006	$0.02	0	24.4	2	2
2007	$0.00	0	0	0	0
2008	$0.40	0	197.0	5	8
2009	$3.63	55.3	401.3	9	10
2010	$6.89	79.4	417.0	16	18
2011	$0.25	0	228.5	3	4
2012	$27.01	100.0	7.5	4	4
2013	$0.33	3.1	5.5	2	2

* There are swaps that are without price. Swaps without price are strictly transfers of RTCs between trading partners and their respective brokers. Information regarding swap trades was not required prior to May 9, 2001.

RTC Trade Prices

Discrete-Year RTC Prices

In calendar year 2013, the average annual prices for discrete-year NOx RTCs were $549 per ton for Compliance Year 2012, $1,080 per ton for Compliance Year 2013 RTCs, and $1,881 per ton for Compliance Year 2014. The highest NOx average price was $3,800 per ton for Compliance Year 2018 RTCs. There was only one trade that involved discrete-year NOx RTCs for Compliance Years 2016, 2017, and 2018.

The average annual prices for discrete-year SOx RTCs were $291 per ton for Compliance Year 2012, $485 per ton for Compliance Year 2013, and $900 per ton for Compliance Years 2015 and 2016[2]. There was only one trade that involved discrete-year SOx RTCs for Compliance Years 2015 and 2016 and this trade was also associated with the change of operator. The $485 per ton for Compliance Year 2013 SOx RTCs traded in calendar year 2013 is less than the corresponding $759 per ton Compliance Year 2012 SOx RTCs traded in calendar year 2012. These discrete-year SOx RTCs average prices are based on only three trades for each of these calendar years. Averages based on such small populations are expected to be highly variable.

Figures 2-11 and 2-12 present the average annual prices for discrete-year NOx and SOx RTCs during calendar years 2005 through 2013, respectively. Note that prices for a Compliance Year's RTCs may also be shown for the calendar year after those RTCs expired, since the average price for each compliance year is based on sales of both Cycle 1 RTCs expiring in December of that year, as well as Cycle 2 RTCs expiring in June of the following year. Furthermore, Cycle 1 RTCs expiring in December may be traded during the 60-day reconciliation period following the expiration date, which extends into the next calendar year.

Average annual prices in calendar year 2013 for discrete NOx and SOx RTCs for all compliance years remained well below the $15,000 per ton threshold to evaluate and review the compliance aspects of the program set forth by SCAQMD Rule 2015, as well as the $40,067 per ton of NOx and $28,848 per ton of SOx discrete RTCs pre-determined overall program review thresholds established by the Governing Board pursuant to Health and Safety Code §39616(f).

[2] There were no discrete-year SOx RTCs for Compliance Year 2014 traded in calendar year 2013.

Figure 2-11
Average Annual Prices for Discrete-Year NOx RTCs during Calendar Years 2005 through 2013

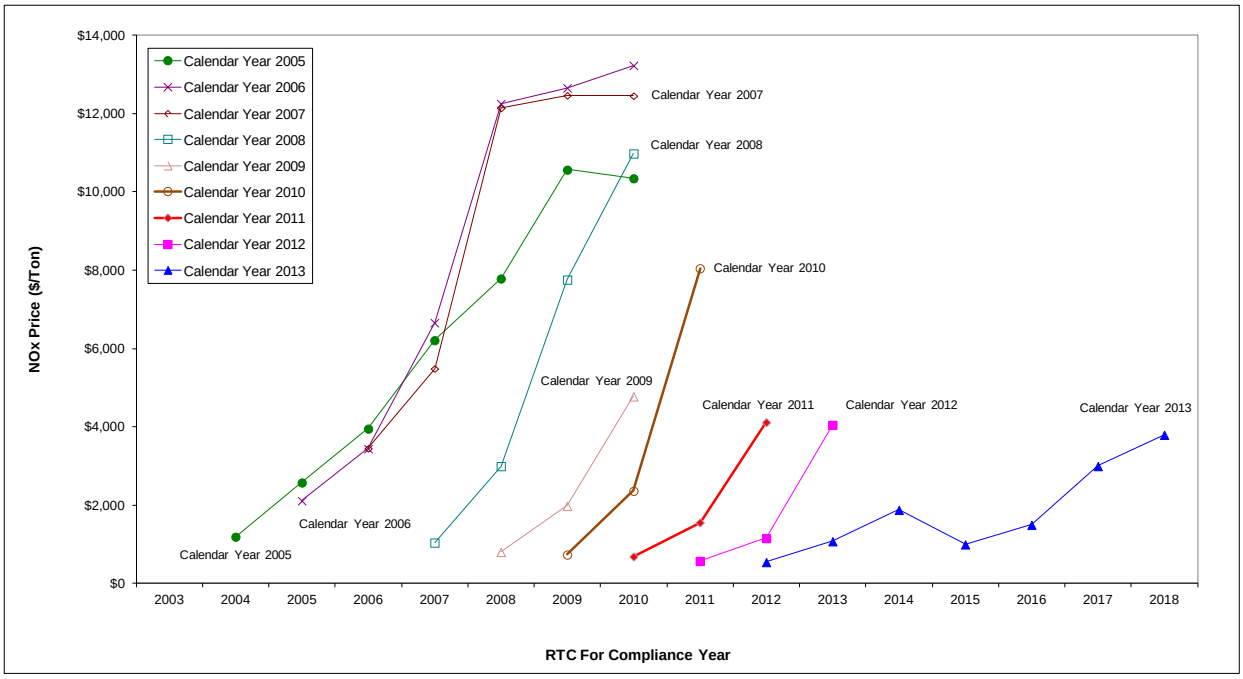
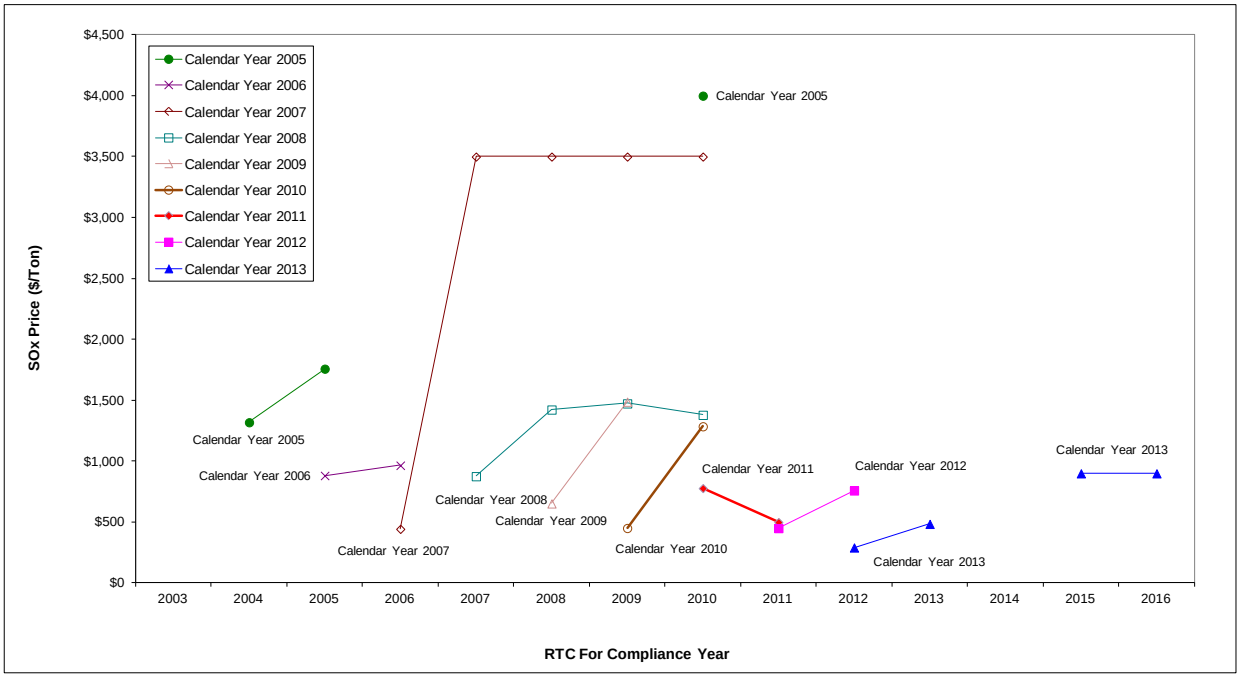


Figure 2-12
Average Annual Prices for Discrete-Year SOx RTCs during Calendar Years 2005 through 2013



Twelve-Month Rolling Average Prices of Compliance Year 2012 NOx RTCs

The January 2005 RECLAIM amendments directed the Executive Officer to calculate the 12-month rolling average price of NOx RTCs ("rolling average price") "for all trades for the current compliance year" excluding "RTC transactions reported at no price." Swap transactions are also excluded from the calculation of rolling average prices.

In the event that the rolling average price exceeds $15,000 per ton, the Executive Officer is required to report the rolling average price to the Governing Board. If the Governing Board determines that the rolling average price exceeds $15,000 per ton, SCAQMD is required to review the compliance aspects of the RECLAIM program. In its resolution amending Rule 2002(f) on January 7, 2005, the Governing Board directed the Executive Officer to report the NOx RTC 12-month rolling average price data to the Stationary Source Committee (SSC) at least quarterly. Accordingly, such reports have been prepared by SCAQMD staff and submitted to the SSC on a quarterly basis. To date, the twelve-month rolling average prices have been far below and have not exceeded the $15,000 per ton threshold. Staff continues to monitor the twelve-month rolling average price of current-year NOx RTCs on a monthly basis and report the rolling average prices to the Stationary Source Committee on a quarterly basis.

As shown in Table 2-4, the twelve-month rolling average prices of Compliance Year 2013 NOx RTCs have generally been flat or declining since January 2013 and have not exceeded the $15,000 per ton threshold specified in Rule 2002(f). Therefore, it was not necessary for the Executive Officer to report the rolling average price to the Governing Board or for the Governing Board to require a compliance audit. For Compliance Year 2012 NOx RTCs, the same findings were true and were included in the RECLAIM Annual Audit Report for 2011 Compliance Year, submitted to the Governing Board in March 2013.

Table 2-4
Twelve-Month Rolling Average Prices of Compliance Year 2013 NOx RTCs

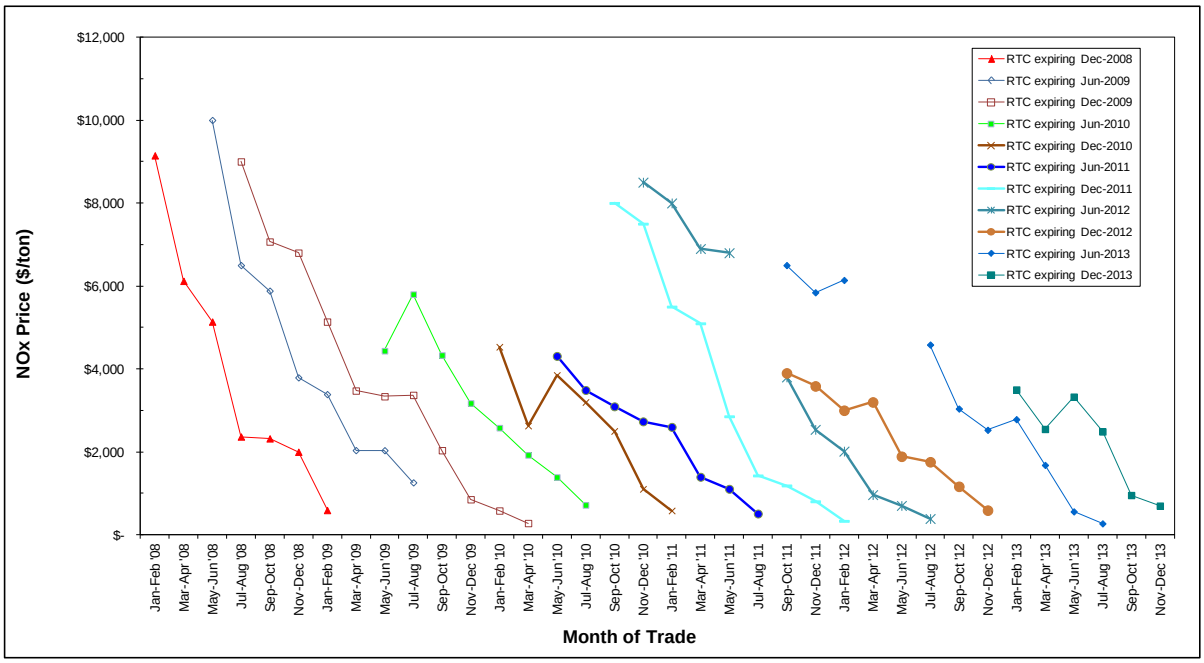
Reporting Month	12-Month Period	Average Price ($/ton)
January 2013	January through December 2012	$4,053
February 2013	February 2012 through January 2013	$4,044
March 2013	March 2012 through February 2013	$4,044
April 2013	April 2012 through March 2013	$4,042
May 2013	May 2012 through April 2013	$3,765
June 2013	June 2012 through May 2013	$3,765
July 2013	July 2012 through June 2013	$3,758
August 2013	August 2012 through July 2013	$3,665
September 2013	September 2012 through August 2013	$3,643
October 2013	October 2012 through September 2013	$1,849
November 2013	November 2012 through October 2013	$1,522
December 2013	December 2012 through November 2013	$1,444
January 2014	January through December 2013	$1,080

Average Price for NOx RTCs Nearing Expiration

Generally, RTC prices decrease as their expiration dates approach and during the sixty days after their expiration dates during which they can be traded. RTC prices are usually lowest during the 60 day-period following their expiration date during which facilities are allowed to trade and obtain RTCs to cover their emissions. This general trend has been repeated every year since 1994 except for Compliance Years 2000 and 2001 (during the California energy crisis), when NOx RTC prices increased as the expiration dates approached because the power plants' NOx emissions increased significantly and there was a shortage of NOx RTCs. Prices for NOx RTCs that expired in calendar year 2013 followed the general trend of RTC prices declining over the course of the Compliance Year and the sixty-day trading period thereafter.

The bi-monthly average price for these near-expiration NOx RTCs is shown in Figure 2-13 to illustrate the general price trend for these RTCs. The general declining trend of RTC prices nearing and just past expiration indicates that there was an adequate supply to meet RTC demand during the final reconciliation period following the end of the compliance years. A similar analysis is not performed for the price of SOx RTCs nearing expiration because there are not enough SOx trades over the course of the year to yield meaningful data, however SOx RTC prices have generally followed the same trends.

Figure 2-13
Bi-Monthly Average Price for NOx RTCs near Expiration



Note: Data is presented for a limited number of RTC expiration dates for graphical clarity.

IYB RTC Prices

The average annual price for IYB NOx RTCs traded in calendar year 2013 is $45,914 per ton, which is lower than the average annual price of $48,146 per ton traded in calendar year 2012. The average annual price for IYB SOx RTCs traded in calendar year 2013 is $181,653 per ton, which is higher than the $125,860 per ton traded in calendar year 2012. There were only four IYB SOx trades with price totaling 79 tons in 2013, which is lower than the 116 tons traded in 2012. However, the IYB SOx RTC average price was dominated by one IYB SOx trade resulting from a change of operator that accounted for over 99% of the trading volume. Data regarding IYB RTCs traded with price (excluding swap trades) for NOx and SOx RTCs and their average annual prices since 1994 are summarized in Tables 2-5 and 2-6, respectively. In calendar year 2013, the average annual IYB RTC prices did not exceed the $601,010 per ton of NOx RTCs or the $432,727 per ton of SOx RTCs program review thresholds established by the Governing Board pursuant to California Health and Safety Code §39616(f).

Table 2-5
IYB NOx Pricing (Excluding Swaps)

Calendar Year	Total Reported Value ($ millions)	IYB RTC Traded with Price (tons)	Number of IYB Registrations With Price	Average Price ($/ton)
1994*	$1.3	85.7	1	$15,623
1995*	$0.0	0	0	N/A
1996*	$0.0	0	0	N/A
1997*	$7.9	404.6	9	$19,602
1998*	$34.1	1,447.6	23	$23,534
1999*	$18.6	438.3	19	$42,437
2000*	$9.1	184.2	15	$49,340
2001*	$34.2	416.9	25	$82,013
2002	$5.5	109.5	31	$50,686
2003	$14.3	388.3	28	$36,797
2004	$12.5	557.0	52	$22,481
2005	$43.1	565.3	71	$76,197
2006	$65.2	432.9	50	$150,665
2007	$45.4	233.5	25	$194,369
2008	$49.7	245.6	27	$202,402
2009	$16.7	134.2	14	$124,576
2010	$14.3	149.0	13	$95,761
2011	$9.1	160.7	29	$56,708
2012	$2.2	46.6	13	$48,146
2013	$12.0	260.9	17	$45,914

* No information regarding swap trades was reported until May 9, 2001.

Table 2-6
IYB SOx Pricing (Excluding Swaps)

Calendar Year	Total Reported Value ($ millions)	IYB RTC Traded with Price (tons)	Number of IYB Registrations With Price	Average Price ($/ton)
1994*	$0.0	0	0	N/A
1995*	$0.0	0	0	N/A
1996*	$0.0	0	0	N/A
1997*	$11.9	429.2	7	$27,738
1998*	$1.0	50.0	1	$19,360
1999*	$0.8	55.0	3	$14,946
2000*	$1.4	50.6	5	$27,028
2001*	$10.2	306.8	8	$33,288
2002	$6.7	147.5	5	$45,343
2003	$0.6	110.9	1	$5,680
2004	$0.0	0.0	0	N/A
2005	$1.0	141.5	3	$7,409
2006	$3.5	241.7	12	$14,585
2007	$3.7	155.2	5	$23,848
2008	$3.3	146.8	5	$22,479
2009	$3.7	100.0	4	$36,550
2010	$30.2	277.0	10	$109,219
2011	$1.03	10.0	2	$102,366
2012	$14.6	116.2	4	$125,860
2013	$14.4	79.2	4	$181,653

* No information regarding swap trades was reported until May 9, 2001.

Market Participants

RECLAIM market participants have traditionally included RECLAIM facilities, brokers, commodity traders, and private investors. Starting in calendar year 2004, mutual funds joined the traditional participants in RTC trades. Market participation expanded further in 2006, when foreign investors started participating in RTC trades. However, foreign investors have not participated in any RTC trades since calendar year 2008 and foreign investors do not hold any current or future RTCs at this time.

RECLAIM facilities are the original sources and users of RTCs. They usually sell their surplus RTCs by the end of the compliance year or when they have a long-term decrease in emissions. Brokers match buyers and sellers, and usually do not purchase or own RTCs. Commodity traders and private investors actually invest in and own RTCs in order to seek profits by trading them. For discussion in this report, “investors” include all parties who hold RTCs other than RECLAIM facility permit holders and brokers.

Investor Participation

Investors were involved in 133 of the 223 discrete NOx RTC trades with price, one of the six discrete SOx RTC trades with price, 16 of the 17 IYB NOx trades with price and three of the four IYB SOx trades with price in calendar year 2013.

Investors' involvement in discrete NOx and SOx trades registered with price in calendar year 2013 is illustrated in Figures 2-14 and 2-15. Figure 2-14 is based on total value of discrete NOx and SOx RTCs traded, and shows that investors were involved in 31% and 0.5%, respectively, of the NOx and SOx trades reported by value. Figure 2-15 is based on discrete volume traded with price and shows that investors were involved in 44% and 0.5% of the NOx and SOx trades by volume, respectively. Figures 2-16 and 2-17 provide similar data for both IYB NOx and SOx trades, and show that investors were involved in 23% of IYB NOx trades and 0.4% of IYB SOx trades on a reported value basis, and 22% of IYB NOx and 0.6% of IYB SOx trades on the basis of the number of pounds traded with price. These involvement figures are relatively low when compared to investor involved trades in calendar year 2012.

Figure 2-14
Calendar Year 2013 Investor-Involved Discrete NOx and SOx Trades Based on Value Traded

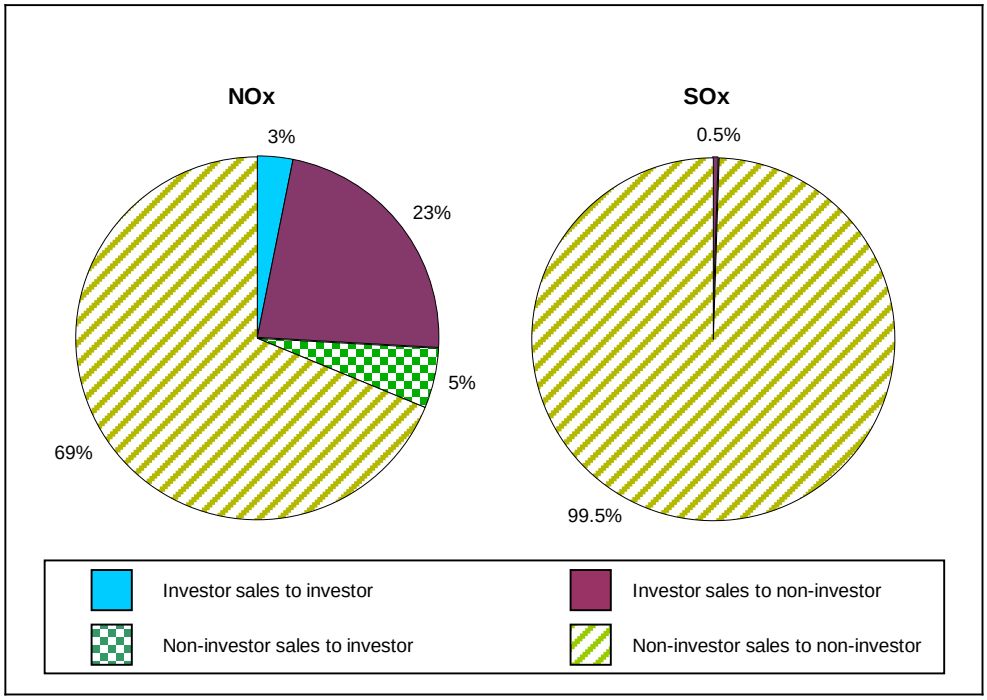


Figure 2-15
Calendar Year 2013 Investor-Involved Discrete NOx and SOx Trades Based on Volume Traded with Price

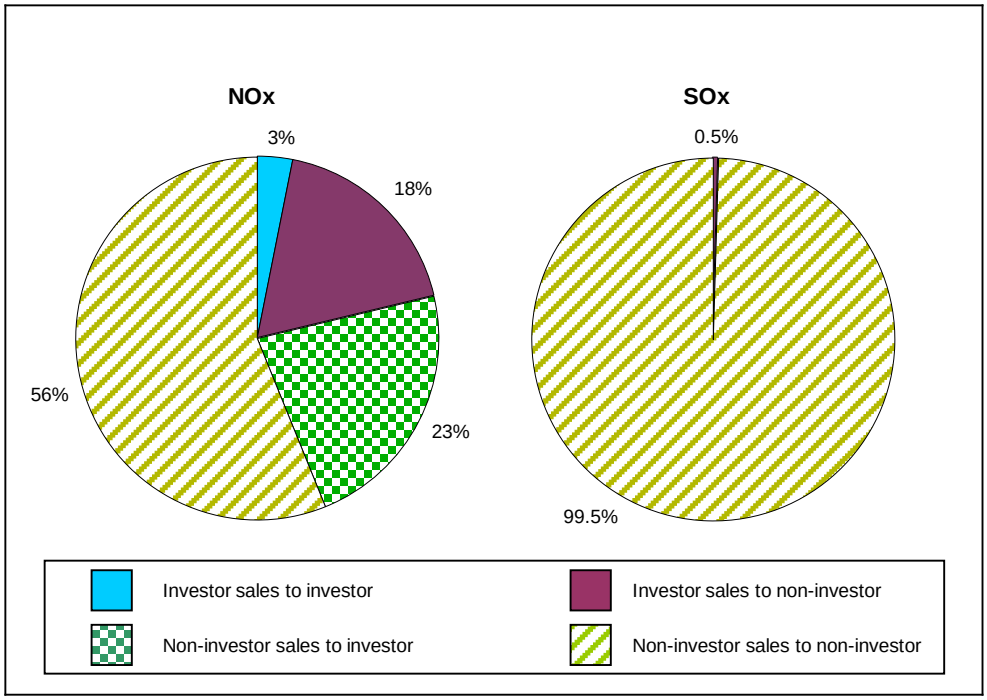


Figure 2-16
Calendar Year 2013 Investor-Involved IYB NOx and SOx Trades Based on Value Traded

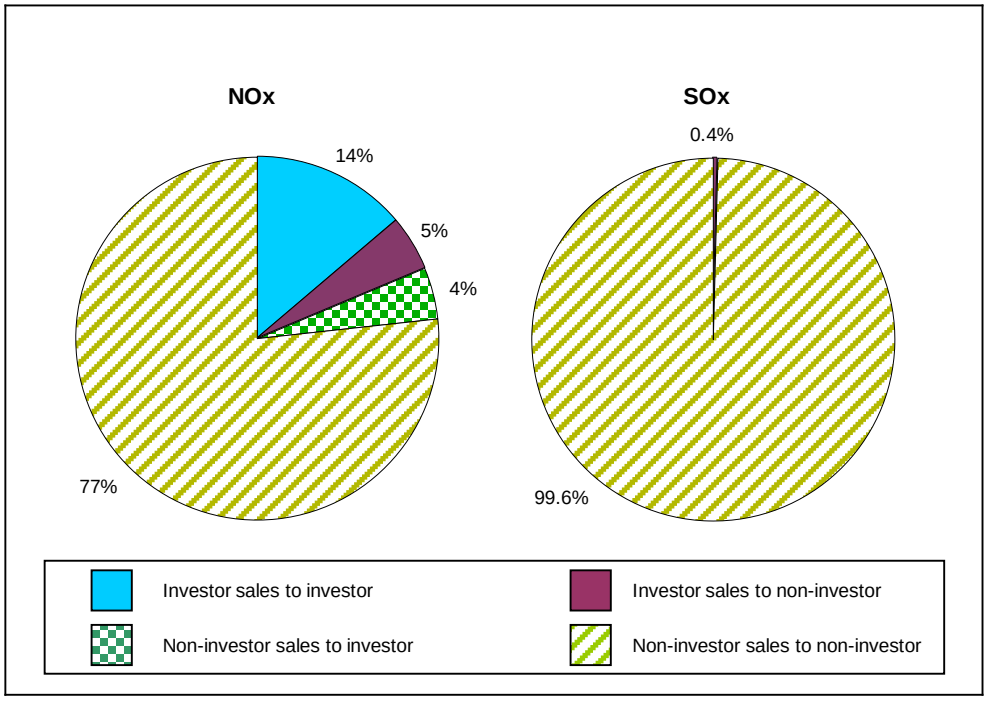
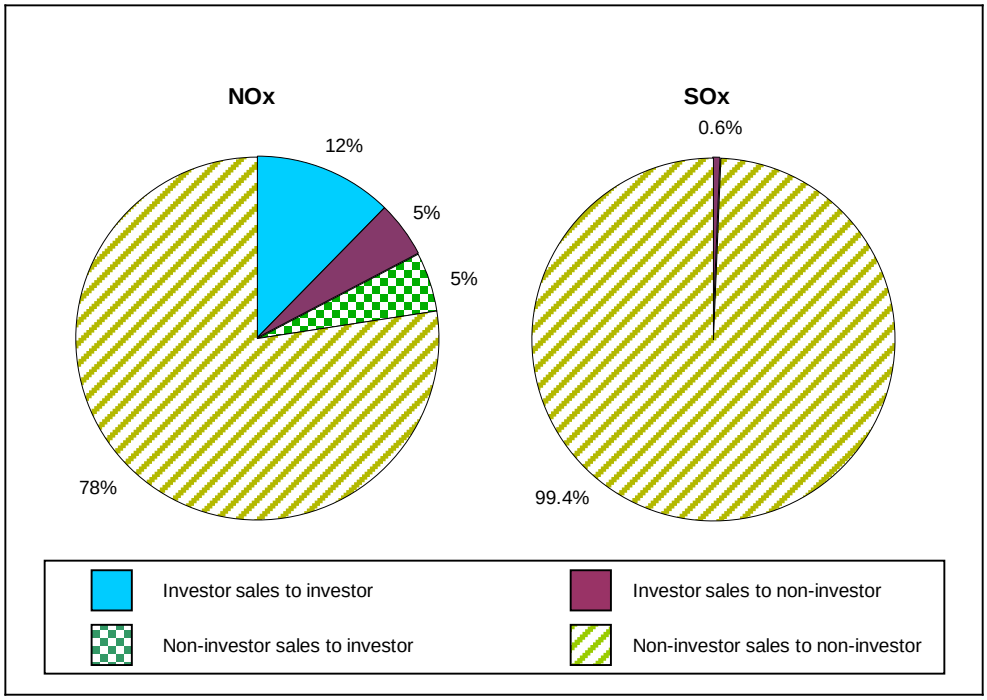


Figure 2-17
Calendar Year 2013 Investor-Involved IYB NOx and SOx Trades Based on Volume Traded with Price



As mentioned in previous sections, there were RTC transfers due to changes of operator between two companies in calendar 2013. The amount of RTCs traded with price as a result of the changes of operator were significant and skewed the above percentages to show a lower investor participation rate, especially in IYB RTC trades. These transfers were the result of RECLAIM facilities changing hands and not influenced by RTC market activities. As such, Figures 2-18 through 2-21 are presented to show investor participation rates after removing these trades in the same manner as in Figures 2-14 through 2-17, respectively. Figures 2-14, 2-15, 2-18, and 2-19 together show that investor involvement in discrete-year RTC trades was appreciably less in calendar year 2013 than it has been in recent years, even with the effect of the change of operator removed. However, investor involvement in IYB RTC trades is still significant (100% in both NOx and SOx IYB RTC trades) when the effect of the change of operator is removed.

Figure 2-18
Calendar Year 2013 Investor-Involved Discrete NOx and SOx Trades Based on Value Traded (with trades resulting from change of operator removed)

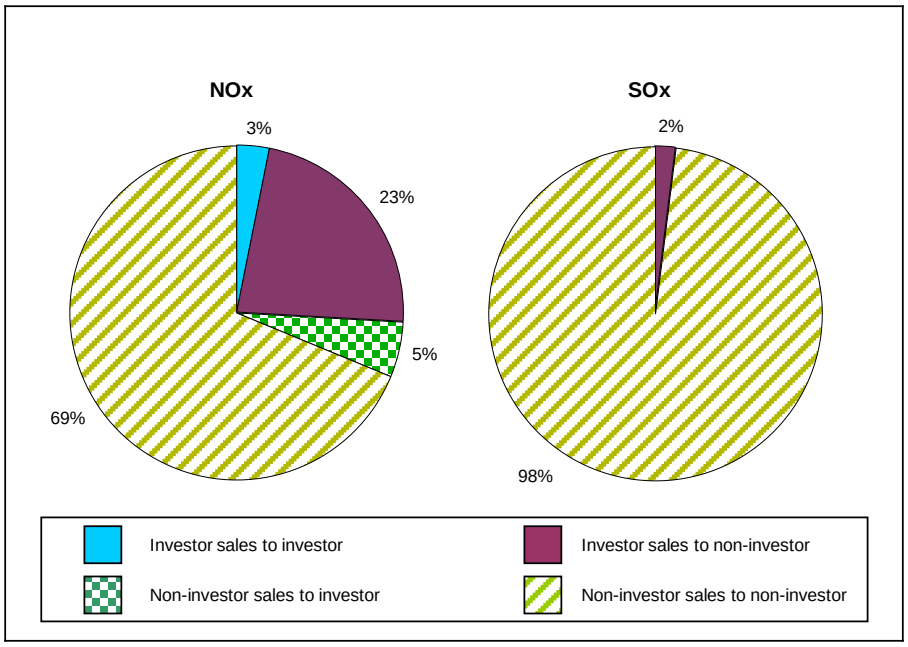


Figure 2-19
Calendar Year 2013 Investor-Involved Discrete NOx and SOx Trades Based on Volume Traded with Price (with trades resulting from change of operator removed)

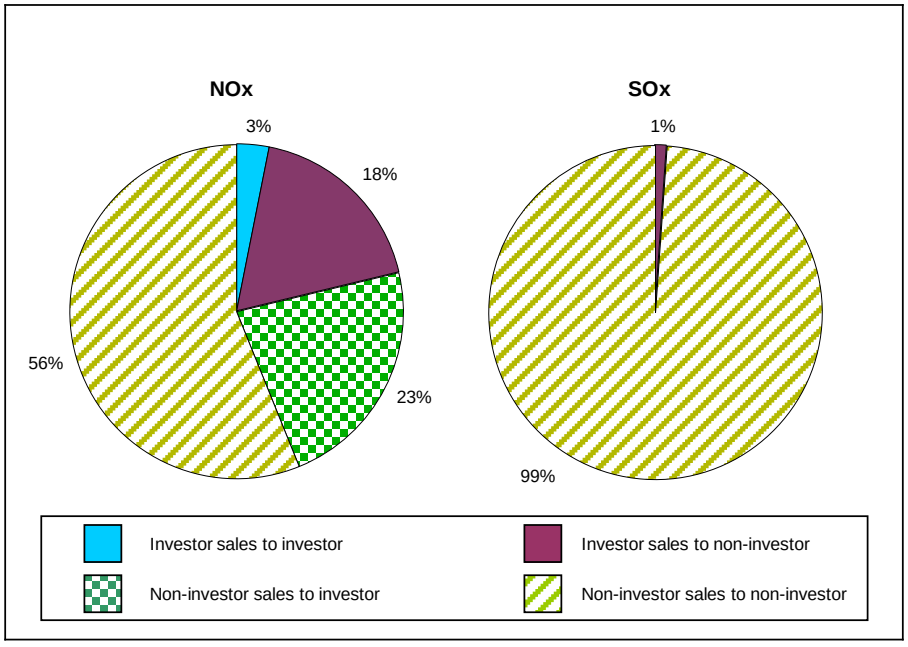


Figure 2-20
Calendar Year 2013 Investor-Involved IYB NOx and SOx Trades Based on Value Traded (with trades resulting from change of operator removed)

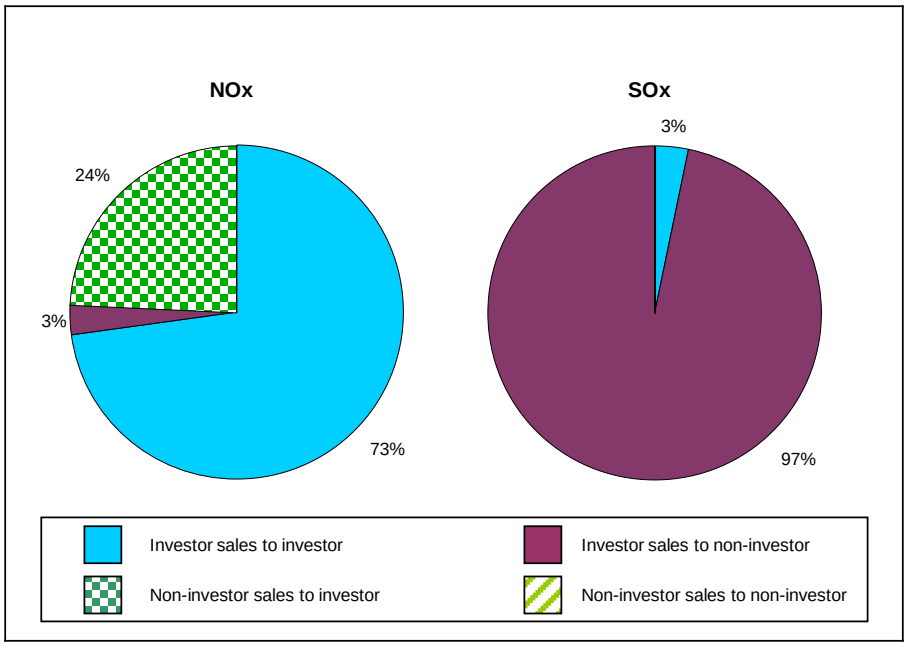
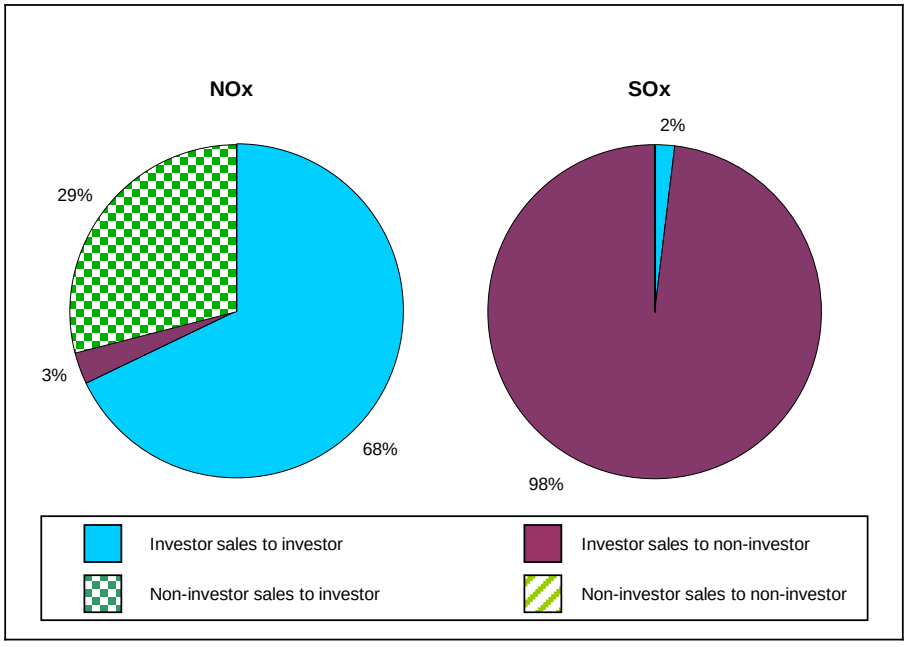


Figure 2-21
Calendar Year 2013 Investor-Involved IYB NOx and SOx Trades Based on Volume Traded with Price (with trades resulting from change of operator removed)



As of the end of calendar year 2013, investors' holding of IYB NOx RTCs was unchanged at 4.9% compared to the end of calendar year 2012. Mutual fund investors hold 2.7% of all IYB NOx RTCs, down from 3.2% at the end of calendar year 2012. Investors slightly increased their holding of IYB SOx RTCs to 0.9% at the end of calendar year 2013 from 0.7% at the end of calendar year 2012. No IYB SOx RTCs are currently held by mutual fund investors.

The supply of IYB RTCs available for sale has been mainly from facilities that have permanently shut down or that were in the process of doing so. There were five RECLAIM facilities that shut down during Compliance Year 2012 (refer to Chapter 1). One of the five facilities participated in both the NOx and SOx RECLAIM program. This facility did not hold any IYB NOx or IYB SOx RTCs. The remaining four NOx-only facilities held a total of 8.4 tons of IYB NOx RTCs. Of this amount, 2.4 tons of IYB NOx RTCs were sold to investors, 4.7 tons of IYB NOx RTCs were sold to non-investors, and the remaining 1.3 tons of IYB NOx RTCs have not been sold or transferred. Note that the majority of these sales occurred prior to calendar year 2013, as facilities often decrease production in years prior to shutting down.

Investor Impacts on RTC Market

Theoretically, the role of investors in this market is to provide capital for installing air pollution control equipment that costs less than the market value of credits. In addition, investors can also improve price competitiveness. This market theory may not fully apply to RECLAIM due to the uniqueness of the program because RECLAIM facility operators have no substitute for RTCs, and short of curtailing operations, pollution controls cannot be implemented within a short time period. That is, there is no alternative source of credits available to RECLAIM facilities when RTC prices increase (they do not have the option to switch to another source of credits when RTCs become expensive). Therefore, they may be at the mercy of owners of surplus or investor-owned RTCs in the short term, particularly during times of rapid price increases, as evidenced in 2000 and 2001 during the California energy crisis.

To put investors' holdings in context, RECLAIM facilities have generally held back approximately 10% of their allocations each compliance year as a margin to ensure that they did not inadvertently find themselves exceeding their allocations (failing to reconcile by securing sufficient RTCs to cover their emissions) if their reported emissions were increased as the result of any problems or errors discovered by SCAQMD staff during annual audits. For Compliance Year 2012, the total RECLAIM NOx emissions were 7,810 tons. However, Compliance Year 2012 spans a period marked by a depressed economy with lower production at many manufacturing facilities and thus emissions were lower compared to historical levels. If the economy were to improve, total RECLAIM NOx emissions may approach recent historical levels (historical emission trends are illustrated in Figure 7-1). RECLAIM NOx emissions as recent as Compliance Year 2007 totaled 8,794 tons. If the recovering economy was to cause emissions to return to the 2007 level, the NOx RTC surplus would be only 895 tons (9% of allocation), which is slightly less than the traditional 10% compliance margin. Therefore, the current aggregate investors' holdings of 4.9% of NOx IYB RTCs (more than half the total surplus IYB RTCs in this scenario) have the potential to result in a sellers' market. The current rule development effort to further reduce

the overall NOx supply to reflect current BARCT (refer to Chapter 3) has the potential to increase the importance of investors' holdings of RTCs.

While it can be argued that the holding of IYB NOx RTCs by investors as a group is still small relative to the total supply of IYB NOx RTCs (4.9% overall), there is no clear basis to estimate the level of IYB RTCs available for sale by non-investors or the extent of additional emissions reductions that will be achieved in future years. IYB RTCs represent an even more critical aspect of the program because these streams of RTCs are sought after to support growth at new or existing facilities. Active facilities are less likely to sell their future year RTCs as IYB. As a result, new RECLAIM facilities or facilities with modifications resulting in emissions increases are potentially at the mercy of investors holding IYB RTCs. Although investors' holdings of IYB NOx RTCs did not change during calendar year 2013, they have the ability to purchase RTCs at any time so there is the potential for investors' holdings of IYB NOx RTCs to increase in the future.

On the other hand, overall emissions in RECLAIM will certainly change and can be affected by various factors including installation of more emission control equipment, production changes, inclusion of additional facilities into the RECLAIM universe, and shifts in industry sectors and in the economy, in general. In January 2005, SCAQMD identified cost-effective control opportunities outside the power producing industry that would amount to 3.7 tons per day of additional NOx reductions based on historical production rates. Staff anticipates that there are two primary mechanisms that will drive the implementation of these control technologies: implementation of BACT when existing sources reach the end of their useful lives and are replaced, and demand for RTCs approaching the supply driving up RTC prices and incentivizing the installation of emission controls. The first of these mechanisms will occur gradually over time and the second is unlikely to be significant until economic conditions change resulting in increased production at RECLAIM facilities. The significance of investors' holdings will certainly depend on the ability of RECLAIM facilities to generate adequate emissions reductions in time to dampen the effect of a sellers' market that may exist if demand surges in a short period of time, as it did during the California energy crisis of 2000-2001. Proposals to generate emission reduction credits from sources outside of RECLAIM (*i.e.*, mobile and area sources) can also dampen sudden price increases. SCAQMD staff continues to monitor investor participation in the market to ensure that such participation does not adversely impact the RECLAIM program.

Other Types of RTC Transactions and Uses

Another type of RTC trade, besides traditional trading and swapping activities, is a trade involving the contingent right (option) to buy or sell RTCs. In those transactions, one party pays a premium for the right to purchase or sell RTCs owned by the other party at a pre-determined price within a certain time period. Until RTCs are transferred from seller to buyer, prices for options are not reported, because the seller is not paid for the actual RTCs, but only for the right to purchase or sell the RTCs at a future date. These rights may or may not be actually exercised. RTC traders are obligated to report options to the SCAQMD within five business days of reaching an agreement. These reports are posted on the SCAQMD website. There was no reported trade involving the contingent right (option) to buy or sell RTCs in calendar year 2013.

As in prior years, RTCs were used in other programs during calendar year 2013. A total of 1.8 tons of NOx RTCs and 0.8 tons of SOx RTCs were surrendered to satisfy variance conditions. These consisted of discrete year RTCs only. However, no RTCs were surrendered to mitigate impacts from construction projects in calendar year 2013.

CHAPTER 3
EMISSION REDUCTIONS ACHIEVED

Summary

For Compliance Year 2012, aggregate NOx emissions were below total allocations by 19% and aggregate SOx emissions were below total allocations by 40%. No emissions associated with breakdowns were excluded from reconciliation with facility allocations in Compliance Year 2012. Accordingly, no mitigation is necessary to offset excluded emissions due to approved Breakdown Emission Reports. Therefore, based on audited emissions, it can be concluded that RECLAIM achieved its targeted emission reductions for Compliance Year 2012. With respect to the Rule 2015 backstop provisions, Compliance Year 2012 aggregate NOx and SOx emissions were both well below aggregate allocations and, as such, did not trigger the requirement to review the RECLAIM program.

Background

One of the primary objectives of the annual RECLAIM program audits is to assess whether RECLAIM is achieving its targeted emission reductions. Those targeted emission reductions are embodied in the annual allocations issued to RECLAIM facilities. In particular, the annual allocations reflect required emission reductions initially from the subsumed command-and-control rules and control measures, as well as from subsequent changes to BARCT. In January 2005, the Board adopted an amendment to Rule 2002 to further reduce RECLAIM NOx allocations to implement the latest BARCT. The amendments to Rule 2002 called for the NOx allocation reductions to be phased-in during Compliance Years 2007 through 2011. These changes resulted in cumulative NOx allocation reductions of 22.5% (7.7 tons/day; 2,811 tons/year) from all RECLAIM facilities by Compliance Year 2011, with the biggest single-year reduction of 11.7% in Compliance Year 2007. Similarly, the Board again amended Rule 2002 in November 2010 to implement changes in BARCT for SOx. Specifically, the November 2010 amendments called for reducing aggregate RECLAIM SOx emissions by 2,081 tons per year (48%), with the reductions phased-in from Compliance Year 2013 through Compliance Year 2019. A little over half of the SOx reductions were scheduled to occur in Compliance Year 2013 (recently completed for Cycle 1 facilities and concluding June 30, 2014 for Cycle 2 facilities).

Emissions Audit Process

Since the inception of the RECLAIM program, SCAQMD has conducted annual program audits of the emissions data submitted by RECLAIM facilities to ensure the integrity and reliability of facility reported data. The process includes reviews of APEP reports submitted by RECLAIM facilities and audits of field records and emission calculations. The audit process is described in further detail in Chapter 5 – Compliance.

SCAQMD staff adjusts the APEP-reported emissions based on audit results, as necessary. Whenever SCAQMD staff finds discrepancies, they discuss the

findings with the facility operators and provide the operators an opportunity to review changes resulting from facility audits and to present additional data or information in support of the data stated in their APEP reports. This rigorous audit process, although resource intensive, reinforces RECLAIM's emissions monitoring and reporting requirements and enhances the validity and reliability of the reported emissions data. The audited emissions are used to determine if a facility complied with its allocations. The most recent five compliance years' audited emissions for each facility are posted on SCAQMD's web page after the audits are completed. Additionally, all emissions data presented in this annual RECLAIM audit report are compiled from audited facility emissions.

Emission Trends and Analysis

RECLAIM achieves its emission reduction goals on an aggregate basis by ensuring that annual emissions are below total RTCs. It is important to understand that the RECLAIM program is successful at achieving these emission reduction goals even when some individual RECLAIM facilities exceed their RTC account balances, provided aggregate RECLAIM emissions do not exceed aggregate RTCs issued. Therefore, aggregate NOx or SOx emissions from all RECLAIM sources are the basis for determining whether the programmatic emission reduction goals for that emittant are met each year. In aggregating emissions from RECLAIM facilities, audited emissions are used in the Annual RECLAIM Report for that Compliance Year. Table 3-1 and Figure 3-1 show aggregate NOx emissions based on audited emission data for Compliance Years 1994 through 2012.

Table 3-1 and Figure 3-1 show that, programmatically, there were excess NOx RTCs remaining after accounting for audited NOx emissions for every compliance year since 1994, except for Compliance Year 2000 when NOx emissions exceeded the total allocations for that year due to the California energy crisis. Since Compliance Year 2007, the first year of the programmatic reduction in RECLAIM NOx allocations which were adopted by the Governing Board as part of the January 2005 rule amendments, the unused NOx RTCs have been at least 20 percent of the aggregate allocations. There may be other forces at play to cause such results in addition to actual emission reductions implemented through the application of air pollution control systems by RECLAIM facilities. Potentially, the effects of the nation's economic downturn and slow recovery over the last few years may also be contributing to lower aggregate emissions in the RECLAIM universe, although less so for Compliance Year 2012 as the economy has begun to improve. As shown in Table 3-1, Compliance Year 2012 NOx emissions increased about 7% when compared to 2011 and almost 10% compared to Compliance Year 2010. This may be a reflection of the economic turnaround in the region.

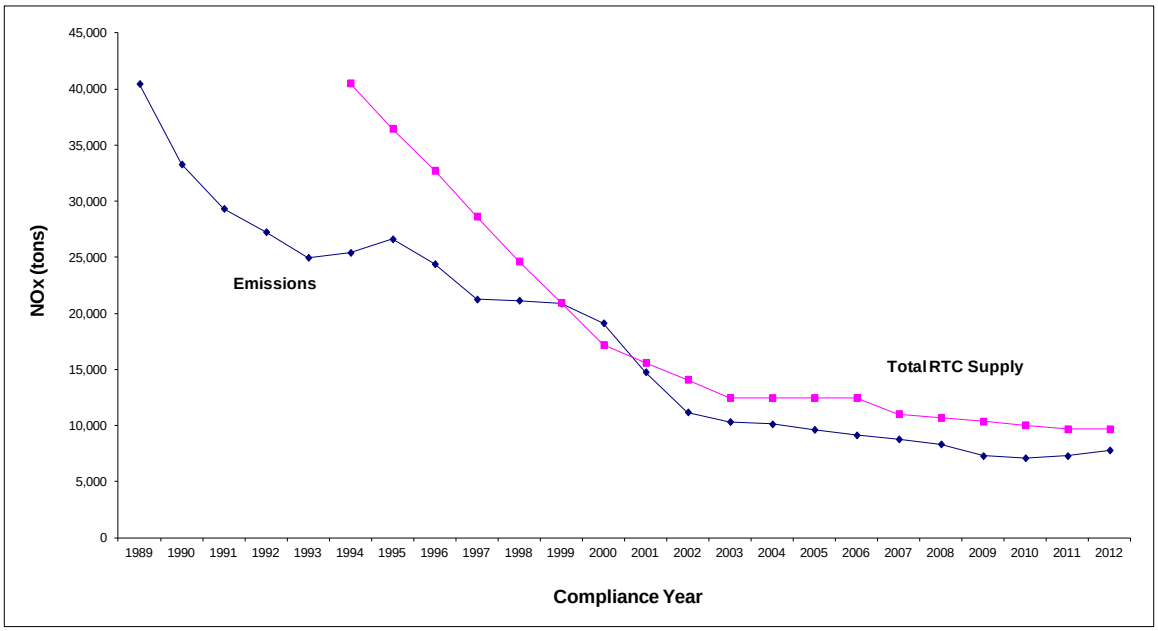
Table 3-1
Annual NOx Emissions for Compliance Years 1994 through 2012

Compliance Year	Audited Annual NOx Emissions[1] (tons)	Audited Annual NOx Emissions Change from 1994 (%)	Total NOx RTCs[2] (tons)	Unused NOx RTCs (tons)	Unused NOx RTCs (%)
1994	25,420	0%	40,534	15,114	37%
1995	26,632	4.8%	36,484	9,852	27%
1996	24,414	-4.0%	32,742	8,328	25%
1997	21,258	-16%	28,657	7,399	26%
1998	21,158	-17%	24,651	3,493	14%
1999	20,889	-18%	20,968	79	0.38%
2000	19,148	-25%	17,208	-1,940	-11%
2001	14,779	-42%	15,617	838	5.4%
2002	11,201	-56%	14,111	2,910	21%
2003	10,342	-59%	12,485	2,143	17%
2004	10,134	-60%	12,477	2,343	19%
2005	9,642	-62%	12,484	2,842	23%
2006	9,152	-64%	12,486	3,334	27%
2007	8,794	-65%	11,046	2,252	20%
2008	8,346	-67%	10,705	2,359	22%
2009	7,300	-71%	10,377	3,077	30%
2010	7,116	-72%	10,053	2,937	29%
2011	7,302	-71%	9,690	2,388	25%
2012	7,810	-69%	9,689	1,879	19%

[1] The RECLAIM universe is divided into two cycles with compliance schedules staggered by six months. Compliance years for Cycle 1 facilities run from January 1 through December 31 and Cycle 2 compliance years are from July 1 through June 30.

[2] Total RTCs = Allocated RTCs + RTCs from ERC conversion.

Figure 3-1
NOx Emissions and Available RTCs



Similar to Table 3-1 and Figure 3-1 for NOx, Table 3-2 presents aggregate annual SOx emissions data for each compliance year based on audited emissions, and Figure 3-2 compares these audited aggregate annual SOx emissions with the aggregate annual SOx RTC supply. As shown in Table 3-2 and Figure 3-2, RECLAIM facilities have not exceeded their SOx allocations on an aggregate basis in any compliance year since program inception. For Compliance Year 2012, SOx emissions were below total allocations by 40%. Similar to the unused NOx RTCs, the unused SOx RTCs for the last four compliance years, inclusive of Compliance Year 2012, remain in excess of 30%. The data indicates that RECLAIM met its programmatic SOx emission reduction goals and demonstrated equivalency in SOx emission reductions compared to the subsumed command-and-control rules and control measures. Based on audited emission data, annual SOx emissions have followed a general downward trend, except for increases in Compliance Years 1995, 1997, 2005, and 2007 compared to their respective previous year.

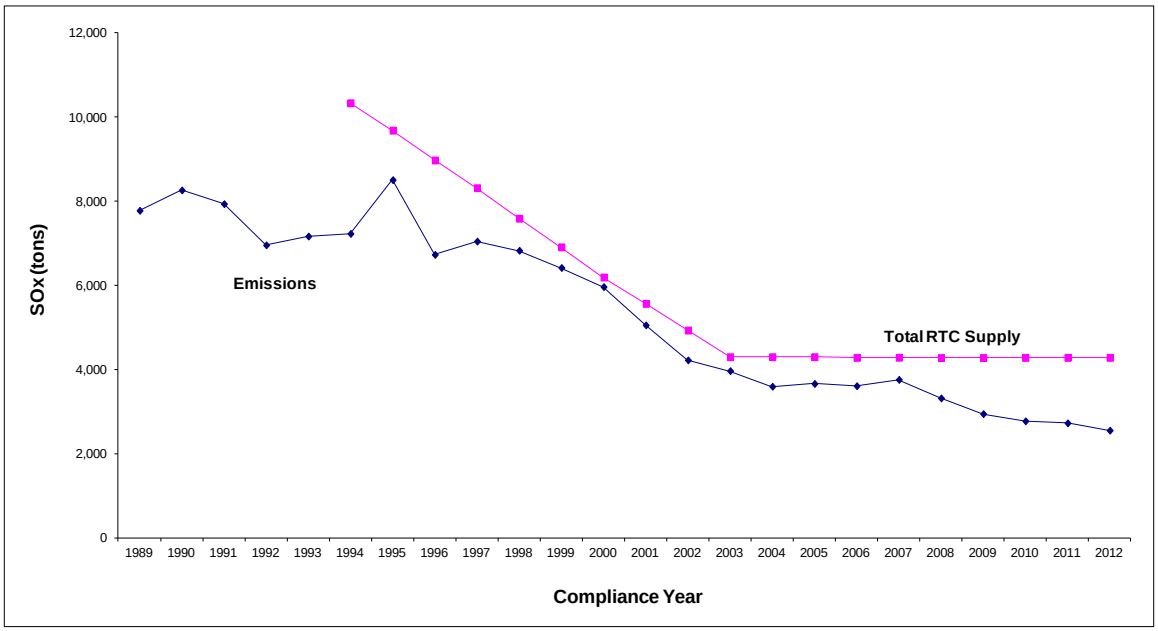
Table 3-2
Annual SOx Emissions for Compliance Years 1994 through 2012

Compliance Year	Audited Annual SOx Emissions[1] (tons)	Audited Annual SOx Emissions Change from 1994 (%)	Total SOx RTCs[2] (tons)	SOx RTCs Left Over (tons)	SOx RTCs Left Over (%)
1994	7,230	0%	10,335	3,105	30%
1995	8,508	18%	9,685	1,177	12%
1996	6,731	-6.9%	8,976	2,245	25%
1997	7,048	-2.5%	8,317	1,269	15%
1998	6,829	-5.5%	7,592	763	10%
1999	6,420	-11%	6,911	491	7.1%
2000	5,966	-17%	6,194	228	3.7%
2001	5,056	-30%	5,567	511	9.2%
2002	4,223	-42%	4,932	709	14%
2003	3,968	-45%	4,299	331	7.7%
2004	3,597	-50%	4,299	702	16%
2005	3,663	-49%	4,300	637	15%
2006	3,610	-50%	4,282	672	16%
2007	3,759	-48%	4,286	527	12%
2008	3,319	-54%	4,280	961	22%
2009	2,946	-59%	4,280	1,334	31%
2010	2,775	-62%	4,282	1,507	35%
2011	2,727	-62%	4,283	1,556	36%
2012	2,552	-65%	4,283	1,731	40%

[1] The RECLAIM universe is divided into two cycles with compliance schedules staggered by six months. Compliance years for Cycle 1 facilities run from January 1 through December 31 and Cycle 2 compliance years are from July 1 through June 30.

[2] Total RTCs = Allocated RTCs + RTCs from ERC conversion.

Figure 3-2
SOx Emissions and Available RTCs



Comparison to Command-and-Control Rules

RECLAIM subsumed a number of command-and-control rules[1] and sought to achieve reductions equivalent to these subsumed rules. RECLAIM facilities are exempt from the subsumed rules' requirements that apply to SOx or NOx emissions once the facilities comply with the applicable monitoring requirements of Rules 2011 - Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Sulfur (SOx) Emissions or 2012 - Requirements for Monitoring, Reporting, and Recordkeeping for Oxides of Nitrogen (NOx) Emissions, respectively. During Compliance Year 2012, one of the subsumed rules, Rule 1110.2 – Emissions from Gaseous and Liquid-Fueled Engines, was amended on September 7, 2012. Even though this rule was subsumed by RECLAIM, the February 1, 2008 amendment to Rule 1110.2 added, in part, emission standards for new non-emergency engines driving electrical generators that are specifically applicable to both RECLAIM and non-RECLAIM facilities. The purpose of the September 2012 rule amendment was to re-affirm the previously adopted emission limits for biogas-powered internal combustion engines as well as to provide: additional time for compliance, a compliance option for a longer averaging time for engines with superior performance in achieving lower mass emissions, and a compliance option that further extends the effective dates for certain engines based on a compliance flexibility fee. This amended rule did not impose a new category-wide equipment emission limit change and did not alter the RECLAIM-related portions of the rule concerning new non-emergency engines driving electrical generators. Instead, it extended the compliance timeline for the command and control emission limit already existing in the 2008 amendment of the rule for operators of biogas-powered internal combustion

[1] See Tables 1 and 2 of Rule 2001.

engines. The emission limit was based on the Interim Report on the Technology Assessment for Rule1110.2 Biogas Engines presented to the Governing Board in July 2010.

Other rules amended or adopted during Compliance Year 2012 but not subsumed by RECLAIM included Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II, Rule 1114 – Petroleum Refining Coking Operations, and Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers.

The May 3, 2013 amendment to Rule 219 – Equipment Not Requiring a Written Permit Pursuant to Regulation II excluded several categories of equipment with de minimus emissions from the requirement to obtain written permits to facilitate the streamlining of the District's permitting system. Similarly, the May 3, 2013 amendment to Rule 222 – Filing Requirements for Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation II included additional categories to the streamlined filing/registration program of Rule 222 and clarified and enhanced the enforceability and the ability to appeal operating conditions issued pursuant to the provisions of that rule.

Rule 1114 – Petroleum Refining Coking Operations, adopted on May 3, 2013, established a depressurization limit of less than two pounds per square inch gauge (psig) pressure prior to venting a coke drum to atmosphere. Additionally, it included into the rule options for alternative compliance schedules and interim limits for facilities not able to meet the less than two psig compliance deadline within six months of rule adoption, depending on the number of delayed coking units they operate. The intent of the adopted rule was to reduce volatile organic compounds, particulate matter, hazardous air pollutants, sulfur compounds and methane emissions released during the delayed coking process at petroleum refineries. Furthermore, the rule also included deadlines for permit applications, installation of monitoring equipment and exemptions from certain Regulation IV requirements.

Finally, on April 5, 2013 Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers was adopted. This rule established requirements for owners or operators of onshore oil and gas wells within SCAQMD's jurisdiction to notify the Executive Officer when conducting well drilling, well completion, and well reworking activities that involve production stimulation activities such as hydraulic fracturing, gravel packing and/or acidizing. Rule 1148.2 also initiated emissions and chemical reporting requirements. Additionally, this rule also impacted suppliers of chemicals and additives used in drilling, rework, and well completion fluids.

Rules 219, 222, 1114, and 1148.2 are not subsumed under RECLAIM, they apply equally to RECLAIM and non-RECLAIM facilities. The amendment to Rule 1110.2 did not impose new emission limits. Therefore, there are no differential impacts between RECLAIM and non-RECLAIM facilities as a result of these rule amendments/adoptions.

Program Amendments

The Governing Board amended Rule 2002 – Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx) in November 2010. These amendments call for SOx RTCs to be adjusted to achieve a 48.4% (2080.5 tons/yr) overall

reduction, phased in from Compliance Year 2013 through Compliance Year 2019. If overall SOx emissions were to remain unchanged at the Compliance Year 2012 level, then emissions would exceed allocations in Compliance Year 2017.

During Compliance Year 2012, there were no new amendments to Regulation XX adopted by SCAQMD's Governing Board. However, on December 7, 2012 SCAQMD Governing Board did adopt the 2012 AQMP, including Control Measure CMB-01 – Further NOx Reductions from RECLAIM that proposes to reduce NOx emissions from RECLAIM sources by three to five tons per day by 2020. The reductions were originally planned for two phases – two to three tons per day by Compliance Year 2015 in Phase I and an additional one to two tons per day by 2020 in Phase II. Rule development is currently underway with an anticipated public hearing in 2014 to consider the reductions as a single amendment (the reductions, if adopted, will most likely be implemented in phases over a number of years).

Breakdowns

Pursuant to Rule 2004(i) – Breakdown Provisions, a facility may request that emissions increases due to a breakdown not be counted towards the facility's allocations. In order to qualify for such exclusion, the facility must demonstrate that the excess emissions were the result of a fire or a mechanical or electrical failure caused by circumstances beyond the facility's reasonable control. The facility must also take steps to minimize emissions resulting from the breakdown, and mitigate the excess emissions to the maximum extent feasible. Applications for exclusion of unmitigated breakdown emissions from a facility's total reported annual RECLAIM emissions must be approved by SCAQMD in writing. In addition, facilities are required to quantify unmitigated breakdown emissions for which an exclusion request has been approved in their APEP report.

As part of the annual program audit report, Rule 2015(d)(3) requires SCAQMD staff to determine whether excess emissions approved to be excluded from RTC reconciliation have been programmatically offset by unused RTCs within the RECLAIM program. If the breakdown emissions exceed the unused RTCs, any excess breakdown emissions must be offset by either: (1) deducting the amount of emissions not programmatically offset from the RTC holdings for the subsequent compliance year from facilities that had unmitigated breakdown emissions, proportional to each facility's contribution to the total amount of unmitigated breakdown emissions; and/or (2) RTCs obtained by the Executive Officer for the compliance year following the completion of the annual program audit report in an amount sufficient to offset the unmitigated breakdown emissions.

As shown in Table 3-3, a review of APEP reports for Compliance Year 2012 found that no facilities requested to exclude breakdown emissions from being counted against their allocations. Thus, for Compliance Year 2012, no additional RTCs are required to offset breakdown emissions pursuant to Rule 2015(d)(3).

Table 3-3
Breakdown Emission Comparison for Compliance Year 2012

Emittant	Compliance Year 2012 Unused RTCs (tons)	Unmitigated Breakdown Emissions[1] (tons)	Remaining Compliance Year 2012 RTCs (tons)
NOx	1,879	0	1,879
SOx	1,731	0	1,731

[1] Data for unmitigated breakdown emissions (not counted against Allocation) as reported under APEP reports.

Impact of Changing Universe

As discussed in Chapter 1, two facilities were included, no facility was excluded and five facilities shut down in Compliance Year 2012. Changes to the universe of RECLAIM facilities have the potential to impact emissions and the supply and demand of RTCs, and therefore, may impact RECLAIM emission reduction goals.

Existing facilities (defined by Rule 2000 as those with valid SCAQMD Permits to Operate issued prior to October 15, 1993 and that continued to be in operation or possess valid SCAQMD permits on October 15, 1993) that are not categorically excluded may choose to enter the program even though they do not meet the inclusion criteria. They may also be included by SCAQMD if their facility-wide emissions increase to four tons or more per year of NOx or SOx or both. When one of these existing facilities enters the program, they are issued RTC allocations based on their operational history pursuant to the methodology prescribed under Rule 2002. Inclusions of existing facilities may affect demand more than supply because even though these facilities are issued RTCs based on their operational history, the amount may not be sufficient to offset their current or future operations. Overall, inclusions shift the accounting of emissions from the universe of non-RECLAIM sources to the universe of RECLAIM sources without actually changing the overall emissions inventory. Finally, inclusions change the rules and requirements that apply to the affected facilities. There were no existing facilities that chose to opt into the RECLAIM program between July 1, 2012 and June 30, 2013 and none were included into the RECLAIM program during Compliance Year 2012 based on the Rule 2001 threshold of actual NOx and/or SOx emissions greater than or equal to four tons per year.

Facilities that received all SCAQMD Permits to Operate on or after October 15, 1993 are defined by Rule 2000 as new facilities. New facilities can choose to enter RECLAIM or can be included due to actual NOx or SOx emissions in excess of four tons or more per year. New facilities are not issued RTCs based on operational history, but any external offsets provided by the facility are converted to RTCs. There was one new facility that elected to opt-in between July 1, 2012 and June 30, 2013. When a new facility joins the RECLAIM universe, it is required to obtain sufficient RTCs to offset its NOx or SOx emissions. These RTCs must be obtained through the trading market and are not issued by SCAQMD to the facility. Such facilities increase the overall

demand for the fixed supply of RTCs because they increase total RECLAIM emissions without increasing the total supply of RTCs.

Additionally, facilities that undergo a partial change of operator may have an impact on emissions, depending on the operating conditions of the facility under the new operator. No additional allocations are issued as a consequence of a facility splitting into two and undergoing a partial change of operator. Therefore, the supplies of NOx and SOx RTCs are not impacted. Between July 1, 2012 and June 30, 2013 there was one facility included into the RECLAIM universe as a result of the partial change of operator of a facility already in RECLAIM.

The shutdown of a RECLAIM facility results in a reduction in actual emissions. The shutdown facility retains its RTC holdings, which it may continue to hold as an investment, transfer to another facility under common ownership, or trade on the market. Therefore, although the facility is no longer emitting, its RTCs may be used at another facility. Shutdown facilities have the opposite effect on the RTC market as do new facilities: the overall demand for RTCs is reduced while the supply remains constant. As reported in Chapter 1, five RECLAIM facilities (one of which was a NOx and SOx facility, and the other four which were NOx-only facilities) shut down permanently between July 1, 2012 and June 30, 2013.

A facility is excluded from the RECLAIM universe if SCAQMD staff determines that the facility was included in the program in error. In such cases, both the emissions and the RTCs that were issued to the facility for future years are withdrawn, thereby having a neutral impact on the RTC supply. Exclusions have the reverse affect as inclusions, in that the accounting of emissions is shifted from the RECLAIM universe of sources to the non-RECLAIM universe of sources. No facilities were excluded between July 1, 2012 and June 30, 2013.

In short, inclusion of new facilities and facilities that result from a partial change of operator, as well as the shutdown of RECLAIM facilities, change the demand for RTCs without changing the supply[2], while exclusions of existing facilities make corresponding changes to both the demand and the supply, thereby mitigating their own impact on the markets and shifting emissions between the RECLAIM and non-RECLAIM universes.

Compliance Year 2012 NOx and SOx audited emissions and initial allocations for facilities that were shut down, excluded, or included into the program during Compliance Year 2012 are summarized in Tables 3-4 and 3-5.

[2] Facilities that were initially permitted after the October 1993 adoption of RECLAIM and that provided NOx or SOx ERCs to offset their emissions are issued RTCs corresponding to the ERCs provided.

Table 3-4
NOx Emissions Impact from the Changes in Universe (Tons)

Category	Compliance Year 2012 NOx Emissions (tons)	Allocated Compliance Year 2012 NOx RTCs (tons)
Shutdown Facilities	4.5	10.0
Excluded Facilities	Not applicable	Not applicable
Included Facilities	172.0	0
RECLAIM Universe	7,810	9,689

Table 3-5
SOx Emissions Impact from the Changes in Universe (Tons)

Category	Compliance Year 2012 SOx Emissions (tons)	Allocated Compliance Year 2012 SOx RTCs (tons)
Shutdown Facilities	1.3	3.7
Excluded Facilities	Not applicable	Not applicable
Included Facilities	Not applicable	Not applicable
RECLAIM Universe	2,552	4,283

Backstop Provisions

Rule 2015 requires that SCAQMD review the RECLAIM program and implement necessary measures to amend it whenever aggregate emissions exceed the aggregate allocations by five percent or more, or whenever the average annual price of RTCs exceeds $15,000 per ton. Compliance Year 2012 aggregate NOx and SOx emissions were both below aggregate allocations as shown in Figures 3-1 and 3-2. At the same time, average annual prices for NOx and SOx RTCs in calendar year 2012 were below $15,000 per ton, as shown in Chapter 2. Therefore, there is no need to initiate a program review.

CHAPTER 4
NEW SOURCE REVIEW ACTIVITY

Summary

The annual program audit assesses New Source Review (NSR) activity from RECLAIM facilities in order to ensure that RECLAIM is complying with federal NSR requirements and state no net increase (NNI) in emissions requirements, while providing flexibility to facilities in managing their operations and allowing new sources into the program. In Compliance Year 2012, a total of 46 NOx RECLAIM facilities had NSR NOx emission increases, and four SOx RECLAIM facilities had NSR SOx emission increases due to expansion or modification. Consistent with all prior compliance years, there were sufficient NOx and SOx RTCs available to allow for expansion, modification, and modernization by RECLAIM facilities.

RECLAIM is required to comply with federal NSR emissions offset requirements at a 1.2-to-1 offset ratio programmatically for NOx emission increases and a 1-to-1 offset ratio for SOx emission increases on a programmatic basis. In Compliance Year 2012, RECLAIM provided an offset ratio based on the compliance year's total unused allocations and total NSR emission increases of 9-to-1 for NOx, demonstrating federal equivalency. RECLAIM inherently complies with the federally-required 1-to-1 SOx offset ratio for any compliance year, provided aggregate SOx emissions under RECLAIM are lower than or equal to aggregate SOx allocations for that compliance year. As shown in Chapter 3, there was no programmatic SOx exceedance during Compliance Year 2012; in fact, there was a surplus of SOx RTCs. Therefore, RECLAIM more than complied with the federally-required SOx offset ratio and further quantification of the SOx offset ratio is unnecessary. Compliance with the federally-required offset ratio also demonstrates compliance with any applicable state NNI requirements for new or modified sources. In addition, RECLAIM requires application of, at a minimum, California Best Available Control Technology (BACT), which is very similar to federal Lowest Achievable Emission Rate (LAER), for all new or modified sources with emission increases. In addition, more stringent control technology can be required pursuant to RECLAIM if it is determined to be cost effective as compared to AQMP measures or adopted SCAQMD rules.

Background

Emissions increases from the construction of new or modified stationary sources in non-attainment areas are regulated by both federal NSR and state NNI requirements to ensure that progress toward attainment of ambient air quality standards is not hampered. RECLAIM is designed to comply with federal NSR

and state NNI requirements without hindering facilities' ability to expand or modify their operations[1].

Title 42, United States Code §7511a, paragraph (e), requires major sources in extreme non-attainment areas to offset emission increases of extreme non-attainment pollutants and their precursors at a 1.5-to-1 ratio based on potential to emit. However, if all major sources in the extreme non-attainment area are required to implement federal BACT, a 1.2-to-1 offset ratio may be used. Federal BACT is comparable to California's BARCT. SCAQMD requires all existing major sources to employ federal BACT/California BARCT and, therefore, is eligible for a 1.2-to-1 offset ratio for ozone precursors (*i.e.*, NOx and VOC). The federal offset requirement for major SO_2 sources is at least a 1-to-1 ratio, which is lower than the aforementioned 1.2-to-1 ratio. Even though the Basin is in attainment with SOx standards, SOx is a precursor to PM10 which is a non-attainment air pollutant in the Basin. The applicable offset ratio for PM10 is at least 1-to-1, thus, the applicable offset ratio for SOx is 1-to-1. Health and Safety Code §40920.5 requires "no net increase in emissions from new or modified stationary sources of non-attainment pollutants or their precursors" (*i.e.*, a 1-to-1 offset ratio on an actual emissions basis). All actual RECLAIM emissions are offset at a 1-to-1 ratio provided there is not a programmatic exceedance of aggregate allocations, thus satisfying the federal offset ratio for SOx and state NNI requirements for both SOx and NOx. Annual RTC allocations follow a programmatic reduction to reflect changes in federal BACT/California BARCT and thereby comply with federal and state offset requirements.

RECLAIM requires California BACT/federal LAER for new or modified sources with increases in hourly potential to emit of RECLAIM pollutants. This provision complies with both the state and federal requirements regarding control technologies for new or modified sources. In addition to offset and BACT requirements, RECLAIM subjects RTC trades that are conducted to mitigate emissions increases over the sum of the facility's starting allocation and non-tradable/non-usable credits to trading zone restrictions to ensure net ambient air quality improvement within the sensitive zone established by Health and Safety Code §40410.5. Furthermore, facilities with actual RECLAIM emissions that exceed their initial allocation by 40 tons per year or more are required to analyze the potential impact of their emissions increases through air quality modeling.

Rule 2005 – New Source Review for RECLAIM requires RECLAIM facilities to provide (hold), prior to the start of operation, sufficient RTCs to offset the annual increase in potential emissions for the first year of operation at a 1-to-1 ratio. The same rule also requires existing RECLAIM facilities that increase their annual allocations above the level of their starting allocations plus non-tradable/non-usable credits and all new RECLAIM facilities[2] to provide sufficient RTCs to offset the annual potential emissions increase from new or modified

[1] Federal NSR applies to federal major sources (sources with the potential to emit at least 10 tons of NOx or 100 tons of SOx per year for the South Coast Air Basin) and state NNI requirements apply to all NOx sources and to SOx sources with the potential to emit at least 15 tons per year in the South Coast Air Basin. RECLAIM's NSR provisions apply to all facilities in the program, including those not subject to federal NSR or state NNI (although the threshold for RECLAIM inclusions is four tons per year of NOx or SOx emissions, some RECLAIM facilities have actual emissions much less than 4 tons per year).

[2] New facilities are facilities that received all District Permits to Construct on or after October 15, 1993. All other facilities are existing facilities.

source(s) at a 1-to-1 ratio at the commencement of each compliance year after the start of operation of the new or modified source(s). Although RECLAIM allows a 1-to-1 offset ratio for emissions increases, RECLAIM complies with the federal offset requirement by complying with the 1.2-to-1 offset requirement for NOx on an aggregate basis. This annual program audit report assesses NSR permitting activities for Compliance Year 2012 to verify that programmatic compliance of RECLAIM with federal and state NSR requirements has been maintained.

NSR Activity

Evaluation of NSR data for Compliance Year 2012 shows that RECLAIM facilities were able to expand and modify their operations while complying with NSR requirements. During Compliance Year 2012, a total of 46 NOx RECLAIM facilities (26 in Cycle 1 and 20 in Cycle 2) were issued permits to operate, which resulted in a total of 237.18 tons per year of NOx emission increases from starting operations of new or modified sources, and four SOx RECLAIM facilities (one facility in Cycle 1 and three facilities in Cycle 2) experienced a total of 7.53 tons per year of SOx NSR emission increases that resulted from starting operations of new or modified permitted sources. These emission increases were calculated pursuant to Rule 2005(d) – Emission Increase. As in previous years, there were adequate unused RTCs (NOx: 1,879 tons, SOx: 1,731 tons; see Chapter 3) in the RECLAIM universe for use to offset these emission increases at the appropriate offset ratios.

NSR Compliance Demonstration

RECLAIM is designed to programmatically comply with the federal NSR offset requirements. Meeting the NSR requirement (offset ratio of 1.2-to-1 for NOx and at least 1-to-1 for SOx) also demonstrates compliance with the state NNI requirements. Section 173 (c) of the federal Clean Air Act (CAA) states that only emissions reductions beyond the requirements of the CAA, such as federal Reasonably Available Control Technology (RACT), shall be considered creditable as emissions reductions for offset purposes. Since the initial allocations (total RTC supply in Compliance Year 1994) already met federal RACT requirements when the program was initially implemented, any emissions reductions beyond the initial allocations are available for NSR offset purposes until RACT becomes more stringent. The programmatic offset ratio calculations presented in the Annual RECLAIM Audit Reports for Compliance Years 1994 through 2004 relied upon aggregate Compliance Year 1994 allocations as representing RACT. However, staff recognizes that RACT may have become more stringent in the intervening years, so it may no longer be appropriate to calculate the programmatic offset ratio based upon aggregate 1994 allocations.

Aggregate allocations for each compliance year represent federal BACT, which is equivalent to local BARCT. Federal BACT is more stringent than federal RACT (*i.e.*, the best available control technology is more stringent than what is reasonably available), so staff started using current allocations (federal BACT) as a surrogate for RACT as the basis for calculating programmatic NOx and SOx offset ratios in the annual program audit report for Compliance Year 2005 and is continuing to do so for NOx in this report. This is a more conservative (*i.e.*, more stringent) approach than using actual RACT and is much more conservative than

using aggregate Compliance Year 1994 allocations. The advantage of this approach is that, as long as the calculated NOx offset ratio is at least 1.2-to-1, it provides certainty that RECLAIM has complied with federal and state offset requirements without the need to know exactly where RACT lies for RECLAIM facilities. However, if this very conservative approach should ever fail to demonstrate that the aggregate NOx offset ratio for any year is at least 1.2-to-1, that will not necessarily mean RECLAIM has not actually complied with the federally required 1.2-to-1 NOx offset ratio. Rather it will indicate that further analysis is required to accurately identify RACT so that the actual offset ratio can be calculated and a compliance determination made.

Provided aggregate RECLAIM emissions do not exceed aggregate allocations, all RECLAIM emissions are offset at a ratio of 1-to-1. This leaves all unused allocations available to provide offsets beyond the 1-to-1 ratio for NSR emission increases. Unused allocations are based on all Cycle 1 and Cycle 2 RTCs of a given compliance year and the aggregate RECLAIM emissions for the selected time period. The NSR emission increase is the sum of emission increases due to permit activities at all RECLAIM facilities during the same compliance year. The aggregate RECLAIM offset ratios are expressed by the following formula:

$$\text{Offset Ratio} = \left(1 + \frac{\text{compliance year's total unused allocations}}{\text{total NSR emission increases}}\right)\text{-to-1}$$

As stated in the previous section under the title of "NSR Activity", permits to operate issued to 46 RECLAIM facilities resulted in 237.18 tons of NOx emission increase pursuant to Rule 2005(d). Additionally, as identified in Table 3-1 (Annual NOx Emissions for Compliance Years 1994 through 2012), 1,879 tons of Compliance Year 2012 NOx RTCs remained unused. Therefore, the Compliance Year 2012 NOx programmatic offset ratio calculated from this methodology is 9-to-1 as shown below:

$$\text{Offset Ratio} = \left(1 + \frac{1{,}879 \text{ tons}}{237.18 \text{ tons}}\right)\text{-to-1}$$

$$= \text{9-to-1}$$

RECLAIM continues to generate sufficient excess emissions reductions to provide a NOx offset ratio greater than the 1.2-to-1 required by federal law. This compliance with the federal offset requirements is built into the RECLAIM program through annual reductions of the allocations assigned to RECLAIM facilities and the subsequent allocation adjustments adopted by the Governing Board to implement BARCT. The required offset ratio for SOx is 1-to-1. Since RECLAIM facilities are required to secure, at a minimum, adequate RTCs to cover their actual emissions, the SOx offset ratio is met automatically provided there is no programmatic exceedance of aggregate SOx allocations for that compliance year. As stated earlier in Chapter 3, there were 1,731 tons of excess (unused) SOx RTCs for Compliance Year 2012. Therefore, there is certainty that both the federally required SOx offset ratio and the California NNI requirement for

SOx were satisfied and a separate calculation of the SOx offset ratio is not necessary.

BACT and modeling are also required for any RECLAIM facility that installs new equipment or modifies existing sources if the installation or modification results in an increase in emissions of RECLAIM pollutants. Furthermore, the RTC trading zone restrictions in Rule 2005 – New Source Review for RECLAIM, limit trades conducted to offset emission increases over the sum of the facility's starting allocation and non-tradable/non-usable credits to ensure net ambient air quality improvement within the sensitive zone, as required by state law.

The result of the review of NSR activity in Compliance Year 2012 shows that RECLAIM is in compliance with both state NNI and federal NSR requirements. SCAQMD staff will continue to monitor NSR activity under RECLAIM in order to assure continued progress toward attainment of ambient air quality standards without hampering economic growth in the Basin.

Modeling Requirements

Rule 2004, as amended in May 2001, requires RECLAIM facilities with actual NOx or SOx emissions exceeding their initial allocation in Compliance Year 1994 by 40 tons per year or more to conduct modeling to analyze the potential impact of the increased emissions. The modeling analysis is required to be submitted within 90 days of the end of the compliance year. For Compliance Year 2012, one RECLAIM facility[3] was subject to this requirement. The facility submitted modeling analysis that showed that its NOx emissions complied with the most stringent ambient air quality standards set forth in Rule 2005, Appendix A.

[3] Under the requirements of Rule 2004(q), Mountainview Power Company (Facility ID 160437) was required to submit modeling analysis for its NOx emissions in Compliance Year 2012.

CHAPTER 5
COMPLIANCE

Summary

*Of the 278 NOx RECLAIM facilities during Compliance Year 2012, a total of 266 facilities (96%) complied with their NOx allocations, and all but one of the 33 SOx facilities (97%) complied with their SOx allocations. The 12 NOx facilities that exceeded their NOx allocations had aggregate NOx emissions of 832 tons and did not have adequate allocations to offset 125.9 tons (or 15.1%) of their combined emissions. This exceedance amount is small compared to the overall allocations for Compliance Year 2012 (1.3% of total NOx allocations). One SOx facility had SOx emissions that exceeded its SOx allocations by only three pounds. The exceedances from these 12 facilities (11 NOx-only facilities and one NOx and SOx facility) did not impact the overall RECLAIM emission reduction goals. Pursuant to Rule 2010(b)(1)(A), all 12 facilities had their respective exceedances deducted from their annual allocations for the compliance year subsequent to the date of SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations. The overall RECLAIM NOx and SOx emission reduction targets and goals were met for Compliance Year 2012 (*i.e.*, aggregate emissions for all RECLAIM facilities were well below aggregate allocations).*

Background

RECLAIM facilities have the flexibility to choose among compliance options to meet their annual allocations by reducing emissions, trading RTCs, or a combination of both. However, this flexibility must be supported by standardized emission MRR requirements to ensure the reported emissions are real, quantifiable, and enforceable. As a result, detailed MRR protocols are specified in the RECLAIM regulation to guarantee accurate and verifiable emission reports.

The MRR requirements were designed to provide accurate and up-to-date emission reports. Once facilities install and complete certification of the required monitoring and reporting equipment, they are relieved from command-and-control rule limits and requirements subsumed under Rule 2001. Mass emissions from RECLAIM facilities are then determined directly by monitoring and reporting equipment for some sources and from data generated by monitoring equipment for others. If monitoring equipment fails to produce quality-assured data or the facility fails to file timely emissions reports, RECLAIM rules require emissions be determined by a rule-prescribed methodology known as Missing Data Procedures or "MDP." Depending on past performance of the monitoring equipment (*i.e.*, availability of quality-assured data) and the duration of the missing data period, MDP use a tiered approach to calculate emissions. As availability of quality-assured data increases, the MDP-calculated emissions become more representative of the actual emissions, but when the availability of quality-assured data is low, MDP calculations become more conservative and approach, to some extent, "worst case" assessments.

Allocation Compliance

Requirements

At the beginning of the RECLAIM program in 1994 or at the time a facility is included in the RECLAIM program, each RECLAIM facility is issued an annual allocation for each compliance year pursuant to methodology prescribed under Rule 2002. For a facility in existence prior to October 1993, it is issued allocations by the SCAQMD based on its historical production rate. A facility without an operating history prior to 1994 receives no allocation and must purchase enough RTCs to cover the emissions for their operations, except facilities that have provided ERCs to offset emission increases prior to entering RECLAIM. At the time of joining RECLAIM, these facilities are issued RTCs on an annual basis, converted from the amount of offsets provided. Additionally, all facilities entering RECLAIM holding any ERCs generated at and held by the individual facility itself have those ERCs converted to RTCs and added to their allocated RTCs. Knowing their emission goals, RECLAIM facilities have the flexibility to manage their emissions in order to meet their allocations in the most cost-effective manner. Facilities may employ emission control technology or process changes to reduce emissions, buy RTCs, or sell unneeded RTCs.

Facilities may buy RTCs or sell excess RTCs at any time during the year in order to ensure that their emissions are covered. There is a thirty day reconciliation period commencing at the end of each of the first three quarters of each compliance year. In addition, after the end of each compliance year, there is a 60-day reconciliation period (instead of 30 days as at the end of the first three quarters) during which facilities have a final opportunity to buy or sell RTCs for that compliance year. Each RECLAIM facility must hold sufficient RTCs in its allocation account to cover its quarterly as well as year-to-date emissions for the compliance year at the end of each reconciliation period. By the end of each quarterly and annual reconciliation period, each facility is required to certify the emissions for the preceding quarter and/or compliance year by submitting its Quarterly Certification of Emissions Reports (QCERs) and/or APEP report, respectively.

Compliance Audit

Since the beginning of the program, SCAQMD staff has conducted annual program audits of all emission reports submitted by RECLAIM facilities to ensure their integrity and reliability. The audit process includes conducting field inspections to check process equipment, monitoring devices, and operational records. Additionally, emissions calculations are performed in order to verify emissions reported electronically to SCAQMD or submitted in QCERs and APEP reports. These inspections revealed that some facilities made errors in quantifying their emissions such as arithmetic errors, used incorrect emission factors or adjustment factors (*e.g.*, pressure correction factors and bias adjustment factors), used emission calculation methodologies not allowed under the rules, used MDP inappropriately, or did not use MDP when required. Other common mistakes included reporting non-RECLAIM emissions and/or omitting reportable emissions.

Whenever an audit revealed a facility's emissions to be in excess of its annual allocation, the facility was provided an opportunity to review the audit and to

present additional data to further refine audit results. This extensive and rigorous audit process ensures valid and reliable emissions data.

Compliance Status

During this compliance year, a total of 12 RECLAIM facilities failed to reconcile their emissions (11 NOx-only facilities and one facility that exceeded both its NOx and SOx allocations). Ten of these 12 facilities failed to secure sufficient RTCs to cover their reported emissions during either the quarterly or annual reconciliation periods. Of these ten facilities, three facilities (two NOx-only facilities and one NOx and SOx facility), had additional reasons for NOx exceedance such as applying incorrect stackflow calculations, using incorrect emission factors, failing to apply MDP, and using incorrect MDP (the facility with a SOx exceedance failed to secure sufficient SOx RTCs to cover reported SOx emissions). Of the remaining two facilities, one exceeded its allocations because the facility failed to apply bias adjustment factors to its calculated major source emissions. The second facility failed to account for emissions from two reportable sources, failed to report all of the emissions from equipment that are exempt from obtaining SCAQMD permit pursuant to Rule 219, and failed to apply a pressure correction factor in order to standardize its process unit fuel usage.

Overall, the Compliance Year 2012 allocation compliance rate is 96% (266 out of 278 facilities) for NOx RECLAIM facilities and 97% (32 out of 33 facilities) for SOx RECLAIM facilities. For purposes of comparison, the allocation compliance rates for Compliance Year 2011 were 93% and 100% for NOx and SOx RECLAIM facilities, respectively. The 12 facilities that had NOx emissions in excess of their individual NOx allocations had 832 tons of NOx emissions and did not have adequate RTCs to cover 125.9 of those tons (or 15.1%). This exceedance amount (1.3% of aggregate NOx allocations) is small compared to the overall allocations for Compliance Year 2012. One SOx facility had SOx emissions that exceeded its SOx allocations by only three pounds. Pursuant to Rule 2010(b)(1)(A), all 12 facilities had their respective exceedances deducted from their annual emissions allocations for the compliance year subsequent to SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations.

Impact of Missing Data Procedures

MDP was designed to provide a method for determining emissions when an emission monitoring system fails to yield valid emissions. For major sources, these occurrences may be caused by failure of the monitoring systems, the data acquisition and handling systems, or by lapses in the Continuous Emission Monitoring System (CEMS) certification period. Major sources are also required to use MDP for determining emissions whenever daily emissions reports are not submitted by the applicable deadline. When comparing actual emissions with a facility's use of substituted MDP emissions, the range of MDP emissions can vary from "more representative" to emissions being overstated to reflect a "worst case"[1] scenario. For instance, an MDP "worst case" scenario may occur for major sources that fail to have their CEMS certified in a timely manner, and therefore, have no valid CEMS data that can be used for substitution. In other

[1] Based on uncontrolled emission factor at maximum rated capacity of the source and 24 hours per day.

cases, where prior CEMS data is available, MDP is applied in tiers depending on the duration of missing data periods and the historical availability of monitoring systems. As the duration of missing data periods gets shorter and the historical availability of monitoring systems gets higher, the substitute data yielded by MDP becomes more representative of actual emissions[2].

In addition to MDP for major sources, RECLAIM rules also define MDP for large sources and process units. These procedures are applicable when a process monitoring device fails or when a facility operator fails to record fuel usage or other monitored data (*e.g.*, hours of operation). The resulting MDP emissions reports are reasonably representative of the actual emissions because averaged or maximum emissions from previous operating periods may be used. However, for extended missing data periods (more than two months for large sources or four quarters or more for process units) or when emissions data for the preceding year are unavailable, large source and process unit MDP are also based on maximum operation or worst case assumptions.

Based on APEP reports, 95 NOx facilities and 13 SOx facilities used MDP in reporting portions of their annual emissions during Compliance Year 2012. In terms of mass emissions, 7.5% of the total reported NOx emissions and 4.5% of the total reported SOx emissions in the APEP reports were calculated using MDP for Compliance Year 2012. Table 5-1 compares the impact of MDP on reported annual emissions for the last few compliance years and the second compliance year, 1995 (MDP was not fully implemented during Compliance Year 1994).

[2] Based on averaged emissions during periods before and after the period for which data is not available.

Table 5-1
MDP Impact on Annual Emissions

Year	Percent of Reported Emissions Using Substitute Data*	
	NOx	SOx
1995	23.0% (65 / 6,070)	40.0% (12 / 3,403)
2006	2.5% (48 / 220)	0.0% (0 / 0)
2007	5.6% (78 / 489)	7.0% (14 / 262)
2008	7.6% (86 / 625)	7.5% (9 / 242)
2009	7.8% (103 / 554)	13.8% (15 / 403)
2010	7.0% (93 / 488)	6.1% (23 / 168)
2011	6.2% (94 / 435)	12.4% (19 / 328)
2012	7.5% (95 / 560)	4.5% (13 / 114)

* Numbers in parenthesis that are separated by a forward slash represent the number of facilities that reported use of MDP in each compliance year and tons of emissions based on MDP.

Most of the issues associated with CEMS certifications were resolved prior to Compliance Year 1999. Since then, very few facilities have had to submit emissions reports based on the worst case scenario under MDP, which may considerably overstate the actual emissions from major sources. As an example, most facilities that reported emissions using MDP in 1995 did so because they did not have their CEMS certified in time to report actual emissions. Since their CEMS had no prior data, MDP called for an application of the most conservative procedure to calculate substitute data by assuming continuous uncontrolled operation at the maximum rated capacity of the facility's equipment, regardless of the actual operational level during the missing data periods. As a result, the calculations yielded substitute data that may have been much higher than the actual emissions. In comparison to the 65 NOx facilities implementing MDP in Compliance Year 1995, 95 facilities reported NOx emissions using MDP in Compliance Year 2012. Even though this number of facilities is higher than in 1995, the percentage of emissions reported using MDP during Compliance Year 2012 is much lower than it was in 1995 (7.5% compared to 23%). Additionally, in terms of quantity, NOx emissions in Compliance Year 2012 were about 9% of those in Compliance Year 1995 (560 tons compared to 6,070 tons). Since most CEMS were certified and had been reporting actual emissions by the beginning of Compliance Year 2000, facilities that had to calculate substitute data were able to apply less conservative methods of calculating MDP for systems with high availability and shorter duration missing data periods. Therefore, the substitute data they calculated for their missing data periods were more likely to be representative of the actual emissions.

It is important to note that portions of annual emissions attributed to MDP include actual emissions from the sources as well as the possibility of overestimated emissions. As shown in Table 5-1, approximately 8% of reported NOx annual emissions were calculated using MDP in Compliance Year 2012. MDP may significantly overestimate emissions from some of the sources that operate intermittently and have low monitoring system availability, and/or lengthy missing data periods. Even though a portion of the 8% may be overestimated emissions due to conservative MDP, a significant portion (or possibly all) of it could have also been actual emissions from the sources. Unfortunately, the portion that represents the actual emissions cannot be readily estimated because the extent of this effect varies widely, depending on source categories and operating parameters, as well as the tier of MDP applied. As an example, refineries tend to operate at near maximum capacity for 24 hours per day and seven days per week, except for scheduled shutdowns for maintenance and barring major breakdowns or other unforeseeable circumstances. For Compliance Year 2012, a majority of NOx MDP emissions data (77%) and SOx MDP emissions data (97%) were reported by refineries. Therefore, missing data emissions calculated for such facilities could be more reflective of the actual emissions than those calculated for facilities that do not operate on a continuous basis but, due to low data availability, are required to calculate MDP based upon continuous operation.

Emissions Monitoring

Overview

The reproducibility of reported RECLAIM facility emissions—and thereby the enforceability of the RECLAIM program—is assured through a three-tiered hierarchy of MRR requirements. A facility's equipment falls into an MRR category based on the kind of equipment it is and on the level of emissions produced or potentially produced by the equipment. RECLAIM divides all NOx sources into major sources, large sources, process units, and equipment exempt from obtaining a written permit pursuant to Rule 219. All SOx sources are divided into major sources, process units, and equipment exempt from obtaining a written permit pursuant to Rule 219. Table 5-2 shows the monitoring requirements applicable to each of these categories.

Table 5-2
Monitoring Requirements for RECLAIM Sources

Source Category	Major Sources (NOx and SOx)	Large Sources (NOx only)	Process Units and Rule 219 Equipment (NOx and SOx)
Monitoring Method	Continuous Emission Monitoring System (CEMS)	Fuel Meter or Continuous Process Monitoring System (CPMS)	Fuel Meter, Timer, or CPMS
Reporting Frequency	Daily	Monthly	Quarterly

Continuous Emission Monitoring System (CEMS)

Requirements

CEMS represent both the most accurate and the most reliable method of calculating emissions because they continuously monitor all of the parameters necessary to directly determine mass emissions of NOx and SOx. They are also the most costly method. These attributes make CEMS the most appropriate method for the largest emission-potential equipment in the RECLAIM universe, major sources. Even though the number of major sources monitored by either CEMS or Alternative Continuous Emission Monitoring Systems (ACEMS) represent 18% and 62% of all permitted RECLAIM NOx and SOx sources, respectively, reported emissions for Compliance Year 2012 revealed that 76% of all RECLAIM NOx emissions and 97% of all RECLAIM SOx emissions were determined by CEMS or ACEMS.

ACEMS are alternatives to CEMS that are allowed under the RECLAIM regulation. These are devices that do not directly monitor NOx or SOx mass emissions; instead, they correlate multiple process parameters to arrive at mass emissions. To be approved for RECLAIM MRR purposes, ACEMS must be determined by the SCAQMD to be equivalent to CEMS in relative accuracy, reliability, reproducibility, and timeliness.

Compliance Status

By the end of calendar year 1999, almost all facilities that were required to have CEMS had their CEMS certified or provisionally approved. The only remaining uncertified CEMS are for sources that recently became subject to major source reporting requirements and sources that modified their CEMS. Typically, there will be a few new major sources each year. Therefore, there will continue to be a small number of CEMS in the certification process at any time.

Semiannual and Annual Assessments of CEMS

RECLAIM facilities conduct their Relative Accuracy Test Audit (RATA) of certified CEMS using private sector testing laboratories approved under the SCAQMD Laboratory Approval Program (LAP). These tests are conducted either semiannually or annually, depending on the most recent relative accuracy value (the sum of the average differences and the confidence coefficient) for each source. The interval is annual only when all required relative accuracies obtained during an audit are 7.5% or less (*i.e.*, more accurate).

To verify the quality of CEMS, the RATA report compares the CEMS data to data taken simultaneously, according to approved testing methods (also known as reference methods), by a LAP-approved source testing contractor. In order to have a passing RATA, each of the following relative accuracy performance criteria must be met: ±20% for pollutant concentration, ±15% for stack flow rate, and ±20% for pollutant mass emission rate. The RATAs also determine whether CEMS data must be adjusted for low readings compared to the reference method (bias adjustment factor), and by how much. The RATA presents two pieces of data, the CEMS bias (how much it differs from the reference method on the average) and the CEMS confidence coefficient (how variable that bias or average difference is).

Tables 5-3 and 5-4, respectively, summarize the 2012 and 2013 calendar years' passing rates for RATAs of certified CEMS for NOx and SOx concentration, total sulfur in fuel gas concentrations, stack flow rate (in-stack monitors and F-factor based calculations), and NOx and SOx mass emissions. However, the tables do not include SOx mass emissions calculated from total sulfur analyzer systems because such systems serve numerous devices, and therefore are not suitable for mass emissions-based RATA testing.

Table 5-3
Passing Rates Based on RATAs of Certified CEMS in 2012[1]

Concentration						Stack Flow Rate				Mass Emissions			
NOx		SO_2		Total[2] Sulfur		In-Stack Monitor		F-Factor Based Calc.		NOx		SOx[3]	
No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass
336	100	84	100	14	100	42	100	341	100	336	100	53	100

1. About one percent of test audits were still submitted in paper form.
2. Includes Cylinder Gas Audit (CGA) tests.
3. Does not include SOx emissions calculated from total sulfur analyzers.

Table 5-4
Passing Rates Based on RATAs of Certified CEMS in 2013[1]

Concentration						Stack Flow Rate				Mass Emissions			
NOx		SO_2		Total[2] Sulfur		In-Stack Monitor		F-Factor Based Calc.		NOx		SOx[3]	
No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass	No.	% Pass
338	100	89	100	14	100	42	100	348	100	338	100	49	100

1. All passing rates calculated from data submitted before January 10, 2014 and may exclude some data from the fourth quarter of calendar year 2013. About two percent of test audits were still submitted in paper form.
2. Includes Cylinder Gas Audit (CGA) tests.
3. Does not include SOx emissions calculated from total sulfur analyzers.

As indicated in Tables 5-3 and 5-4, the passing rates for NOx/SO_2 concentration, stack flow rate, and mass emissions were all 100%. Since the inception of RECLAIM there have been significant improvements with respect to the availability of reliable calibration gas, the reliability of the reference method, and an understanding of the factors that influence valid total sulfur analyzer data. RATA reports for all total sulfur analyzers during calendar years 2012 and 2013 have indicated passing results.

Electronic Data Reporting of RATA Results

Facilities operating CEMS under RECLAIM are required to submit RATA results to SCAQMD. An electronic reporting system, known as Electronic Data Reporting (EDR), was set up to allow RATA results to be submitted electronically using a standardized format in lieu of the traditional formal source test reports in paper form. This system minimizes the amount of material the facility must

submit to SCAQMD and also expedites reviews. Currently, most RATA results are submitted via this system.

Non-Major Source Monitoring, Reporting, and Recordkeeping

Emissions quantified for large sources are primarily based on concentration limits or emission rates specified in the Facility Permit. Other variables used in the calculation of large source emissions are dependent on the specific process of the equipment, but generally include fuel usage, applicable dry F-factor, and the higher heating value of the fuel used. RECLAIM requires large sources to be source tested within defined three-year windows in order to validate fuel meter accuracy, and the equipment's concentration limit or emission rate. Since emissions quantification is fuel-based, the monitoring equipment required to quantify emissions is a non-resettable fuel meter that must be corrected to standard temperature and pressure. Large source emission data must be submitted electronically on a monthly basis.

Process unit emission calculations are similar to those of large sources in that emissions are quantified using the fuel-based calculations for either a concentration limit or an emission factor specified in the Facility Permit. Similar to large sources, variables used in emission calculations for process units are dependent on the equipment's specific process, but generally include fuel usage, applicable dry F-factor, and the higher heating value of the fuel used. Process units that are permitted with concentration limits are also required to be source-tested, but within specified five-year windows. Emissions for equipment exempt from obtaining a written permit pursuant to Rule 219 are quantified using emission factors and fuel usage. No source testing is required for such exempt equipment. Since emissions are fuel-based for both process units and exempt equipment, the monitoring equipment required to quantify emissions is a non-resettable fuel meter, corrected to standard temperature and pressure. Alternately, a timer may be used to record operational time. In such cases, fuel usage is determined based on maximum rated capacity of the source. Process units and exempt equipment must submit emission reports electronically on a quarterly basis.

Emissions Reporting

Requirements

RECLAIM is designed to take advantage of electronic reporting technology to streamline reporting requirements for both facilities and SCAQMD, and to help automate compliance tracking. Under RECLAIM, facilities report their emissions electronically on a per device basis to SCAQMD's Central Station computer as follows:

- Major sources must use a Remote Terminal Unit (RTU) to telecommunicate emission data to the SCAQMD Central Station. The RTU collects data, performs calculations, generates the appropriate data files, and transmits the data to the Central Station. This entire process is required to be performed by the RTU without human intervention on a daily basis.

- Emission data for all equipment other than major sources may be transmitted via RTU or compiled manually and transmitted to the Central Station via modem. Alternatively, emissions from non-major sources may use the SCAQMD internet based application, Web Access To Electronic Reporting System (WATERS) to transmit emission data for non-major sources via internet connection. The data may be transmitted directly by the facility or through a third party.

Compliance Status

The main concern for emission reporting is the timely submittal of accurate daily emissions reports from major sources. If daily reports are not submitted by the specified deadlines, RECLAIM rules may require that emissions from CEMS be ignored and the emissions be calculated using MDP. Daily emission reports are submitted by the RTU of the CEMS to the SCAQMD Central Station via telephone lines. Often communication errors between the two points are not readily detectable by facility operators. Undetected errors can cause facility operators to believe that daily reports were submitted when they were not received by the Central Station. In addition to providing operators a means to confirm the receipt of their reports, the WATERS application can also display electronic reports that were submitted to, and received by, the Central Station. This system helps reduce instances where MDP must be used for late or missing daily reports, because the operators can verify that the Central Station received their daily reports, and can resubmit them if there were communication errors.

Protocol Review

Even though review of MRR protocols was only required by Rule 2015(b)(1) for the first three compliance years of the RECLAIM program, staff continues to review the effectiveness of enforcement and MRR protocols. Based on such review, occasional revisions to the protocols may be needed to achieve improved measurement and enforcement of RECLAIM emission reductions, while minimizing administrative costs to SCAQMD and RECLAIM participants.

Since the RECLAIM program was adopted, staff has produced rule interpretations and implementation guidance documents to clarify and resolve specific concerns about the protocols raised by RECLAIM participants. In situations where staff could not interpret existing rule requirements to adequately address the issues at hand, the protocols and/or rules have been amended.

Finally, when the RECLAIM program first began, the ability to electronically transmit emissions data to SCAQMD's Central Station via modem was considered state-of-the-art technology. However, that technology is now antiquated and finding replacement components (*e.g.,* slower baud-rate modems) is becoming increasingly difficult. As such, SCAQMD is evaluating options to either upgrading or replacing the current Central Station. Key factors being considered include ease of implementation and cost impacts on RECLAIM facilities and SCAQMD. Progress on this effort will be presented in future annual program audit reports.

CHAPTER 6
REPORTED JOB IMPACTS

Summary

*This chapter compiles data as reported by RECLAIM facilities in their Annual Permit Emissions Program (APEP) reports. The analysis focuses exclusively on job impacts at RECLAIM facilities and determination if those job impacts were directly attributable to RECLAIM as reported by those facilities. There may be additional effects of the RECLAIM program on the local economy outside of RECLAIM facilities (*e.g.*, generating jobs for consulting firms, source testing firms and CEMS vendors) and also factors other than RECLAIM (*e.g.*, the prevailing economic climate), that impact the job market. These factors are not evaluated in this report. Also job losses and job gains are strictly based on RECLAIM facilities' reported information. AQMD is not able to independently verify the reported job impacts information.*

According to the Compliance Year 2012 employment survey data gathered from APEP reports, RECLAIM facilities reported a net gain of 2,026 jobs, representing 2% of their total employment. All of the facilities that reported job losses and job gains cited factors other than RECLAIM as the reasons for these changes in employment figures. Furthermore, none of the five RECLAIM facilities listed as shutdown during Compliance Year 2012 cited RECLAIM as a factor contributing to the decision to shutdown.

Background

The APEP reports submitted by RECLAIM facilities include survey forms that are used to evaluate the socioeconomic impacts of the program. Facilities were asked to indicate on the forms the number of jobs at the beginning of Compliance Year 2012 and any changes in the number of jobs that took place during the compliance year in each of three categories: manufacturing, sale of products, and non-manufacturing. The numbers of jobs gained and lost reported by facilities in each category during the compliance year were tabulated.

Additionally, APEP reports ask facilities that shut down during Compliance Year 2012 to provide the reasons for their closure. APEP reports also allow facilities to indicate whether the RECLAIM program led to the creation or elimination of jobs during Compliance Year 2012. Those facilities that reported a change in the number of jobs due to RECLAIM were asked to specify the number of jobs lost or gained, and to state why the job loss or creation was attributed to RECLAIM.

Since data regarding job impacts and facility shutdowns are derived from the APEP reports, the submittal of these reports is essential to assessing the influence that the RECLAIM program has on these issues. The following discussion represents data obtained from APEP reports submitted to SCAQMD for Compliance Year 2012 and clarifying information collected by SCAQMD staff. SCAQMD staff is not able to verify the accuracy of the reported job impacts information.

Job Impacts

Table 6-1 summarizes job impact data gathered from Compliance Year 2012 APEP reports and follow-up contacts with facilities. A total of 123 facilities reported 11,856 job gains, while 129 facilities reported a total of 9,830 job losses. Net job gains were reported in two of the three categories: sales of products (19), and non-manufacturing (2,604), whereas net job losses were reported in the remaining category: manufacturing (597). Table 6-1 shows a total net gain of 2,026 jobs, which represents a net jobs increase of 2% at RECLAIM facilities during Compliance Year 2012.

Table 6-1
Job Impacts at RECLAIM Facilities for Compliance Year 2012

Description	Manufacture	Sales of Products	Non-Manufacture	Total[1]
Initial Jobs	39,983	863	62,542	103,388
Overall Job Gain	3,163	128	8,565	11,856
Overall Job Loss	3,760	109	5,961	9,830
Final Jobs	39,386	882	65,146	105,414
Net Job Change	-597	19	2,604	2,026
Percent (%) Job Change	-1.49%	2.20%	4.16%	1.96%
Facilities Reporting Job Gains	86	23	75	123
Facilities Reporting Job Losses	91	30	81	129

[1] The total number of facilities reporting job gains or losses does not equal the sum of the number of facilities reporting job changes in each category (*i.e.*, the manufacture, sales of products, and non-manufacture categories) due to the fact that some facilities may report changes under more than one of these categories.

Data in Table 6-1 include five RECLAIM facilities that were reported to be shut down or ceasing operations in Compliance Year 2012 as listed in Appendix C. One of the shutdown facilities was sold to, and became part of, an adjacent university which is exempt from RECLAIM pursuant to Rule 2001(i)(2)(H). Since the university did not file for a Change of Operator, the original facility is considered shutdown. In the case of the second facility, its operations were consolidated to a new plant in Tennessee. The third facility, a power plant, was shut down as air quality mitigation for another new power plant in the SCAQMD. The last two facilities were shut down because the operations at those facilities were each consolidated at other facilities in the SCAQMD. None of the shutdown facilities attributed job gains or losses to RECLAIM in Compliance Year 2012 (refer to Appendix E).

As with the shutdown facilities described above, none of the RECLAIM facilities that remain in operation attributed any job gains or losses to RECLAIM for Compliance Year 2012. It should also be noted that based on the past few years of data collected from RECLAIM facilities, the job gains or losses attributed only to RECLAIM comprise a very small percentage (less than 2%) of the total number of jobs lost or gained in that period.

The analysis in this report only considers job gains and losses at RECLAIM facilities. It should be noted that this analysis of socioeconomic impacts based on APEP reports and follow-up interviews is focused exclusively on changes in

employment that occurred at RECLAIM facilities. The effect of the program on the local economy outside of RECLAIM facilities, including consulting and source testing jobs, is not considered.

It is not possible to compare the impact of the RECLAIM program on the job market *vis-à-vis* a scenario without RECLAIM. This is because factors other than RECLAIM (*e.g.*, the prevailing economic climate), also impact the job market. Furthermore, there is no way to compare job impacts attributed to RECLAIM to job impacts attributed to command-and-control rules that would have been adopted in RECLAIM's absence, because these command-and-control rules do not exist. As mentioned previously, the effect of the RECLAIM program on the local economy outside of RECLAIM facilities (*e.g.*, generating jobs for consulting firms, source testing firms and CEMS vendors) is also not considered in this report.

CHAPTER 7
AIR QUALITY AND PUBLIC HEALTH IMPACTS

Summary

Audited RECLAIM emissions have been in an overall downward trend since the program's inception. Compliance Year 2012 NOx emissions increased slightly (7.0%) relative to Compliance Year 2011 and Compliance Year 2012 SOx emissions were 6.4% less when compared to last year. Quarterly calendar year 2012 NOx emissions fluctuated within four percent of the mean NOx emissions for the year. Quarterly calendar year 2012 SOx emissions fluctuated within ten percent of the year's mean SOx emissions. There was no significant shift in seasonal emissions from the winter season to the summer season.

The California Clean Air Act (CCAA) required a 50% reduction in population exposure to ozone, relative to a baseline averaged over three years (1986 through 1988), by December 31, 2000. The Basin achieved the December 2000 target for ozone well before the deadline. In calendar year 2013, the per capita exposure to ozone (the average length of time each person is exposed) continued to be well below the target set for December 2000.

Air toxic health risk is primarily caused by emissions of certain volatile organic compounds (VOCs) and fine particulates, such as metals. RECLAIM facilities are subject to the same air toxic, VOC, and particulate matter regulations as other sources in the Basin. All sources are subject, where appropriate, to the NSR rule for toxics (Rule 1401). In addition, new or modified sources with NOx or SOx emission increases are required to be equipped with BACT, which minimizes to the extent feasible the increase of NOx and SOx emissions. RECLAIM and non-RECLAIM facilities that emit toxic air contaminants are required to report those emissions to SCAQMD. Those toxics emissions reports are used to identify candidates for the Toxics Hot Spots program (AB2588), which in turn quantifies toxic risk from facilities in the program and identifies those facilities that are required to do public notice and/or reduce their health risk levels to the public. There is no evidence that RECLAIM has caused or allowed higher toxic risk in areas adjacent to RECLAIM facilities.

Background

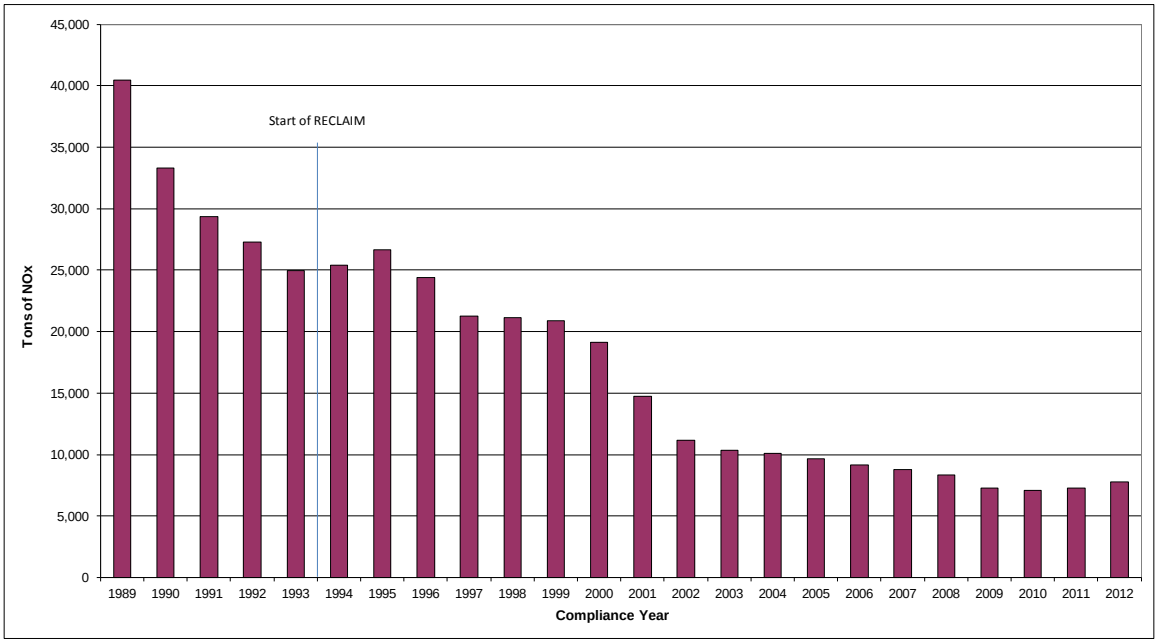
RECLAIM is designed to achieve the same, or higher level of, benefits in terms of air quality and public health as would have been achieved from implementation of the control measures and command-and-control rules that RECLAIM subsumed. Therefore, as a part of each annual program audit, SCAQMD evaluates per capita exposure to air pollution, toxic risk reductions, emission trends, and seasonal fluctuations in emissions. SCAQMD also generates quarterly emissions maps depicting the geographic distribution of RECLAIM emissions. As mentioned in last year's annual report, these maps are generated and posted quarterly on SCAQMD's webpage (http://www.aqmd.gov/reclaim/Qtrly_Maps.htm) including all quarterly emissions maps presented in previous annual program audit reports. This chapter addresses:

- Emission trends for RECLAIM facilities;
- Seasonal fluctuations in emissions;
- Per capita exposure to air pollution; and
- Toxics impacts.

Emission Trends for RECLAIM Sources

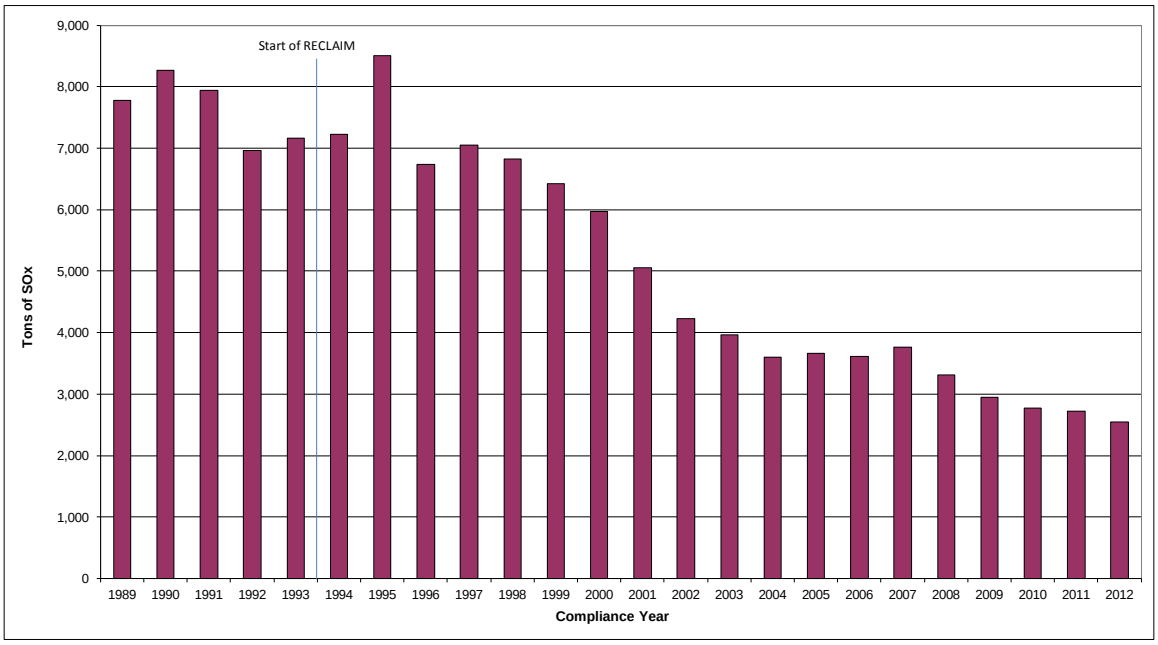
Concerns were expressed during program development that RECLAIM might cause sources to increase their aggregate emissions during the early years of the program due to perceived over-allocation of emissions. In Figures 7-1 and 7-2, which show NOx and SOx emissions from RECLAIM sources since 1989, the analysis of emissions from RECLAIM sources indicates that overall, RECLAIM emissions have been in a downward trend since program inception and the concerns on emission increase during early years of RECLAIM did not materialize.

Figure 7-1
NOx Emission Trend for RECLAIM Sources



Note: 1989-1993 emissions presented in this figure are the emissions from the facilities in the 1994 NOx universe.

Figure 7-2
SOx Emission Trend for RECLAIM Sources



Note: 1989-1993 emissions presented in this figure are the emissions from the facilities in the 1994 SOx universe.

NOx emissions decreased every year since Compliance Year 1995 through Compliance Year 2010. Then for Compliance Year 2011 as well as this compliance year, NOx emissions increased slightly each year but were still much lower than the programmatic goal as shown in Table and Figure 3-1. Since Compliance Year 1995, annual SOx emissions have also followed a general downward trend, except for slight increases in Compliance Years 1997, 2005, and 2007 compared to each respective previous compliance year. SOx emissions continued to decrease in Compliance Year 2012 when compared to the previous compliance year.

The increase in NOx and SOx emissions from Compliance Year 1994 to 1995 can be attributed to the application of MDP at the onset of RECLAIM implementation. RECLAIM provides for emissions from each major source's first year in the program to be quantified using an emission factor and fuel throughput (interim reporting) while they certify their CEMS. However, at the beginning of the program (Compliance Year 1994), many facilities had difficulties certifying their CEMS within this time frame, and consequently reported their Compliance Year 1995 emissions using MDP. As discussed in Chapter 5, since CEMS for these major sources had no prior data, MDP required the application of the most conservative procedure to calculate substitute data. As a result, the application of MDP during this time period yielded substitute data that may have been much higher than the actual emissions. In addition, emissions after Compliance Year 1995 decreased steadily through 2000. Thus, RECLAIM facilities did not increase their aggregate emissions during the earlier years of the program.

Seasonal Fluctuation in Emissions for RECLAIM Sources

During program development, another concern was that RECLAIM might cause facilities to shift emissions from the winter season into the summer ozone season since RECLAIM emission goals are structured on an annual basis, thus exacerbating poor summer air quality. To address this concern, "seasonal fluctuations" were added as part of the required analysis. Accordingly, SCAQMD staff performed a two-part analysis of the quarterly variation in RECLAIM emissions:

1. In the first part, staff qualitatively compared the quarterly variation in Compliance Year 2012 RECLAIM emissions to the quarterly variation in emissions from the same universe of sources prior to the implementation of RECLAIM.
2. In the second part, staff analyzed quarterly audited emissions during calendar year 2012 and compared them with quarterly audited emissions for prior years to assess if there had been such a shift in emissions. This analysis is reflected in Figures 7-3, 7-4, 7-5, and 7-6.[1]

Quarterly emissions data from the facilities in RECLAIM before they were in the program is not available. Therefore, a quantitative comparison of the seasonal variation of emissions from these facilities while operating under RECLAIM with their seasonal emissions variation prior to RECLAIM is not feasible. However, a qualitative comparison has been conducted, as follows:

- NOx emissions from RECLAIM facilities are dominated by refineries and power plants.
- SOx emissions from RECLAIM facilities are especially dominated by refineries.
- Prior to RECLAIM, refinery production was generally highest in the summer months because more people travel during summer; thus, increasing demand for gasoline and other transportation fuels.
- Electricity generation prior to RECLAIM was generally highest in the summer months because of increased demand for electricity to drive air conditioning units.

Emissions from refineries (NOx and SOx) and from power plants (NOx) are typically higher in the summer months, which was the trend prior to implementation of RECLAIM. Therefore, provided a year's summer quarter RECLAIM emissions do not exceed that year's quarterly average emissions by a substantial amount, it can be concluded that, for that year, RECLAIM has not resulted in a shift of emissions to the summer months relative to the pre-RECLAIM emission pattern.

Summer (third quarter) 2012 RECLAIM NOx and SOx emissions exceed the 2012 quarterly average emissions by about three percent and seven percent, respectively. Based on the foregoing logic, it is clear that these small seasonal fluctuations in RECLAIM emissions are consistent with pre-RECLAIM emissions from the same universe of sources. Therefore, RECLAIM did not cause a shift in

[1] Data used to generate these figures were derived from audited data. Similar figures for calendar years 1994 through 2007 in previous annual reports were generated from a combination of audited and reported data available at the time the reports were written.

emissions to the summer months relative to the pre-RECLAIM emissions patterns.

Figure 7-3 shows the 2012 mean quarterly NOx emissions, which is the average of the four quarterly aggregate emissions, and the 2012 actual quarterly emissions and Figure 7-4 compares the 2012 quarterly NOx emissions with the quarterly emissions from 2002 through 2011. During calendar year 2012, aggregate quarterly NOx emissions varied from less than three percent below the mean in the first quarter (January through March) to about three percent above the mean in the third quarter (July through September). Figure 7-4 shows that the fourth quarter of 2012 had the lowest aggregate RECLAIM NOx emission totals of any quarter since the program began in 1994. Figures 7-3 and 7-4, together, show that the RECLAIM program has not caused a significant shift in NOx emissions from the winter season into the summer season in recent years relative to early years of the program.

Figure 7-3
Calendar Year 2012 NOx Quarterly Emissions

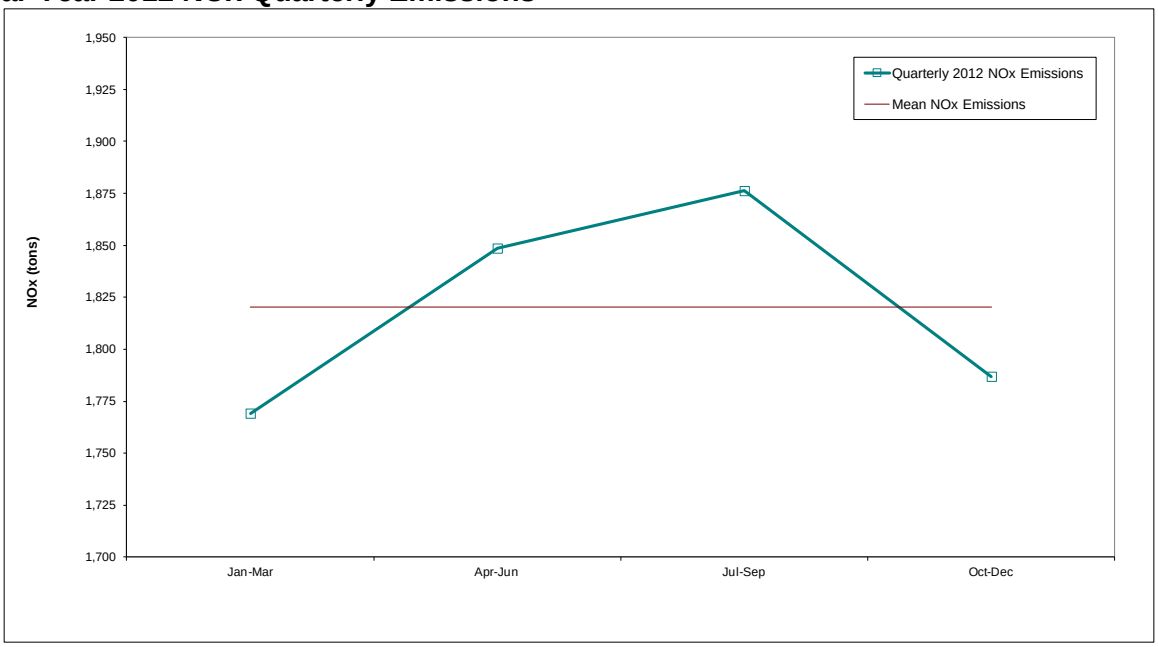


Figure 7-4
Quarterly NOx Emissions from Calendar Years 2002 through 2012

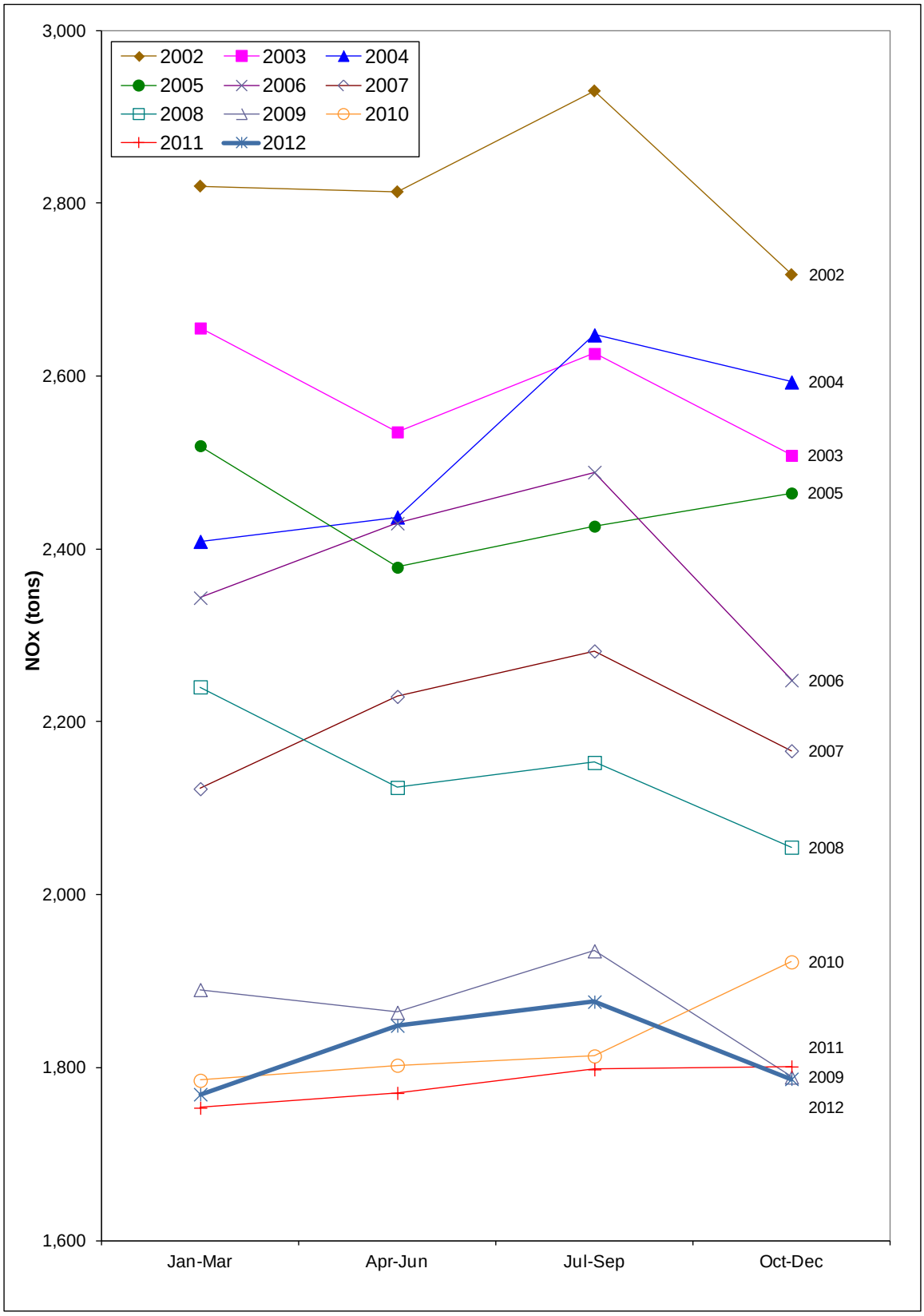


Figure 7-5 presents the 2012 mean quarterly SOx emissions and the 2012 actual quarterly emissions and Figure 7-6 compares the 2012 quarterly SOx emissions with the quarterly emissions from 2002 through 2011. Figure 7-5 shows that quarterly SOx emissions during calendar year 2012 varied from seven percent above the mean in the third quarter (July through September) to nine percent below the mean in the fourth quarter (October through December). Figure 7-6 reveals that the 2012 quarterly aggregate SOx emissions profile was similar to those for previous years and that the first, third, and fourth quarters of 2012 had lower aggregate emissions than the corresponding quarters of any prior year since the program began in 1994.

The decline in SOx emissions from the third quarter to the fourth quarter in Figure 7-5 can be attributed to three facilities. One refinery underwent a turnaround of their sulfur recovery unit (SRU) and pre-treater in July 2012 which increased SOx concentrations during the third quarter; thus increasing third quarter emissions over their normal operation levels. Another refinery added a new SRU with low SOx emissions while reducing the loads of three other SRUs during the fourth quarter. Additionally, a third facility added a wet scrubber in the fourth quarter which greatly reduced fourth quarter emissions. These occurrences led to greater than normal third quarter emissions and lower than normal fourth quarter emissions which explain the decline from third quarter to fourth quarter emissions.

This analysis shows that the RECLAIM program has not caused a significant shift in SOx emissions from the winter season into the summer season in recent years relative to early years of the program and that the calendar year 2012 seasonal emissions profile was similar to the corresponding profiles for other recent years.

Figure 7-5
Calendar Year 2012 SOx Quarterly Emissions

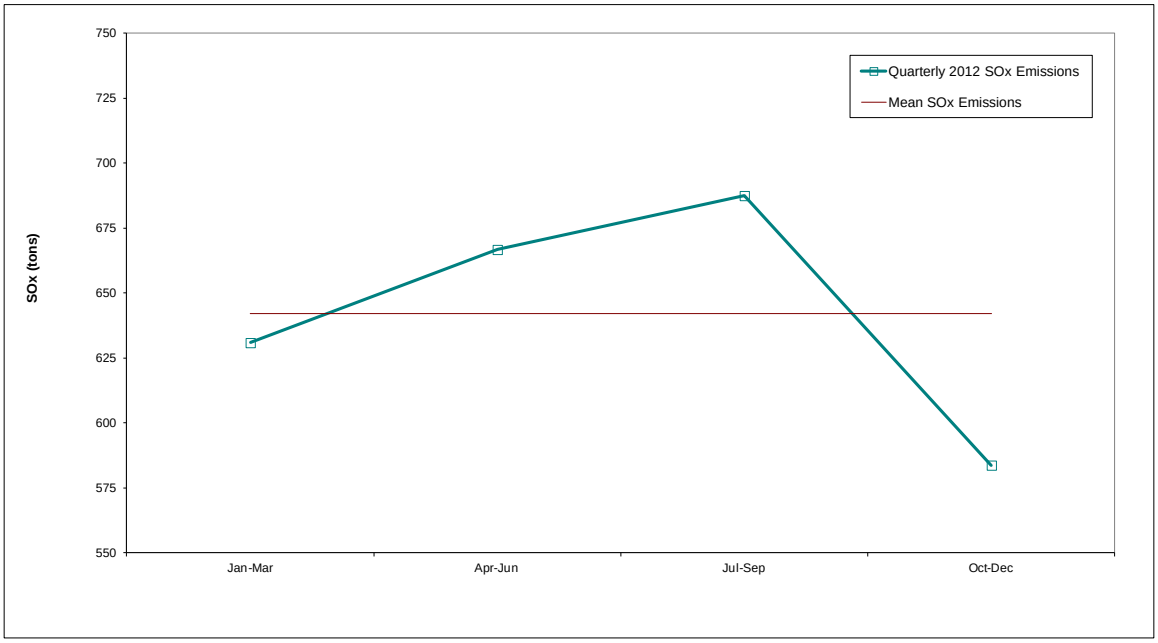
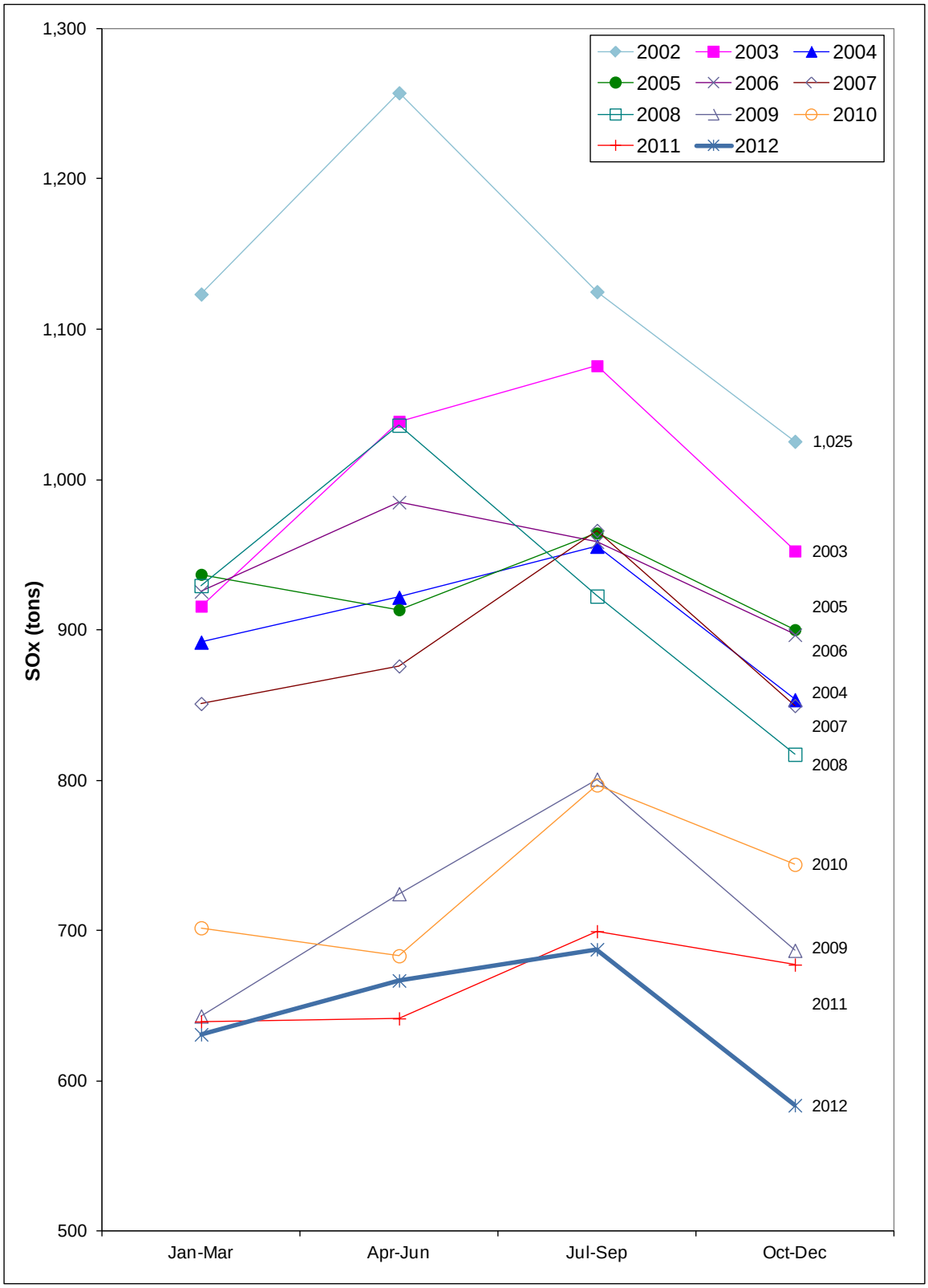


Figure 7-6
Quarterly SOx Emissions from Calendar Years 2002 through 2012



Per Capita Exposure to Pollution

The predicted effects of RECLAIM on air quality and public health were thoroughly analyzed through modeling during program development. The results were compared to projected impacts from continuing traditional command-and-control regulations and implementing control measures in the 1991 AQMP. One of the criteria examined in the analysis was per capita population exposure.

Per capita population exposure reflects the length of time each person is exposed to unhealthful air quality. The modeling performed in the program development analysis projected that the reductions in per capita exposure under RECLAIM in calendar year 1994 would be nearly identical to the reductions projected for implementation of the control measures in the 1991 AQMP, and the reductions resulting from RECLAIM would be greater in calendar years 1997 and 2000. As reported in previous annual reports, actual per capita exposures to ozone for 1994 and 1997 were below the projections.

As part of the Children's Environmental Health Protection Act that was passed in 1999, and in consultation with the Office of Environmental Health Hazard Assessment, CARB is to "review all existing health-based ambient air quality standards to determine whether these standards protect public health, including infants and children, with an adequate margin of safety." As a result of that requirement, CARB adopted a new 8-hour ozone standard (0.070 ppm), which became effective May 17, 2006, in addition to the 1-hour ozone standard (0.09 ppm) already in place. Table 7-1 shows the number of days that both the new state 8-hour ozone standard of 0.070 ppm and the 1-hour standard of 0.09 ppm were exceeded.

In July 1997, the USEPA established a new ozone National Ambient Air Quality Standard (NAAQS) of 0.085 ppm based on an 8-hour average measurement. As part of the Phase I implementation that was finalized in June 2004, the federal 1-hour ozone standard (0.12 ppm) was revoked effective June 2005. Effective May 27, 2008, the 8-hour NAAQS ozone standard was reduced to 0.075 ppm. Table 7-1 shows monitoring results based on this revised 8-hour federal standard.

Table 7-1 summarizes ozone data for calendar years 2001 through 2013 in terms of the number of days that exceeded the state and federal ambient ozone standards and the Basin's maximum concentration in each calendar year. This table shows that the number of days that exceeded the state and federal ambient ozone standards from calendar year 2012 to 2013 decreased back to 2011 levels; however, the Basin's maximum ozone concentrations, based on both the 1-hour and 8-hour averaging periods, increased slightly over the same period. Although the Basin's maximum ozone concentrations did increase, the changes were small and both concentrations are similar to the average of the corresponding maximum concentrations for 2010 through 2012.

Table 7-1
Summary of Ozone Data

Year	Days exceeding state 1-hour standard (0.09 ppm)	Days exceeding state new 8-hour standard (0.07 ppm)	Days exceeding federal 8-hour standard (0.075 ppm)	Basin Maximum 1-hour ozone concentration (ppm)	Basin Maximum 8-hour ozone concentration (ppm)
2001	121	156	132	0.191	0.146
2002	118	149	135	0.169	0.148
2003	133	161	141	0.216	0.200
2004	110	161	126	0.163	0.148
2005	111	142	116	0.163	0.145
2006	102	121	114	0.175	0.142
2007	99	128	108	0.171	0.137
2008	98	136	121	0.176	0.131
2009	100	131	113	0.176	0.128
2010	83	128	109	0.143	0.123
2011	94	127	107	0.160	0.136
2012*	97	140	111	0.147	0.112
2013	92	123	106	0.151	0.122

* After finalizing the Annual RECLAIM Audit Report for 2011 Compliance Year, the 2012 ozone data decreased slightly from previously reported values. The 2012 ozone data has been revised to reflect the updated changes. However, these changes did not alter the trends stated in the 2011 RECLAIM Report.

The CCAA, which was enacted in 1988, established targets for reducing overall population exposure to severe non-attainment pollutants in the Basin—a 25% reduction by December 31, 1994, a 40% reduction by December 31, 1997, and a 50% reduction by December 31, 2000 relative to a calendar years 1986-88 baseline. These targets are based on the number of hours on average a person is exposed ("per capita exposure"[2]) to ozone above the state 1-hour standard of 0.09 ppm. Table 7-2 shows the 1986-88 baseline, the actual per capita exposures each year since 1994 (RECLAIM's initial year), and the 1997 and 2000 targets set by the CCAA for each of the four counties in the district and the Basin overall. As shown in Table 7-2, the CCAA reduction targets were achieved as early as 1994 (actual 1994 Basin per capita exposure was 37.6 hours, which is below the 2000 target of 40.2 hours). The per capita exposure continues to remain much lower than the CCAA targets since RECLAIM started in 1994. For calendar year 2013, the actual per capita exposure for the Basin was 1.314 hours, which represents a 98.4% reduction from the 1986-88 baseline level.

[2] SCAQMD staff divides the air basin into a grid of square cells and interpolates recorded ozone data from ambient air quality monitors to determine ozone levels experienced in each of these cells. The total person-hours in a county experiencing ozone higher than the state ozone standard is determined by summing over the whole county the products of the number of hours exceeding the state ozone standard per grid cell with the number of residents in the corresponding cell. The per capita ozone exposures are then calculated by dividing the sum of person-hours by the total population within a county. Similar calculations are used to determine the Basin-wide per capita exposure by summing and dividing over the whole Basin.

Table 7-2
Per Capita Exposure to Ozone above the State One-Hour Standard of 0.09 ppm (hours)

Calendar Year	Basin	Los Angeles	Orange	Riverside	San Bernardino
1986-88 baseline[1]	80.5	75.8	27.2	94.1	192.6
1994 actual	37.6	26.5	9	71.1	124.9
1995 actual	27.7	20	5.7	48.8	91.9
1996 actual	20.3	13.2	4	42.8	70
1997 actual	5.9	3	0.6	13.9	24.5
1998 actual	12.1	7.9	3.1	25.2	40.2
2000 actual	3.8	2.6	0.7	8.5	11.4
2001 actual	1.73	0.88	0.15	6	5.68
2002 actual	3.87	2.16	0.13	11.12	12.59
2003 actual	10.92	6.3	0.88	20.98	40.21
2004 actual	3.68	2.26	0.50	6.82	12.34
2005 actual	3.11	1.43	0.03	6.06	12.54
2006 actual	4.56	3.08	0.68	8.02	13.30
2007 actual	2.90	1.50	0.35	4.65	10.53
2008 actual	4.14	2.04	0.26	7.50	14.71
2009 actual	2.872	1.538	0.078	3.884	10.539
2010 actual	1.184	0.377	0.107	2.451	4.476
2011 actual	2.099	0.848	0.015	3.456	8.125
2012 actual	2.366	1.050	0.050	2.587	9.776
2013 actual	1.314	0.519	0.067	1.609	5.497
1997 target[2]	48.3	45.5	16.3	56.5	115.6
2000 target[3]	40.2	37.9	13.6	47	96.3

[1] Average over three years, 1986 through 1988.

[2] 60% of the 1986-88 baseline exposures.

[3] 50% of the 1986-88 baseline exposures.

Table 7-2 shows that actual per capita exposures during all the years mentioned were well under the 1997 and 2000 target exposures limits. It should also be noted that air quality in the Basin is a complex function of meteorological conditions and an array of different emission sources, including mobile, area, RECLAIM stationary sources, and non-RECLAIM stationary sources. Therefore, the reduction of per capita exposure beyond the projected level is not necessarily attributable to implementation of the RECLAIM program in lieu of the command-and-control regulations.

Toxic Impacts

Based on a comprehensive toxic impact analysis performed during program development, it was concluded that RECLAIM would not result in any significant impacts on air toxic emissions. Nevertheless, to ensure that the implementation of RECLAIM does not result in adverse toxic impacts, each annual program audit is required to assess any increase in the public health exposure to air toxics potentially caused by RECLAIM.

One of the safeguards to ensure that the implementation of RECLAIM does not result in adverse air toxic health impacts is that RECLAIM sources are subject to

the same air toxic statutes and regulations (*e.g.*, SCAQMD Regulation XIV, State AB 2588, State Air Toxics Control Measures, Federal National Emissions Standards for Hazardous Air Pollutants, etc.) as other sources in the Basin. Additionally, air toxic health risk is primarily caused by emissions of VOCs and fine particulates such as certain metals. VOC sources at RECLAIM facilities are subject to source-specific command-and-control rules the same way these rules apply to non-RECLAIM facilities, in addition to the toxics requirements described above. Sources of fine particulates and toxic metal emissions are also subject to the above-identified regulations pertaining to toxic emissions. Moreover, new or modified RECLAIM sources with NOx or SOx emission increases are also required to be equipped with BACT, which minimizes to the best extent feasible NOx and SOx emissions.

Under the AER program, facilities that have the potential to emit: 1) four tons per year or more of VOC, NO_X, SO_X, or PM, or 100 tons per year or more of CO; or 2) any one of 24 toxic air contaminants (TACs) and ozone depleting compounds (ODCs) emitted above specific thresholds (Rule 301 Table IV), are required to report their emissions annually to the SCAQMD. Beginning with the FY 2000-01 reporting cycle, toxics emission reporting for the AB2588 Program was incorporated into the SCAQMD's AER Program. The data collected in the AER program is used to determine which facilities will be required to take further actions under the AB2588 Hot Spots Program.

Facilities in the AB2588 Program are required to submit a comprehensive toxics inventory, which is then prioritized using Board-approved procedures (see SCAQMD website at http://www.aqmd.gov/prdas/AB2588/AB2588_B2.html) into one of three categories: low, intermediate, or high priority. Facilities ranked with low priority are exempt from future reporting. Facilities ranked with intermediate priority are classified as District tracking facilities, which are then required to submit a complete toxics inventory once every four years (or quadrennially). In addition to reporting their toxic emissions quadrennially, facilities designated as high priority are required to submit a health risk assessment (HRA) to determine their impacts to the surrounding community. As of April 2013, SCAQMD staff has reviewed and approved 306 facility HRAs. About 95 percent of the facilities have cancer risks below 10 in a million and over 98 percent of the facilities have acute and chronic non-cancer hazard indices less than 1.

Facilities with cancer risks above 10 in a million or a non-cancer hazard index above 1 are required by AB2588 to conduct a public notice and SCAQMD holds a public meeting to discuss their health risk. To date, the SCAQMD has conducted 47 such public notification meetings for the AB2588 Program.

The Board also established the following action risk levels in Rule 1402: Cancer burden of 0.5, a cancer risk of 25 in a million, and a hazard index of 3.0. Facilities above any of the action risk levels must reduce their risks below the action risk levels within three years. According to the SCAQMD's 2012 Annual Report on AB 2588 Air Toxics "Hot Spots" program[3], 21 facilities were required to reduce risks and all of these facilities have reduced risks well below the action

[3] Data and descriptions about the AB2588 Program were taken from the SCAQMD's April 2013 Annual Report on AB 2588 Air Toxics "Hot Spots" Program. http://www.aqmd.gov/prdas/AB2588/pdf/Annual_Report_2012.pdf

risk levels mandated by Rule 1402[4].

Finally, the SCAQMD staff conducts Multiple Air Toxic Exposure Studies (MATES) periodically to assess cumulative air toxic impacts to the residents and workers of southern California. These studies also help document progress in reducing toxic impacts. The third version of MATES (*i.e.*, MATES III) was conducted over a two year period from April 2004 to March 2006. Monitoring conducted at that time indicated resident and worker exposure to 1,3-butadiene, benzene, perchloroethylene, and methylene chloride was reduced by 50 percent or more since MATES II (conducted from April 1998 to March 1999) and exposure to formaldehyde and acetaldehyde was reduced by 9 percent. Exposure to toxic metals, such as arsenic, cadmium, lead, and nickel, was reduced by over 25 percent from the levels observed in MATES II. Field monitoring for MATES IV was completed in June 2013 and analysis of that data is currently underway.

There have been concerns voiced regarding the potential that trading of RTCs can allow for higher production at a RECLAIM facility which may indirectly cause higher secondary emissions of toxic air contaminants, and thereby, make the health risk in the vicinity of the facility worse. If any facility significantly experiences such circumstances, the above described requirements related to toxic emissions under the AB2588 program and/or Rule 1402 would be triggered and the appropriate risk reduction measures would be required. Also, based on the results of recent MATES studies, the region-wide cumulative air toxic impacts on residents and workers in Southern California have been declining. Nonetheless, air toxic risk did increase in a few areas and, in particular, for those living near the San Pedro Bay ports between 1997 and 2005, those risk increases can be primarily attributed to goods movement related sources that are not part of RECLAIM. Therefore, staff has not found any evidence that would suggest that the substitution of NOx and SOx RECLAIM for the command-and-control rules and the measures RECLAIM subsumes caused a significant increase in public exposure to air toxic emissions relative to what would have happened if the RECLAIM program was not implemented. Staff will continue to monitor and assess toxic impacts as part of future annual program audits.

[4] In March 2013, one additional facility was identified as subject to the risk reduction requirements. It subsequently submitted a risk reduction plan in August 2013 and revised and amended it in November 2013 and January 2014, respectively. In February 2014, the revised and amended risk reduction plan was provisionally and conditionally approved.

APPENDIX A
RECLAIM UNIVERSE OF SOURCES

The RECLAIM universe of active sources as of the end of Compliance Year 2012 is provided below.

Facility ID	Cycle	Facility Name	Program
800088	2	3M COMPANY	NOx
23752	2	AEROCRAFT HEAT TREATING CO INC	NOx
115394	1	AES ALAMITOS, LLC	NOx
115389	2	AES HUNTINGTON BEACH, LLC	NOx/SOx
42676	2	AES PLACERITA INC	NOx
115536	1	AES REDONDO BEACH, LLC	NOx
148236	2	AIR LIQUIDE LARGE INDUSTRIES U.S., LP	NOx/SOx
3417	1	AIR PROD & CHEM INC	NOx
101656	2	AIR PRODUCTS AND CHEMICALS, INC.	NOx
5998	1	ALL AMERICAN ASPHALT	NOx
114264	1	ALL AMERICAN ASPHALT	NOx
3704	2	ALL AMERICAN ASPHALT, UNIT NO.01	NOx
800196	2	AMERICAN AIRLINES INC	NOx
145836	2	AMERICAN APPAREL DYEING & FINISHING, INC	NOx
156722	1	AMERICAN APPAREL KNIT AND DYE	NOx
21598	2	ANGELICA TEXTILE SERVICES	NOx
74424	2	ANGELICA TEXTILE SERVICES	NOx
16642	1	ANHEUSER-BUSCH INC., (LA BREWERY)	NOx/SOx
117140	2	AOC, LLC	NOx
167066	1	ARLON GRAPHICS L.L.C.	NOx
12155	1	ARMSTRONG WORLD INDUSTRIES INC	NOx
16737	2	ATKINSON BRICK CO	NOx
10094	2	ATLAS CARPET MILLS INC	NOx
117290	2	B BRAUN MEDICAL, INC	NOx
800016	2	BAKER COMMODITIES INC	NOx
800205	2	BANK OF AMERICA NT & SA, BREA CENTER	NOx
40034	1	BENTLEY PRINCE STREET INC	NOx
119907	1	BERRY PETROLEUM COMPANY	NOx
166073	1	BETA OFF SHORE	NOx
155474	2	BICENT (CALIFORNIA) MALBURG LLC	Nox

Facility ID	Cycle	Facility Name	Program
132068	1	BIMBO BAKERIES USA INC	NOx
115241	1	BOEING SATELLITE SYSTEMS INC	NOx
800067	1	BOEING SATELLITE SYSTEMS INC	NOx
174544	2	BREITBURN OPERATION LP	NOx
25638	2	BURBANK CITY, BURBANK WATER & POWER	NOx
128243	1	BURBANK CITY,BURBANK WATER & POWER,SCPPA	NOx
800344	1	CALIFORNIA AIR NATIONAL GUARD, MARCH AFB	NOx
22607	2	CALIFORNIA DAIRIES, INC	NOx
138568	1	CALIFORNIA DROP FORGE, INC	NOx
800181	2	CALIFORNIA PORTLAND CEMENT CO	NOx/SOx
46268	1	CALIFORNIA STEEL INDUSTRIES INC	NOx
107653	2	CALMAT CO	NOx
107654	2	CALMAT CO	NOx
107655	2	CALMAT CO	NOx
107656	2	CALMAT CO	NOx
119104	1	CALMAT CO	NOx/SOx
153992	1	CANYON POWER PLANT	NOx
94930	1	CARGILL INC	NOx
22911	2	CARLTON FORGE WORKS	NOx
118406	1	CARSON COGENERATION COMPANY	NOx
141555	2	CASTAIC CLAY PRODUCTS, LLC	NOx
800373	1	CENCO REFINING COMPANY	NOx/SOx
148925	1	CHERRY AEROSPACE	NOx
800030	2	CHEVRON PRODUCTS CO.	NOx/SOx
56940	1	CITY OF ANAHEIM/COMB TURBINE GEN STATION	NOx
172077	1	CITY OF COLTON	NOx
129810	1	CITY OF RIVERSIDE PUBLIC UTILITIES DEPT	NOx
139796	1	CITY OF RIVERSIDE PUBLIC UTILITIES DEPT	NOx
164204	2	CITY OF RIVERSIDE, PUBLIC UTILITIES DEPT	NOx
16978	2	CLOUGHERTY PACKING LLC/HORMEL FOODS CORP	NOx
800210	2	CONEXANT SYSTEMS INC	NOx
38440	2	COOPER & BRAIN - BREA	NOx
68042	2	CORONA ENERGY PARTNERS, LTD	NOx
152707	1	CPV SENTINEL LLC	NOx
50098	1	D&D DISPOSAL INC,WEST COAST RENDERING CO	NOx
63180	1	DARLING INTERNATIONAL INC	NOx

Facility ID	Cycle	Facility Name	Program
3721	2	DART CONTAINER CORP OF CALIFORNIA	NOx
7411	2	DAVIS WIRE CORP	NOx
143738	2	DCOR LLC	NOx
143739	2	DCOR LLC	NOx
143740	2	DCOR LLC	NOx
143741	1	DCOR LLC	NOx
132071	1	DEAN FOODS CO. OF CALIFORNIA	NOx
47771	1	DELEO CLAY TILE CO INC	NOx
800037	2	DEMENNO/KERDOON	NOx
125579	1	DIRECTV	NOx
800189	1	DISNEYLAND RESORT	NOx
174371	2	DP3 HANGARS, LLC	NOx
142536	2	DRS SENSORS & TARGETING SYSTEMS, INC	NOx
800264	2	EDGINGTON OIL COMPANY	NOx/SOx
115663	1	EL SEGUNDO POWER, LLC	NOx
800372	2	EQUILON ENTER. LLC, SHELL OIL PROD. US	NOx/SOx
124838	1	EXIDE TECHNOLOGIES	NOx/SOx
17344	1	EXXONMOBIL OIL CORP	NOx
25058	2	EXXONMOBIL OIL CORP	NOx
800089	1	EXXONMOBIL OIL CORPORATION	NOx/SOx
800094	1	EXXONMOBIL OIL CORPORATION	NOx
95212	1	FABRICA	NOx
11716	1	FONTANA PAPER MILLS INC	NOx
346	1	FRITO-LAY, INC.	NOx
2418	2	FRUIT GROWERS SUPPLY CO	NOx
142267	2	FS PRECISION TECH LLC	NOx
5814	1	GAINEY CERAMICS INC	NOx
115315	1	GEN ON WEST, INC.	NOx
153033	2	GEORGIA-PACIFIC CORRUGATED LLC	NOx
152857	2	GEORGIA-PACIFIC GYPSUM LLC	NOx
124723	1	GREKA OIL & GAS, INC	NOx
137471	2	GRIFOLS BIOLOGICALS INC	NOx
156741	2	HARBOR COGENERATION CO, LLC	NOx
157359	1	HENKEL CORPORATION	NOx
123774	1	HERAEUS METAL PROCESSING, LLC	NOx
113160	2	HILTON COSTA MESA	NOx

Facility ID	Cycle	Facility Name	Program
160888	1	HINES REIT EL SEGUNDO, LP	NOx
800066	1	HITCO CARBON COMPOSITES INC	NOx
2912	2	HOLLIDAY ROCK CO INC	NOx
800003	2	HONEYWELL INTERNATIONAL INC	NOx
124619	1	IMPRESS USA INC	NOx
124808	2	INEOS POLYPROPYLENE LLC	NOx/SOx
129816	2	INLAND EMPIRE ENERGY CENTER, LLC	NOx
157363	2	INTERNATIONAL PAPER CO	NOx
169678	1	ITT CANNON, LLC	NOx
16338	1	KAISER ALUMINUM FABRICATED PRODUCTS, LLC	NOx
21887	2	KIMBERLY-CLARK WORLDWIDE INC.-FULT. MILL	NOx/SOx
1744	2	KIRKHILL - TA COMPANY	NOx
800335	2	LA CITY, DEPT OF AIRPORTS	NOx
800170	1	LA CITY, DWP HARBOR GENERATING STATION	NOx
800074	1	LA CITY, DWP HAYNES GENERATING STATION	NOx
800075	1	LA CITY, DWP SCATTERGOOD GENERATING STN	NOx
800193	2	LA CITY, DWP VALLEY GENERATING STATION	NOx
61962	1	LA CITY, HARBOR DEPT	NOx
550	1	LA CO., INTERNAL SERVICE DEPT	NOx
173904	2	LAPEYRE INDUSTRIAL SANDS, INC	NOx
141295	2	LEKOS DYE AND FINISHING, INC	NOx
144455	2	LIFOAM INDUSTRIES, LLC	NOx
83102	2	LIGHT METALS INC	NOx
151394	2	LINN WESTERN OPERATING INC	NOx
151532	2	LINN WESTERN OPERATING INC	NOx
152054	1	LINN WESTERN OPERATING INC	NOx
151415	2	LINN WESTERN OPERATING, INC	NOx
115314	2	LONG BEACH PEAKERS LLC	NOx
17623	2	LOS ANGELES ATHLETIC CLUB	NOx
58622	2	LOS ANGELES COLD STORAGE CO	NOx
125015	2	LOS ANGELES TIMES COMMUNICATIONS LLC	NOx
800080	2	LUNDAY-THAGARD COMPANY	NOx/SOx
38872	1	MARS PETCARE U.S., INC.	NOx
14049	2	MARUCHAN INC	NOx
3029	2	MATCHMASTER DYEING & FINISHING INC	NOx
2825	1	MCP FOODS INC	NOx

Facility ID	Cycle	Facility Name	Program
173290	1	MEDICLEAN	NOx
115563	1	METAL COATERS OF CALIFORNIA	NOx
94872	2	METAL CONTAINER CORP	NOx
155877	1	MILLERCOORS, LLC	NOx
12372	1	MISSION CLAY PRODUCTS	NOx
11887	2	NASA JET PROPULSION LAB	NOx
40483	2	NELCO PROD. INC	NOx
172005	2	NEW-INDY ONTARIO, LLC	NOx
12428	2	NEW NGC, INC.	NOx
131732	2	NEWPORT FAB, LLC	NOx
18294	1	NORTHROP GRUMMAN CORP, AIRCRAFT DIV	NOx
800408	1	NORTHROP GRUMMAN SYSTEMS	NOx
800409	2	NORTHROP GRUMMAN SYSTEMS CORPORATION	NOx
112853	2	NP COGEN INC	NOx
89248	2	OLD COUNTRY MILLWORK INC	NOx
47781	1	OLS ENERGY-CHINO	NOx
35302	2	OWENS CORNING ROOFING AND ASPHALT, LLC	NOx/SOx
7427	1	OWENS-BROCKWAY GLASS CONTAINER INC	NOx/SOx
169754	1	OXY USA INC	NOx
151594	1	OXY USA, INC	NOx
151601	1	OXY USA, INC.	NOx
45746	2	PABCO BLDG PRODUCTS LLC,PABCO PAPER, DBA	NOx/SOx
17953	1	PACIFIC CLAY PRODUCTS INC	NOx
59618	1	PACIFIC CONTINENTAL TEXTILES, INC.	NOx
2946	1	PACIFIC FORGE INC	NOx
130211	2	PAPER-PAK INDUSTRIES	NOx
800183	1	PARAMOUNT PETR CORP	NOx/SOx
800168	1	PASADENA CITY, DWP	NOx
168088	1	PCCR USA	NOx
171107	2	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	NOx/SOx
171109	1	PHILLIPS 66 CO/LOS ANGELESREFINERY	NOx/SOx
133987	1	PLAINS EXPLORATION & PRODUCTION CO, LP	NOx
133996	2	PLAINS EXPLORATION & PRODUCTION COMPANY	NOx
137520	1	PLAINS WEST COAST TERMINALS LLC	NOx
800416	1	PLAINS WEST COAST TERMINALS LLC	NOx
800417	2	PLAINS WEST COAST TERMINALS LLC	NOx

Facility ID	Cycle	Facility Name	Program
800419	2	PLAINS WEST COAST TERMINALS LLC	NOx
800420	2	PLAINS WEST COAST TERMINALS LLC	NOx
800431	1	PRATT & WHITNEY ROCKETDYNE, INC.	NOx
7416	1	PRAXAIR INC	NOx
42630	1	PRAXAIR INC	NOx
152501	1	PRECISION SPECIALTY METALS, INC.	NOx
136	2	PRESS FORGE CO	NOx
105903	1	PRIME WHEEL	NOx
132191	1	PURENERGY OPERATING SERVICES, LLC	NOx
132192	1	PURENERGY OPERATING SERVICES, LLC	NOx
173392	1	QUAD/GRAPHICS MARKETING, LLC	NOx
8547	1	QUEMETCO INC	NOx/SOx
19167	2	R J NOBLE COMPANY	NOx
3585	2	R. R. DONNELLEY & SONS CO, LA MFG DIV	NOx
20604	2	RALPHS GROCERY CO	NOx
115041	1	RAYTHEON COMPANY	NOx
114997	1	RAYTHEON COMPANY	NOx
115172	2	RAYTHEON COMPANY	NOx
800371	2	RAYTHEON SYSTEMS COMPANY - FULLERTON OPS	NOx
15544	2	REICHHOLD INC	NOx
52517	1	REXAM BEVERAGE CAN COMPANY	NOx
114801	1	RHODIA INC.	NOx/SOx
61722	2	RICOH ELECTRONICS INC	NOx
139010	2	RIPON COGENERATION LLC	NOx
800182	1	RIVERSIDE CEMENT CO	NOx/SOx
800113	2	ROHR, INC.	NOx
18455	2	ROYALTY CARPET MILLS INC	NOx
4242	2	SAN DIEGO GAS & ELECTRIC	NOx
161300	2	SAPA EXTRUDER, INC	NOx
155221	2	SAVE THE QUEEN LLC (DBA QUEEN MARY)	NOx
15504	2	SCHLOSSER FORGE COMPANY	NOx
20203	2	SCOPE PRODUCTS INC, DEXT CO	NOx
14926	1	SEMPRA ENERGY (THE GAS CO)	NOx
37603	1	SGL TECHNIC INC, POLYCARBON DIVISION	NOx
131850	2	SHAW DIVERSIFIED SERVICES INC	NOx
117227	2	SHCI SM BCH HOTEL LLC, LOEWS SM BCH HOTE	NOx

Facility ID	Cycle	Facility Name	Program
16639	1	SHULTZ STEEL CO	NOx
54402	2	SIERRA ALUMINUM COMPANY	NOx
85943	2	SIERRA ALUMINUM COMPANY	NOx
101977	1	SIGNAL HILL PETROLEUM INC	NOx
119596	2	SNAK KING CORPORATION	NOx
43201	2	SNOW SUMMIT INC	NOx
4477	1	SO CAL EDISON CO	NOx
5973	1	SO CAL GAS CO	NOx
800127	1	SO CAL GAS CO	NOx
800128	1	SO CAL GAS CO	NOx
8582	1	SO CAL GAS CO/PLAYA DEL REY STORAGE FACI	NOx
14871	2	SONOCO PRODUCTS CO	NOx
160437	1	SOUTHERN CALIFORNIA EDISON	NOx
800338	2	SPECIALTY PAPER MILLS INC	NOx
126498	2	STEELSCAPE, INC	NOx
105277	2	SULLY MILLER CONTRACTING CO	NOx
19390	1	SULLY-MILLER CONTRACTING CO.	NOx
2083	1	SUPERIOR INDUSTRIES INTERNATIONAL INC	NOx
3968	1	TABC, INC	NOx
18931	2	TAMCO	NOx
14944	1	TECHALLOY CO., INC.	NOx/SOx
174591	1	TESORO REFINING & MARKETING CO LLC, CAL	NOX/SOx
174655	2	TESORO REFINING & MARKETING CO LLC	NOX/SOx
151798	1	TESORO REFINING AND MARKETING CO	NOx/SOx
800436	1	TESORO REFINING AND MARKETING CO	NOx/SOx
96587	1	TEXOLLINI INC	NOx
148340	2	THE BOEING CO. COMMERCIAL AVIATION SRVCS	NOx
14736	2	THE BOEING COMPANY	NOx
16660	2	THE BOEING COMPANY	NOx
800038	2	THE BOEING COMPANY - C17 PROGRAM	NOx
11119	1	THE GAS CO./ SEMPRA ENERGY	NOx
153199	1	THE KROGER CO/RALPHS GROCERY CO	NOx
11435	2	THE PQ CORP	NOx/SOx
97081	1	THE TERMO COMPANY	NOx
800330	1	THUMS LONG BEACH	NOx
129497	1	THUMS LONG BEACH CO	NOx

Facility ID	Cycle	Facility Name	Program
800325	2	TIDELANDS OIL PRODUCTION CO	NOx
68118	2	TIDELANDS OIL PRODUCTION COMPANY ETAL	NOx
171960	2	TIN, INC. DBA INTERNATIONAL PAPER	NOx
137508	2	TONOGA INC, TACONIC DBA	NOx
53729	1	TREND OFFSET PRINTING SERVICES, INC	NOx
9053	1	TRIGEN- LA ENERGY CORP	NOx
11034	2	TRIGEN-LA ENERGY CORP	NOx
165192	2	TRIUMPH AEROSTRUCTURES, LLC	NOx
43436	1	TST, INC.	NOx
800026	1	ULTRAMAR INC	NOx/SOx
9755	2	UNITED AIRLINES INC	NOx
73022	2	US AIRWAYS INC	NOx
800149	2	US BORAX INC	NOx
800150	1	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	NOx
1073	1	US TILE CO	NOx
800393	1	VALERO WILMINGTON ASPHALT PLANT	NOx
14502	2	VERNON CITY, LIGHT & POWER DEPT	NOx
148896	2	VINTAGE PRODUCTION CALIFORNIA LLC	NOx
148897	2	VINTAGE PRODUCTION CALIFORNIA LLC	NOx
151899	2	VINTAGE PRODUCTION CALIFORNIA LLC	NOx
14495	2	VISTA METALS CORPORATION	NOx
146536	1	WALNUT CREEK ENERGY PARK	NOx/SOx
42775	1	WEST NEWPORT OIL CO	NOx/SOx
17956	1	WESTERN METAL DECORATING CO	NOx
51620	1	WHEELABRATOR NORWALK ENERGY CO INC	NOx
127299	2	WILDFLOWER ENERGY LP/INDIGO GEN., LLC	NOx
158950	1	WINDSOR QUALITY FOOD CO. LTD.	NOx

APPENDIX B
FACILITY INCLUSIONS

As discussed in Chapter 1, two facilities were added to the RECLAIM universe between July 1, 2012 and the end of Compliance Year 2012. The included facilities are identified, and the reasons for inclusion are also provided.

Facility ID	Cycle	Facility Name	Market	Date	Reason
119596	2	SNAK KING CORPORATION	NOx	8/23/2012	Opt-in at facility request.
172005	2	NEW- INDY ONTARIO, LLC	NOx	7/3/2012	Partial change of operator from an existing facility.

APPENDIX C
RECLAIM FACILITIES CEASING OPERATION OR EXCLUDED

SCAQMD staff is aware of the following RECLAIM facilities that permanently shut down all operations, inactivated their RECLAIM permits, or were excluded from the RECLAIM universe during Compliance Year 2012. The reasons for shutdowns and exclusions cited below are based on the information provided by the facilities and other information available to SCAQMD staff.

Facility ID	9217
Facility Name	VEOLIA ENERGY LOS ANGELES, INC
City and County	Fullerton, Orange County
SIC	4961
Pollutants	NOx
1994 Allocation	26,274
Reason for Shutdown	The facility shut down all its operations, the only piece of process equipment was rendered inoperable, and the property was sold to Hope University which is exempt from RECLAIM per Rule 2001(i)(2)(H).

Facility ID	111415
Facility Name	VAN CAN COMPANY
City and County	Fontana, San Bernardino County
SIC	3411
Pollutants	NOx
1994 Allocation	8,310
Reason for Shutdown	Operations moved to new plant in Tennessee.

Facility ID	167432
Facility Name	EDISON MISSION HUNTINGTON BEACH, LLC
City and County	Huntington Beach, Orange County
SIC	4911
Pollutants	NOx/SOx
1994 Allocation	1,024,673
Reason for Shutdown	Air quality mitigation for a new power plant (Walnut Creek Energy LLC, ID: 146536) also located in the SCAQMD.

Facility ID	800110
Facility Name	THE BOEING COMPANY
City and County	Anaheim, Orange County
SIC	3812
Pollutants	NOx
1994 Allocation	17,846
Reason for Shutdown	Facility consolidated operations at another Boeing facility in Huntington Beach (ID: 16660).

Facility ID	800343
Facility Name	BOEING SATELLITE SYSTEMS, INC
City and County	El Segundo, Los Angeles County
SIC	3669
Pollutants	NOx
1994 Allocation	6,620
Reason for Shutdown	Facility consolidated operations at another Boeing facility in El Segundo (ID: 800067).

APPENDIX D
FACILITIES THAT EXCEEDED THEIR ANNUAL ALLOCATION FOR COMPLIANCE YEAR 2012

The following is a list of facilities that did not have enough RTCs to cover their NOx and/or SOx emissions in Compliance Year 2012 based on the results of audits conducted by SCAQMD staff.

Facility ID	Facility Name	Compliance Year	Emittant
3704	ALL AMERICAN ASPHALT CORONA	2012	NOx
5998	ALL AMERICAN ASPHALT WESTMINSTER	2012	NOx
17956	WESTERN METAL DECORATING CO	2012	NOx
59618	PACIFIC CONTINENTAL TEXTILES, INC	2012	NOx
73022	US AIRWAYS INC	2012	NOx
101656	AIR PRODUCTS AND CHEMICALS, INC	2012	NOx
118406	CARSON COGENERATION COMPANY	2012	NOx
133996	PLAINS EXPLORATION AND PRODUCTION COMPANY	2012	NOx
145836	AMERICAN APPAREL DYEING & FINISHING, INC	2012	NOx
153199	THE KROGER CO/RALPHS GROCERY CO	2012	NOx
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	2012	NOx
800182	RIVERSIDE CEMENT CO	2012	NOx/SOx

APPENDIX E
REPORTED JOB IMPACTS ATTRIBUTED TO RECLAIM

Each year, RECLAIM facility operators are asked to provide employment data in their APEP reports. The report asks company representatives to quantify job increases and/or decreases, and to report the positive and/or negative impacts of the RECLAIM program on employment at their facilities.

This appendix is included in each Annual RECLAIM Audit Report to provide detailed information for facilities reporting that RECLAIM contributed to job gains or losses. During Compliance Year 2012, no facility reported actual job gains or losses attributable to RECLAIM.

ERRATA SHEET FOR AGENDA #28

Annual RECLAIM Audit Report for 2012 Compliance Year

SCAQMD Governing Board Meeting

March 7, 2014

The following revisions are recommended in the Board Letter and Annual RECLAIM Audit Report for 2012 Compliance Year to change the number of NOx facilities which exceeded their NOx allocations from twelve (12) to thirteen (13).

Board Letter, Page 3:

- ***"Facility Compliance*** – The vast majority of RECLAIM facilities complied with their allocations during the 2012 compliance year (~~96~~95% of NOx facilities and 97% of SOx facilities). ~~Twelve~~ Thirteen facilities (~~4~~5% of total facilities) exceeded their NOx allocations and one of the ~~12~~ 13 facilities also exceeded its SOx allocation during Compliance Year 2012. These ~~12~~ 13 NOx facilities had total NOx emissions of ~~832~~ 1,208 tons and did not have adequate allocations to offset ~~125.9~~361.1 of those tons. The exceedances represent ~~15.1~~29.9% of the sum of the NOx emissions from the ~~12~~ 13 facilities and ~~1.3~~3.7% of total RECLAIM NOx allocations. One facility had SOx emissions that exceeded its SOx allocations by only three pounds. Pursuant to Rule 2010(b)(1)(A), all ~~12~~ 13 facilities had their respective exceedances deducted from their annual allocations for the compliance year subsequent to SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations."

Annual RECLAIM Audit Report for 2012 Compliance Year

Executive Summary, Page ES-4:

"Chapter 5: Compliance

Of the 278 NOx RECLAIM facilities during Compliance Year 2012, a total of ~~266~~ 265 facilities (~~96~~95%) complied with their NOx allocations, and all but one of the 33 SOx facilities (97%) complied with their SOx allocations. The ~~12~~ 13 NOx facilities that exceeded their NOx allocations had aggregate NOx emissions of ~~832~~ 1,208 tons and did not have adequate allocations to offset ~~125.9~~361.1 tons (or ~~15.1~~29.9%) of their combined emissions. This exceedance amount is small compared to the overall allocations for Compliance Year 2012 (~~1.3~~3.7% of total NOx allocations). One SOx facility had SOx emissions that exceeded its SOx allocations by only three pounds. The exceedances from these ~~12~~ 13 facilities (~~11~~ 12 NOx-only facilities and one NOx and SOx facility) did not impact the overall RECLAIM emission reduction goals. Pursuant to Rule 2010(b)(1)(A), all ~~12~~ 13 facilities had their respective exceedances deducted from their annual allocations for the compliance year subsequent to the date of SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations. The overall RECLAIM NOx and SOx emission reduction targets and goals were met for Compliance Year 2012 (*i.e.*, aggregate emissions for all RECLAIM facilities were well below aggregate allocations)."

Chapter 5, Page 5-1:

"Summary

*Of the 278 NOx RECLAIM facilities during Compliance Year 2012, a total of ~~266~~ 265 facilities (~~96~~95%) complied with their NOx allocations, and all but one of the 33 SOx facilities (97%) complied with their SOx allocations. The ~~12~~ 13 NOx facilities that exceeded their NOx allocations had aggregate NOx emissions of ~~832~~ 1,208 tons and did not have adequate allocations to offset ~~125.9~~361.1 tons (or ~~15.1~~29.9%) of their combined emissions. This exceedance amount is small compared to the overall allocations for Compliance Year 2012 (~~1.3~~3.7% of total NOx allocations). One SOx facility had SOx emissions that exceeded its SOx allocations by only three pounds. The exceedances from these ~~12~~ 13 facilities (~~11~~ 12 NOx-only facilities and one NOx and SOx facility) did not impact the overall RECLAIM emission reduction goals. Pursuant to Rule 2010(b)(1)(A), all ~~12~~ 13 facilities had their respective exceedances deducted from their annual allocations for the compliance year subsequent to the date of SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations. The overall RECLAIM NOx and SOx emission reduction targets and goals were met for Compliance Year 2012 (*i.e.*, aggregate emissions for all RECLAIM facilities were well below aggregate allocations)."*

Chapter 5, Page 5-3:

"Compliance Status

During this compliance year, a total of ~~12~~ 13 RECLAIM facilities failed to reconcile their emissions (~~11~~ 12 NOx-only facilities and one facility that exceeded both its NOx and SOx allocations). Ten of these ~~12~~ 13 facilities failed to secure sufficient RTCs to cover their reported emissions during either the quarterly or annual reconciliation periods. Of these ten facilities, three facilities (two NOx-only facilities and one NOx and SOx facility), had additional reasons for NOx exceedance such as applying incorrect stackflow calculations, using incorrect emission factors, failing to apply MDP, and using incorrect MDP (the facility with a SOx exceedance failed to secure sufficient SOx RTCs to cover reported SOx emissions). Of the remaining ~~two~~ three facilities, one exceeded its allocations because the facility failed to apply bias adjustment factors to its calculated major source emissions. The second facility failed to account for emissions from two reportable sources, failed to report all of the emissions from equipment that are exempt from obtaining SCAQMD permit pursuant to Rule 219, and failed to apply a pressure correction factor in order to standardize its process unit fuel usage. The third facility failed to replace its major source turbines emissions data as reported by their CEMS with MDP based emissions because the facility failed to conduct RATA tests until about two and a half months beyond the rule-specified deadline.

Overall, the Compliance Year 2012 allocation compliance rate is ~~96~~95% (~~266~~ 265 out of 278 facilities) for NOx RECLAIM facilities and 97% (32 out of 33 facilities) for SOx RECLAIM facilities. For purposes of comparison, the allocation compliance rates for Compliance Year 2011 were 93% and 100% for NOx and SOx RECLAIM facilities, respectively. The ~~12~~ 13 facilities that had NOx emissions in excess of their individual

NOx allocations had ~~832~~ 1,208 tons of NOx emissions and did not have adequate RTCs to cover ~~125.9~~361.1 of those tons (or ~~15.1~~29.9%). This exceedance amount (~~1.3~~3.7% of aggregate NOx allocations) is small compared to the overall allocations for Compliance Year 2012. One SOx facility had SOx emissions that exceeded its SOx allocations by only three pounds. Pursuant to Rule 2010(b)(1)(A), all ~~12~~ 13 facilities had their respective exceedances deducted from their annual emissions allocations for the compliance year subsequent to SCAQMD's determination that the facilities exceeded their Compliance Year 2012 allocations."

APPENDIX D
FACILITIES THAT EXCEEDED THEIR ANNUAL ALLOCATION FOR COMPLIANCE YEAR 2012

The following is a list of facilities that did not have enough RTCs to cover their NOx and/or SOx emissions in Compliance Year 2012 based on the results of audits conducted by SCAQMD staff.

Facility ID	Facility Name	Compliance Year	Emittant
3704	ALL AMERICAN ASPHALT CORONA	2012	NOx
5998	ALL AMERICAN ASPHALT WESTMINSTER	2012	NOx
17956	WESTERN METAL DECORATING CO	2012	NOx
59618	PACIFIC CONTINENTAL TEXTILES, INC	2012	NOx
73022	US AIRWAYS INC	2012	NOx
101656	AIR PRODUCTS AND CHEMICALS, INC	2012	NOx
118406	CARSON COGENERATION COMPANY	2012	NOx
129816	INLAND EMPIRE ENERGY CENTER, LLC	2012	NOx
133996	PLAINS EXPLORATION AND PRODUCTION COMPANY	2012	NOx
145836	AMERICAN APPAREL DYEING & FINISHING, INC	2012	NOx
153199	THE KROGER CO/RALPHS GROCERY CO	2012	NOx
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL	2012	NOx
800182	RIVERSIDE CEMENT CO	2012	NOx/SOx