BOARD MEETING DATE: March 6, 2015 AGENDA NO. 29

REPORT: Annual RECLAIM Audit Report for 2013 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 twentieth 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 2013 Compliance Year is included with the report.

COMMITTEE: Stationary Source, February 20, 2015, 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, making process changes 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 staff 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 2013 (which extends from January 1, 2013, start of Cycle 1, through June 30, 2014, 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 2013, 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 2013, audited NOx emissions were 24% less than programmatic NOx allocations and audited SOx emissions were 35% less than programmatic SOx allocations.

Audit Findings

The audit of the RECLAIM Program's Compliance Year 2013 and trades of RTCs that occurred during calendar year 2014 show:

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

- ***Universe*** – The RECLAIM universe consisted of 273 facilities as of June 30, 2013. Six facilities were included, no facility was excluded, and four facilities in the RECLAIM universe shut down during Compliance Year 2013. Thus, 275 facilities were in the RECLAIM universe on June 30, 2014, the end of the Compliance Year 2013. Of the six newly included facilities, one facility elected to enter the RECLAIM program, whereas another facility, a former RECLAIM facility which ceased operation in 2005, reactivated its operation. The third facility relocated part of its operation to a new location. The remaining three facilities were included in NOx RECLAIM pursuant to Rule 2001(b) – Criteria for Inclusion in RECLAIM. Additionally, another facility was added to the SOx market, but this inclusion did not affect the number of facilities in the entire RECLAIM universe because it formerly participated in the NOx market.

  Of the four facilities that shut down, one facility shut down and filed for bankruptcy, whereas another facility had all equipment removed from the site and the property was sold for development as a warehouse-distribution center. Of the remaining two facilities, one attributed a declining demand for products and the other cited the high cost of manufacturing as reasons for shutdown.

- ***Facility Compliance*** – The vast majority of RECLAIM facilities complied with their allocations during the 2013 compliance year (97% of NOx facilities and 94% of SOx facilities). Nine facilities (3% of total facilities) exceeded their allocations (one facility exceeded both its NOx and SOx allocations, seven facilities exceeded their NOx allocations, and one facility exceeded its SOx allocation) during Compliance Year 2013. The eight facilities that exceeded their NOx allocations had total NOx emissions of 173.2 tons and did not have adequate allocations to offset 18.5 of those tons. The exceedances represent 10.6% of the sum of the NOx emissions from the eight facilities and 0.19% of total RECLAIM NOx allocations. Two facilities had SOx emissions that exceeded their SOx allocations by only nine pounds. Pursuant to Rule 2010(b)(1)(A), all nine 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 2013 allocations.

- ***Job Impacts*** – Based on a survey of the RECLAIM facilities, the RECLAIM program had minimal impact on employment during the 2013 compliance year, which is consistent with previous years. RECLAIM facilities reported an overall net gain of 4,180 jobs, representing 4.01% of their total employment. Two facilities reported a gain of one job each due to RECLAIM while one facility reported a loss of four jobs due to RECLAIM. None of the four RECLAIM facilities that shut down during Compliance Year 2013 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 job impacts data.

- ***Trading Activity*** – The RTC trading market activity during calendar year 2014 was comparable in terms of number of trades, slightly higher with respect to volume (by 48%), but substantially higher with respect to total value (by 243%) when compared to calendar year 2013. A total of over $1.15 billion in RTCs has been traded since the adoption of RECLAIM, of which $104.2 million occurred in calendar year 2014 (compared to $30.4 million in calendar year 2013), excluding swaps.

  The average annual prices of infinite-year block (IYB) and all compliance years discrete-year NOx and SOx RTCs traded in calendar year 2014 were below the applicable review thresholds for average RTC prices. The average annual prices of RTCs traded during calendar years 2013 and 2014 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 2013 and 2014

	Average Price ($/ton)				Review Thresholds ($/ton)	
Year Traded	**2012 NOx RTC**	**2013 NOx RTC**	**2014 NOx RTC**	**2015 NOx RTC**	**Rule 2015(b)(6)**	**Health and Safety Code §39616(f)**
2013	$549	$1,080	$1,881	$1,000	$15,000	$40,612
2014		$1,065	$1,910	$3,779		
Year Traded	**2012 SOx RTC**	**2013 SOx RTC**	**2014 SOx RTC**	**2015 SOx RTC**	**Rule 2015(b)(6)**	**Health and Safety Code §39616(f)**
2013	$291	$485	None traded	$900	$15,000	$29,241
2014		$378	$400	None traded		

Table 2 – Average Prices for IYB RTCs Traded during Calendar Years 2013 and 2014

	Average Price ($/ton)		Review Threshold ($/ton)
RTCs	**Traded in 2013**	**Traded in 2014**	**[Health and Safety Code §39616(f)]**
NOx	$45,914	$110,509	$609,187
SOx	$181,653	$80,444	$438,615

- ***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 2014 was greater when compared to calendar year 2013. Investors were involved in 134 of the 213 discrete NOx trades with price and 4 of the 6 discrete SOx trades with price. With respect to IYB trades, investors' participation was significant and they were involved with 44 of 49 IYB NOx trades with price, but none of the 4 IYB SOx trades with price. Compared to calendar year 2013, investor RTC holdings of total IYB NOx and SOx RTCs decreased slightly from 4.9% to 4.6% for IYB NOx RTCs and remained unchanged at 0.9% for IYB SOx RTCs at the end of calendar year 2014.

- ***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 air toxic emissions.

Attachment
Annual RECLAIM Audit Report for 2013 Compliance Year

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Annual RECLAIM Audit Report for 2013 Compliance Year

March 6, 2015

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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
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
CEMS	Continuous Emissions Monitoring System(s)
CEQA	California Environmental Quality Act
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 Standards
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
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SOx	Oxides of Sulfur
SSC	Stationary Source Committee
STC	Short Term Credit
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 2013 (January 1 through December 31, 2013 for Cycle 1 and July 1, 2013 through June 30, 2014 for Cycle 2 facilities). This annual audit report covers activities for the twentieth 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, 2013, the overall changes in RECLAIM participants were 123 facilities included into the program, 70 facilities excluded from the program, and 174 facilities ceased operation. Thus, the RECLAIM universe consisted of 273 active facilities at the end of Compliance Year 2012 (December 31, 2012 for Cycle 1 facilities and June 30, 2013 for Cycle 2 facilities). During Compliance Year 2013 (January 1, 2013 through December 31, 2013 for Cycle 1 facilities and July 1, 2013 through June 30, 2014 for Cycle 2 facilities), six facilities were included into the RECLAIM universe, no facility was excluded, and four facilities (all in the NOx universe only) shut down and are no longer in the active RECLAIM universe. These changes resulted in a net increase of two facilities in the universe, bringing the total number of active RECLAIM facilities to 275 as of the end of Compliance Year 2013.

Chapter 2: RTC Allocations and Trading

On November 5, 2010, the Governing Board adopted amendments to SOx RECLAIM to phase in SOx reductions in Compliance Year 2013 and continue through Compliance Year 2019. The amendment will result in an overall reduction of 48.4% (or 5.7 tons/day) in SOx allocations when fully implemented (for Compliance Year 2019 and beyond). For Compliance Year 2013, the first

year of implementation, the SOx allocation supply is reduced by 25% (or 3.0 tons/day) to 3,204 tons. There was no programmatic allocation reduction in NOx RTCs during Compliance Year 2013.

The overall NOx RTC supply increased by 20.7 tons and the SOx RTC supply decreased by 5.75 tons during Compliance Year 2013. The changes were due to allocation adjustments for clean fuel production pursuant to Rule 2002(c)(12), which accounted for an increase of 9.9 tons of NOx RTCs and a decrease of 5.8 tons of SOx RTCs. The remaining 10.8 tons of increased NOx RTCs was the result of allocations issued to two facilities that entered the NOx RECLAIM program. One existing NOx RECLAIM facility entered the SOx RECLAIM program and was issued 0.05 tons of SOx RTCs. As a result, the NOx and SOx RTC supplies for Compliance Year 2013 were 9,699 tons and 3,198 tons, respectively.

During calendar year 2014, there were 362 registered RTC transactions with a total value of over $104 million traded, excluding the values reported for swap transactions. Since the inception of the RECLAIM program in 1994, a total value of over $1.15 billion dollars has been traded in the RTC trading market, excluding swap transactions. RTC trades are reported to SCAQMD as either 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). In terms of volume traded in calendar year 2014, a total of 2,318 tons of discrete NOx RTCs, 493 tons of discrete SOx RTCs, 942 tons of infinite-year block (IYB) NOx RTCs and 22.5 tons of IYB SOx RTCs were traded. The RTC trading market activity during calendar year 2014 compared to calendar year 2013 was about the same in terms of number of trades, significantly lower in total volume (decreased by 48%), but substantially higher in total value (increased by 243%).

The annual average prices of discrete-year NOx RTCs traded during calendar year 2014 were $1,065 per ton for Compliance Year 2013 RTCs, $1,910 per ton for Compliance Year 2014 RTCs, and $3,779 per ton for Compliance Year 2015 RTCs. The annual average prices for discrete-year SOx RTCs traded during the same period were $378 per ton for Compliance Year 2013 RTCs and $400 per ton for Compliance Year 2014 RTCs. Therefore, the annual average 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 $40,612 per ton of NOx and $29,241 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 annual average price during calendar year 2014 for IYB NOx RTCs was $110,509 per ton, and the annual average price for IYB SOx RTCs was $80,444 per ton. Therefore, annual average IYB RTC prices did not exceed the $609,187 per ton of IYB NOx RTCs or the $438,615 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 2014. They were involved in 138 of the 219 discrete NOx and SOx trade registrations with price and 44 of 53 IYB NOx and SOx trades with price. Investors were involved in 46% of total value and 47% of total volume for discrete NOx trades, and 55%

of total value and 57% of total volume for discrete SOx trades. In addition, investors were involved in 64% of total value and 59% of total volume for IYB NOx trades with price. Investors were not involved in any IYB SOx trades with price. At the end of calendar year 2014, investors' holdings of IYB NOx RTCs and IYB SOx RTCs were 4.6% and 0.9% of the total RECLAIM RTCs, respectively.

Chapter 3: Emission Reductions Achieved

For Compliance Year 2013, aggregate NOx emissions were below total allocations by 24% and aggregate SOx emissions were below total allocations by 35%. No emissions associated with breakdowns were excluded from reconciliation with facility allocations in Compliance Year 2013. 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 2013. With respect to the Rule 2015 backstop provisions, Compliance Year 2013 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 2013, a total of 70 NOx RECLAIM facilities had NSR NOx emission increases, and 11 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 2013, RECLAIM provided an offset ratio based on the compliance year's total unused allocations and total NSR emission increases of 6-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 2013. 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). The same BACT guidelines are used to determine applicable BACT to RECLAIM and non-RECLAIM facilities.

Chapter 5: Compliance

Of the 279 NOx RECLAIM facilities audited during Compliance Year 2013, a total of 271 facilities (97%) complied with their NOx allocations, and 31 of the 33 SOx facilities (94%) complied with their SOx allocations. The eight facilities that exceeded their NOx allocations had aggregate NOx emissions of 173.2 tons and did not have adequate allocations to offset 18.5 tons (or 10.6%) of their combined emissions. This exceedance amount is small compared to the overall allocations for Compliance Year 2013 (0.19% of total NOx allocations). Two SOx facilities had SOx emissions that exceeded their SOx allocations by two pounds in one case and seven pounds in the other case. The exceedances from these facilities did not impact the overall RECLAIM emission reduction goals. Pursuant to Rule 2010(b)(1)(A), these 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 2013 allocations. The overall RECLAIM NOx and SOx emission reduction targets and goals were met for Compliance Year 2013 (*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. Additional benefits to the local economy (*e.g.*, generating jobs for consulting firms, source testing firms and CEMS vendors) attributable to the RECLAIM program, as well as factors outside of RECLAIM (*e.g.*, the prevailing economic climate), impact the job market. However, these factors are not evaluated in this report. Also, job losses and job gains are strictly based on RECLAIM facilities' reported information. SCAQMD staff is not able to independently verify the accuracy of the reported job impact information.

According to the Compliance Year 2013 employment survey data gathered from APEP reports, RECLAIM facilities reported a net gain of 4,180 jobs, representing 4.01% of their total employment. Two facilities reported a gain of one job each due to RECLAIM while one facility reported a loss of four jobs due to RECLAIM. None of the four RECLAIM facilities that shut down during Compliance Year 2013 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 2013 NOx emissions decreased 4.8% relative to Compliance Year 2012 and Compliance Year 2013 SOx emissions were 19.0% less than the previous year. Quarterly calendar year 2013 NOx emissions fluctuated within 18 percent of the mean NOx emissions for the year. Quarterly calendar year 2013 SOx emissions fluctuated within 16 percent of the year's mean SOx emissions. There was no significant shift in seasonal emissions from the winter season to the summer season for either pollutant.

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 2014, 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 and/or Rule 1401.1). 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 emissions reports are used to identify candidates for the Toxics Hot Spots program (AB2588). This program requires emission inventories and depending on the type and amount of emissions, facilities may be required to do public notice and/or prepare and implement a plan to reduce emissions. 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 (CAA) 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 2013 Compliance Year Audit.

This report presents the annual program audit and progress report of RECLAIM's twentieth compliance year (January 1 through December 31, 2013 for Cycle 1 and July 1, 2013 through June 30, 2014 for Cycle 2 RECLAIM facilities), also known as Compliance Year 2013. 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;
- Annual average 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, 2013 (covered under the Annual RECLAIM Audit Report for 2012 Compliance Year), then discusses changes to the RECLAIM universe of sources in detail through the end of Compliance Year 2013.
2. ***RTC Allocations and Trading***
   This chapter summarizes changes in emissions allocations in the RECLAIM universe, RTC supply and RTC trading activity, annual average 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, 2013, the overall changes in RECLAIM participants were 123 facilities included into the program, 70 facilities excluded from the program, and 174 facilities ceased operation. Thus, the RECLAIM universe consisted of 273 active facilities at the end of Compliance Year 2012 (December 31, 2012 for Cycle 1 facilities and June 30, 2013 for Cycle 2 facilities). During Compliance Year 2013 (January 1, 2013 through December 31, 2013 for Cycle 1 facilities and July 1, 2013 through June 30, 2014 for Cycle 2 facilities), six facilities were included into the RECLAIM universe, no facility was excluded, and four facilities (all in the NOx universe only) shut down and are no longer in the active RECLAIM universe. These changes resulted in a net increase of two facilities in the universe, bringing the total number of active RECLAIM facilities to 275 as of the end of Compliance Year 2013.

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, landfill gas 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 from permitted sources 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.

Staff has periodically initiated the process of reviewing past Annual Emission Reports (AERs) 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 AER program, for potential inclusion into RECLAIM. This part of the process involves screening for emissions only 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.

Universe Changes

In the early years of the RECLAIM program, facilities initially identified for inclusion were excluded upon determination that they did not meet the criteria for inclusion (*e.g.*, some facilities that had reported emissions from permitted

sources above four tons in a year were determined to have over-reported their emissions and subsequently submitted corrected emissions reports reflecting emissions from permitted sources below four tons per year). Additionally, facilities that were not part of the original universe were subsequently added to the program based on the inclusion criteria mentioned above. The overall changes to the RECLAIM universe from the date of adoption (October 15, 1993) through June 30, 2013 (the last day of Compliance Year 2012 for Cycle 2 facilities) were: the inclusion of 123 facilities (including 34 facilities created by partial change of operator of existing RECLAIM facilities), the exclusion of 70 facilities, and the shutdown of 174 facilities. Thus, the net change in the RECLAIM universe from January 1, 1994 through June 30, 2013 was a decrease of 121 facilities from 394 to 273 facilities. In Compliance Year 2013 (January 1, 2013 through December 31, 2013 for Cycle 1 facilities and July 1, 2013 through June 30, 2014 for Cycle 2 facilities), six facilities were included, no facility was excluded, and four facilities shut down. These changes brought the total number of facilities in the RECLAIM universe to 275 facilities. The Compliance Year 2013 RECLAIM universe includes 242 NOx-only, no SOx-only, and 33 both NOx and SOx RECLAIM facilities. The list of active facilities in the RECLAIM universe as of the end of Compliance Year 2013 is provided in Appendix A.

Facility Inclusions and Exclusions

Six facilities were included in the RECLAIM universe in Compliance Year 2013. One of these facilities elected to enter the RECLAIM program, whereas another facility, a former RECLAIM facility that ceased operation in 2005, reactivated its operation. The third facility relocated part of its operation to a new location. The remaining three facilities were included in NOx RECLAIM pursuant to Rule 2001(b) – Criteria for Inclusion in RECLAIM because they reported NOx emissions from permitted sources in excess of four tons a year. Additionally, an existing NOx RECLAIM facility amended its AERs to report SOx emissions exceeding four tons and was added into SOx RECLAIM. However, the inclusion of this existing NOx facility into SOx RECLAIM did not result in a change to the overall number of facilities. Appendix B lists these seven facilities and the reasons for their inclusion. No facility was excluded from the RECLAIM universe during Compliance Year 2013.

Since the implementation of the above-described annual review process, a total of 69 facilities were identified based on their AERs as potential candidates for inclusion (two of the 69 facilities were already NOx RECLAIM facilities; they were identified for inclusion into SOx RECLAIM based on their SOx emissions). As stated above, three NOx facilities were included as a result of this process. Twenty-six other facilities are still in various stages of the review process. The remaining 40 facilities have been eliminated from the process because they either have corrected their AERs to be less than 4 tons per year or have been identified to be in one of the exempted facility categories. Additional inclusions will be addressed in future RECLAIM annual program audits as facility eligibility is confirmed. Per Rule 2001(c)(2), a facility is subject to RECLAIM provisions on the date a facility permit containing RECLAIM requirements is issued.

Facilities Permanently Ceasing Operations

Four RECLAIM facilities permanently ceased operations in Compliance Year 2013. One facility shut down and filed for bankruptcy. A second facility had all equipment removed from the site and the property was sold for development as a warehouse-distribution center. Of the remaining two facilities, one attributed a declining demand for products and the other cited the high cost of manufacturing as reasons for shutdown. None of these facilities cited RECLAIM as a cause for their shutting down. All four facilities permanently ceasing operations were in NOx RECLAIM. Appendix C lists these facilities and provides brief descriptions of the reported reasons for their closures.

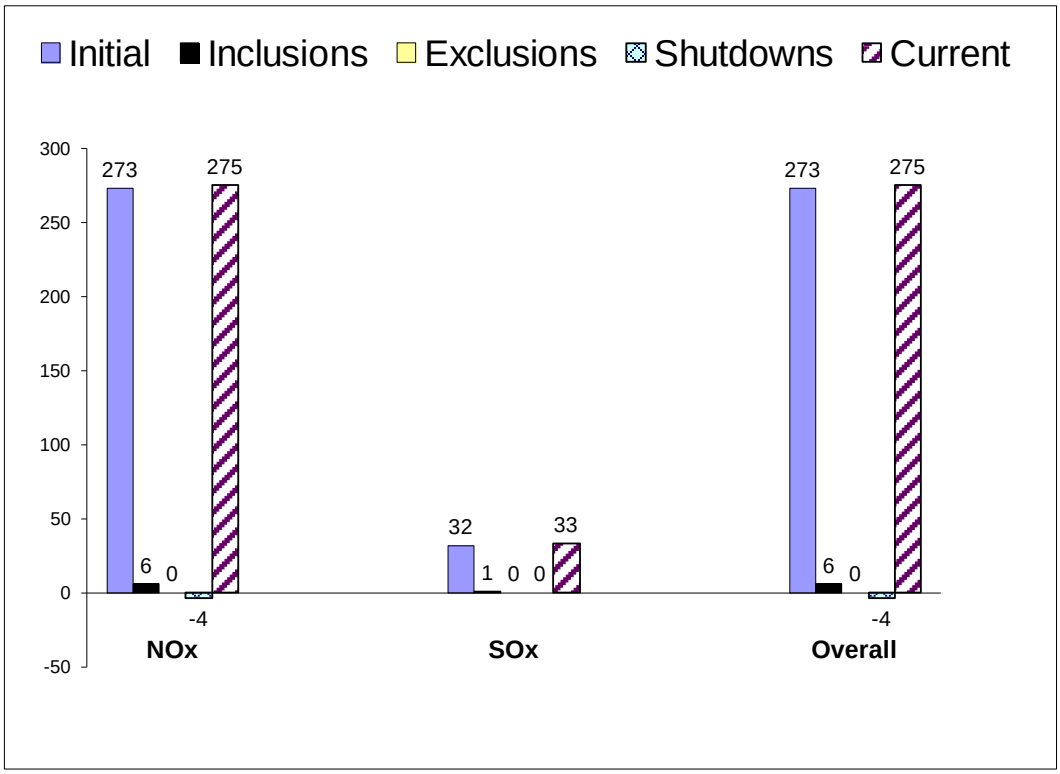
The above mentioned changes to the RECLAIM Universe resulted in a net increase of two facilities in the RECLAIM universe during Compliance Year 2013. Table 1-1 summarizes overall changes in the RECLAIM universe between the start of the program and end of Compliance Year 2013 (December 31, 2013 for Cycle 1 facilities and June 30, 2014 for Cycle 2 facilities). Changes to the RECLAIM universe that occurred in Compliance Year 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 Compliance Year 2012	123	12	123
Exclusions – October 15, 1993 through Compliance Year 2012	-69	-4	-70
Shutdowns – October 15, 1993 through Compliance Year 2012	-173	-17	-174
Universe – June 30, 2013	273	32	273
Inclusions –Compliance Year 2013	6	1	6
Exclusions –Compliance Year 2013	0	0	0
Shutdowns –Compliance Year 2013	-4	0	-4
Universe – End of Compliance Year 2013	275	33	275

* "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 in Compliance Year 2013



CHAPTER 2
RTC ALLOCATIONS AND TRADING

Summary

On November 5, 2010, the Governing Board adopted amendments to SOx RECLAIM to phase in SOx reductions in Compliance Year 2013 and continue through Compliance Year 2019. The amendment will result in an overall reduction of 48.4% (or 5.7 tons/day) in SOx allocations when fully implemented (for Compliance Year 2019 and beyond). For Compliance Year 2013, the first year of implementation, the SOx allocation supply is reduced by 25% (or 3.0 tons/day) to 3,204 tons. There was no programmatic allocation reduction in NOx RTCs during Compliance Year 2013.

The overall NOx RTC supply increased by 20.7 tons and the SOx RTC supply decreased by 5.75 tons during Compliance Year 2013. The changes were due to allocation adjustments for clean fuel production pursuant to Rule 2002(c)(12), which accounted for an increase of 9.9 tons of NOx RTCs and a decrease of 5.8 tons of SOx RTCs. The remaining 10.8 tons of increased NOx RTCs was the result of allocations issued to two facilities that entered the NOx RECLAIM program. One existing NOx RECLAIM facility entered the SOx RECLAIM program and was issued 0.05 tons of SOx RTCs. As a result, the NOx and SOx RTC supplies for Compliance Year 2013 were 9,699 tons and 3,198 tons, respectively.

During calendar year 2014, there were 362 registered RTC transactions with a total value of over $104 million traded, excluding the values reported for swap transactions. Since the inception of the RECLAIM program in 1994, a total value of over $1.15 billion dollars has been traded in the RTC trading market, excluding swap transactions. RTC trades are reported to SCAQMD as either 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). In terms of volume traded in calendar year 2014, a total of 2,318 tons of discrete NOx RTCs, 493 tons of discrete SOx RTCs, 942 tons of infinite-year block (IYB) NOx RTCs and 22.5 tons of IYB SOx RTCs were traded. The RTC trading market activity during calendar year 2014 compared to calendar year 2013 was about the same in terms of number of trades, significantly lower in total volume (decreased by 48%), but substantially higher in total value (increased by 243%).

The annual average prices of discrete-year NOx RTCs traded during calendar year 2014 were $1,065 per ton for Compliance Year 2013 RTCs, $1,910 per ton for Compliance Year 2014 RTCs, and $3,779 per ton for Compliance Year 2015 RTCs. The annual average prices for discrete-year SOx RTCs traded during the same period were $378 per ton for Compliance Year 2013 RTCs and $400 per ton for Compliance Year 2014 RTCs. Therefore, the annual average 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 $40,612 per ton of NOx and $29,241 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 annual average price during calendar year 2014 for IYB NOx RTCs was $110,509 per ton, and the annual average price for IYB SOx RTCs was $80,444 per ton. Therefore, annual average IYB RTC prices did not exceed the $609,187 per ton of IYB NOx RTCs or the $438,615 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 2014. They were involved in 138 of the 219 discrete NOx and SOx trade registrations with price and 44 of 53 IYB NOx and SOx trades with price. Investors were involved in 46% of total value and 47% of total volume for discrete NOx trades, and 55% of total value and 57% of total volume for discrete SOx trades. In addition, investors were involved in 64% of total value and 59% of total volume for IYB NOx trades with price. Investors were not involved in any IYB SOx trades with price. At the end of calendar year 2014, investors' holdings of IYB NOx RTCs and IYB SOx RTCs were 4.6% 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 annual emission reports (if the facility existed prior to January 1, 1993), the listed starting emission factor in Tables 1 or 2 according to the equipment category, any qualified[1] external offsets it previously provided, any unused Emission Reduction Credits (ERCs) generated at and held by the facility and the methodology prescribed in the rule for each Compliance Year subsequent to 1994, including reductions due to implementation of Best Available Retrofit Control Technology (BARCT). 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

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

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 present and discuss Compliance Year 2013 data, RTC trading and price data discussed in this chapter are for calendar year 2014.

RTC Allocations and Supply

The methodology for determining RTC allocations is established by Rule 2002. According to this 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 emission factors used to determine allocations 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 2013 are discussed below.

Allocations Adjustments Due to Inclusion and Exclusion of Facilities

Facilities existing prior to October 1993 and 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 have expired.

Of the six NOx facilities and one SOx facility that were included in Compliance Year 2013, two NOx facilities and the SOx facility were issued allocations. A total of 10.8 tons per year of NOx allocations and 0.05 tons per year of SOx allocations were issued to these facilities entering RECLAIM in Compliance Year 2013.

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 California Air Resources Board (CARB) Phase II reformulated gasoline. The amount of these RTCs is based on actual emissions

for the subject compliance year and historical production data. The quantities of such clean fuels RTCs needed were projected based on the historical production data submitted, and 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 on the basis of those projections. 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) provides refineries 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 2013, the overall effect of adjusting NOx allocations to account for these differences was a total of 9.9 tons of NOx RTCs (0.1% of total NOx allocation for Compliance Year 2013) added to, and 5.8 tons of SOx RTCs (0.2% of total SOx allocation for Compliance Year 2013) deducted from, refineries' Compliance Year 2013 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 2013.

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. No new RTCs were issued by conversion of other types of emission reduction credits in Compliance Year 2013.

Net Changes in RTC Allocations

The changes to RTC supplies described in the above sections resulted in a net increase of 20.7 tons of NOx RTCs (0.2% of the total) and a decrease of 5.8 tons of SOx RTCs (0.2% of total) for Compliance Year 2013. Table 2-1 summarizes the changes in NOx and SOx RTC supplies that occurred in Compliance Year 2013 pursuant to Rule 2002.

Table 2-1
Changes in NOx and SOx RTC Supplies during Compliance Year 2013 (tons/year)

Source	NOx	SOx
Universe changes	10.8	0.05
Clean Fuel/Reformulated Gasoline	9.9	-5.8
Activity corrections	0	0
MSERCs	0	0
Net change	**20.7**	**-5.75**

Note: The data in this table represents the changes that occurred over the course of Compliance Year 2013 to the Compliance Year 2013 aggregate NOx and SOx RTC supplies originally issued pursuant to Rule 2002, not the difference between 2013 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

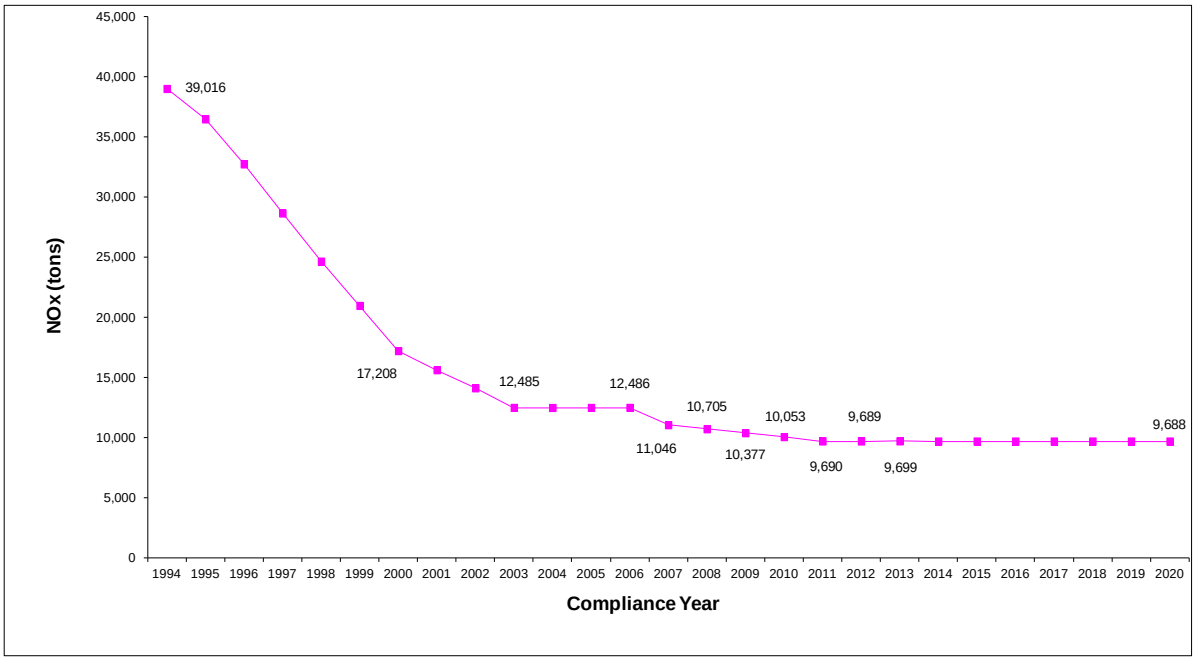
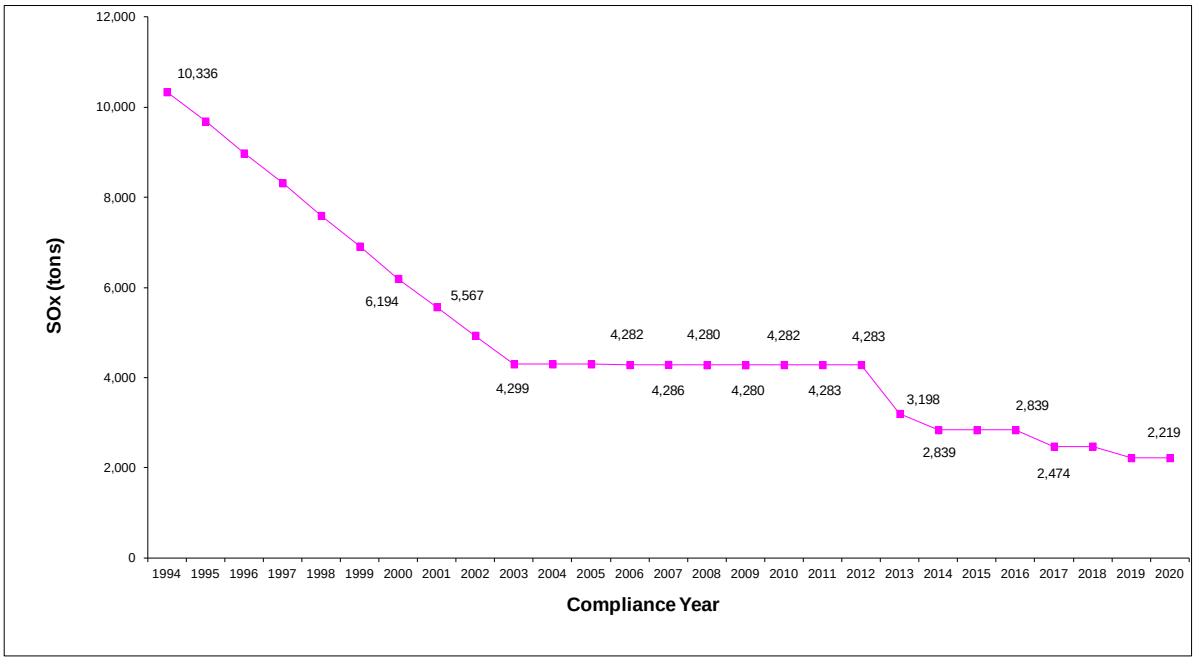


Figure 2-2
SOx RTC Supply



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 of 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. The public hearing is currently scheduled for the second quarter of calendar year 2015.

Upcoming Proposals 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 credits for emission 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 proposed rules are listed on the Rule and Control Measure Forecast as rule activities to be determined for calendar year 2015.

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. Swap trades occur when trading partners exchange different types of RTCs. These trades maybe of equal value or different values, in which case some amount of money or credits are also included in swap trades (additional details on swap trades are discussed later in this chapter). 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 annual average 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.

RTC Price Thresholds for Program Review

Rule 2015(b)(6) specifies that, if the annual average 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. In addition, according to Rule 2002(f)(1)(O), if the annual average price of discrete SOx RTCs for any compliance year from 2017 through 2019 exceeds $50,000 per ton, the Governing Board has the discretion to convert facilities' Nontradable/Nonusable RTCs to Tradable/Usable RTCs. For RTC transactions occurring in calendar year 2014, the overall program review thresholds in 2014 dollars are $40,612 per ton of discrete-year NOx RTCs, $29,241 per ton of discrete-year SOx RTCs, $609,187 per ton of IYB NOx RTCs, and $438,615 per ton of IYB SOx RTCs.

RTC Trading Activity Excluding Swaps

Overall Trading Activity

RTC trades include discrete and IYB RTCs traded with prices, discrete and IYB RTC transfers with zero price, and discrete and IYB RTC swap trades. The RTC market activity in calendar year 2014 was comparable to the market activity in calendar year 2013 in terms of the number of transactions. The calendar year 2014 trading activity—362 total registered trade transactions (344 NOx trades and 18 SOx trades)—was slightly lower than the number of trade transactions in calendar year 2013 (367 total registered trade transactions).

In comparison to calendar year 2013, the value traded in calendar year 2014 was substantially higher (increased by 243%). Excluding swap trades, a total value of almost $104.2 million was traded in calendar year 2014 ($102.4 million for NOx and $1.8 million for SOx)—substantially higher than the total value of $30.4 million traded in calendar year 2013 ($15.9 million for NOx and $14.5 million for SOx). As illustrated in Figure 2-3, 2014 experienced the highest annual value of RTCs traded in RECLAIM to date other than 2000 and 2001, both of which had exceptionally high prices due to the California energy crisis that happened at that time. The increase in the total value traded was due to the much higher price for the IYB NOx RTCs traded in 2014. Figure 2-4 summarizes overall trading activity (excluding swaps) in calendar year 2014 by pollutant.

With respect to volume traded (also excluding swap trades), the 2,811 tons of discrete RTCs traded in calendar year 2014 were substantially lower than the 5,000 tons of discrete RTCs traded in calendar year 2013 (decreased by 48%). In calendar year 2014, there were 1,808 tons of discrete NOx RTCs and 51 tons of discrete SOx traded with price and 510 tons of discrete NOx and 442 tons of discrete SOx traded without price. In addition, the 965 tons of IYB RTCs traded in calendar year 2014 were also much lower than the 2,216 tons of IYB RTCs traded in 2013 (decreased by 56%). There were 902 tons of IYB NOx and 23 tons of IYB SOx traded with price and 40 tons of IYB NOx traded with zero price. There were no 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 64 trades with zero price in calendar year 2014. 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. In calendar year 2014, the majority of trades with zero price were transfers between facilities under common ownership and facilities that had a change of operator.

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

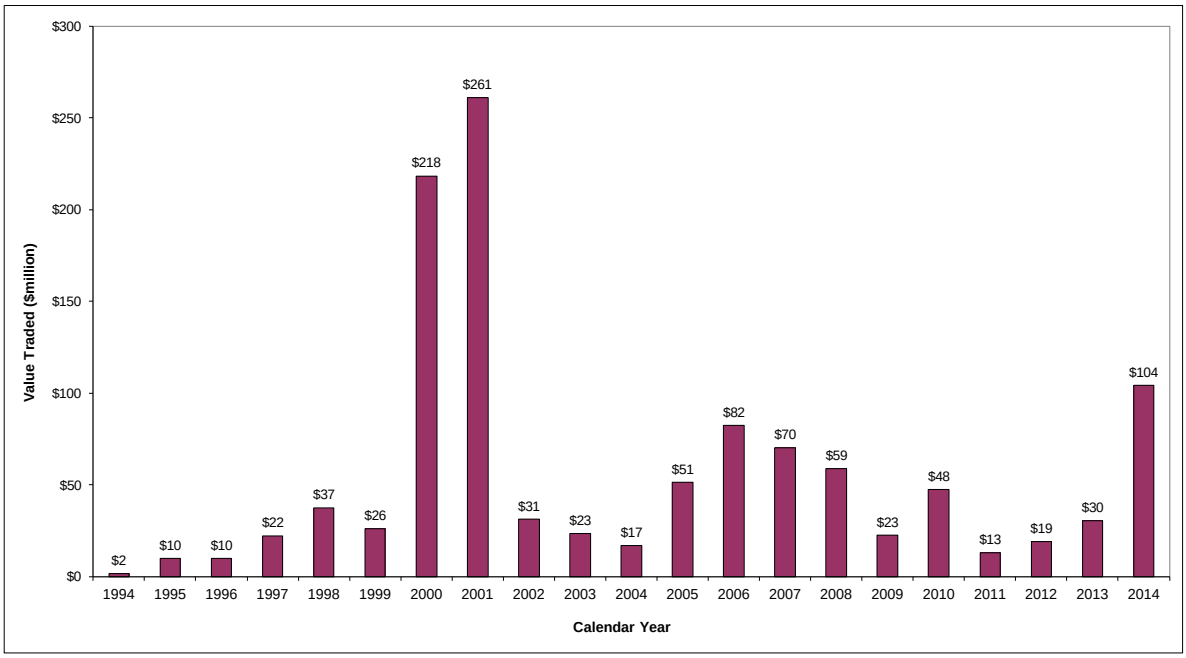
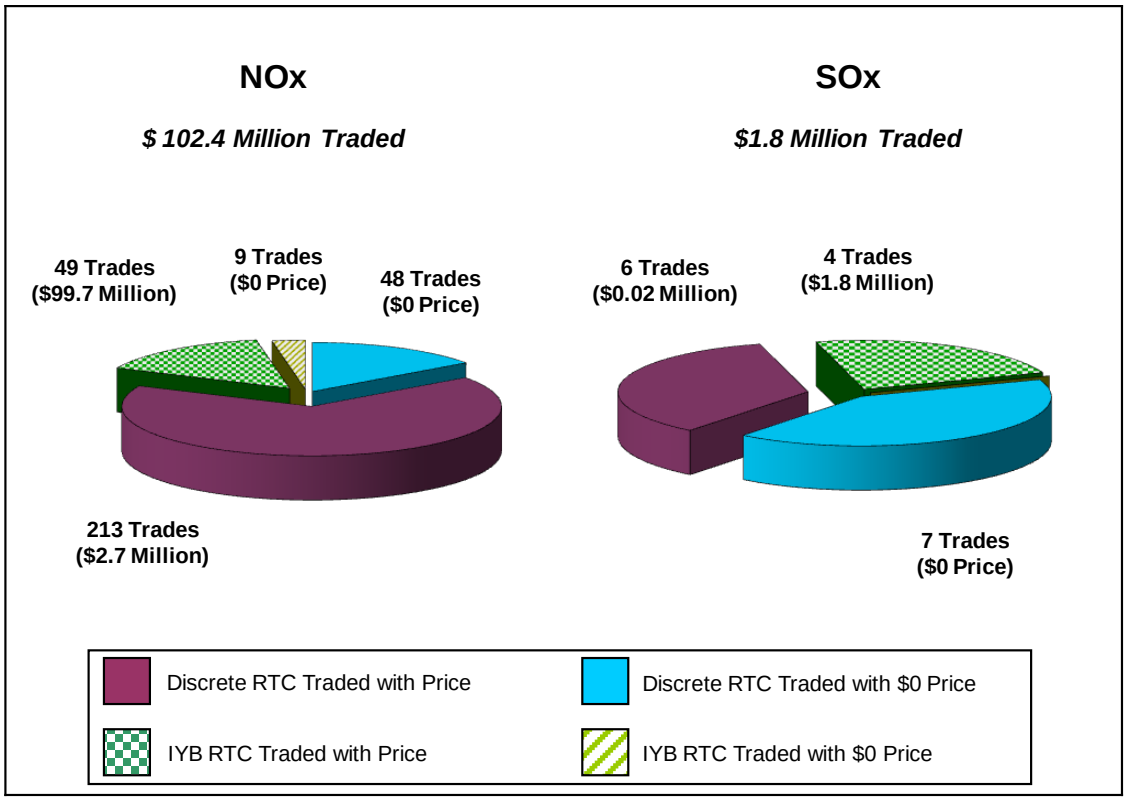


Figure 2-4
Calendar Year 2014 Overall Trading Activity (Excluding Swaps)



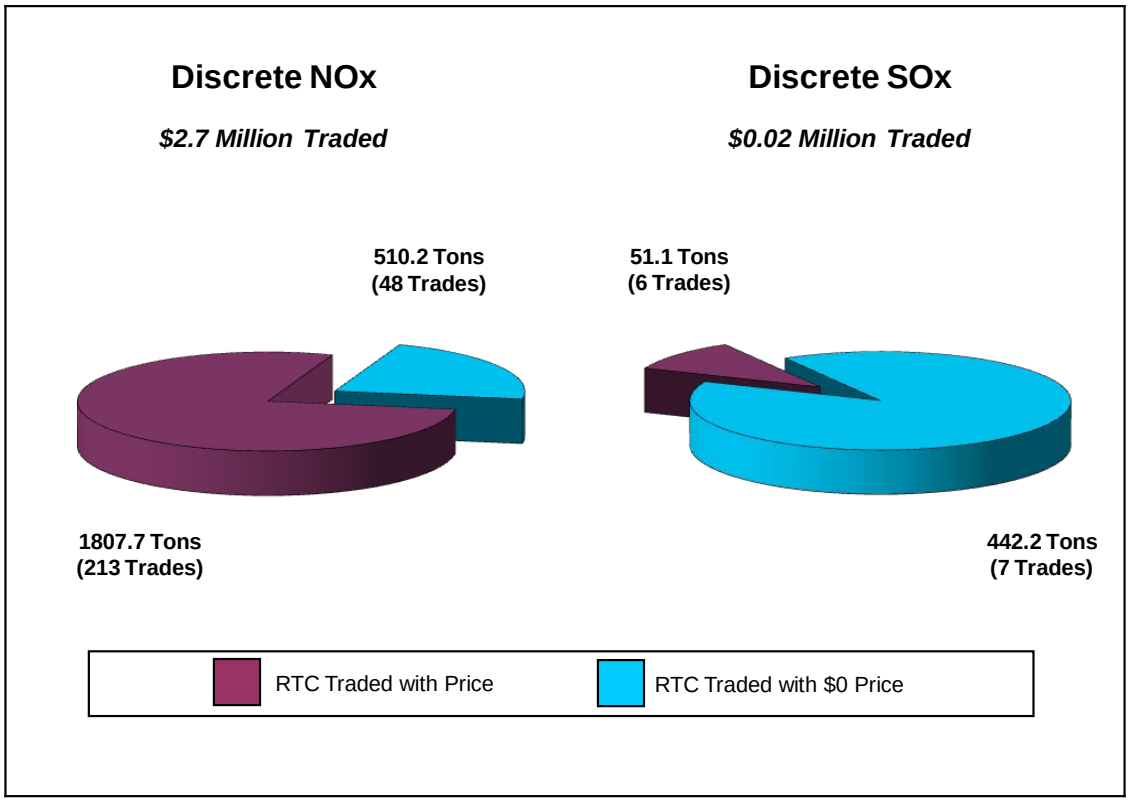
Discrete RTC Trading Activity

In calendar year 2014, there were a total of 261 discrete NOx RTC trades (213 trades with price and 48 trades with zero price) and 13 discrete SOx RTC trades (six trades with price and seven trades with zero price), excluding swap trades. The trading of discrete NOx RTCs included RTCs for Compliance Years 2013 through 2015. The trading of discrete SOx RTCs included RTCs for Compliance Years 2013 and 2014.

Discrete RTC trading values decreased in calendar year 2014. The 213 NOx trades with price totaled $2.7 million in value, down from $3.9 million in calendar year 2013. The six discrete SOx trades with price totaled $0.02 million in value, which also is lower than the $0.06 million traded in calendar year 2013.

In calendar year 2014, the overall quantities of discrete NOx and SOx RTCs traded were 2,318 tons and 493 tons, respectively. These quantities were all lower than those traded in calendar year 2013 (4,443 tons of NOx RTCs and 557 tons of SOx RTCs). There were 1,808 tons of discrete NOx and 51 tons of discrete SOx RTCs traded with price in calendar year 2014, decreased from 3,370 tons of NOx and 83 tons of SOx RTCs in 2013. In addition, there were 510 tons of discrete NOx RTCs and 442 tons of discrete SOx traded with zero price, decreased from 1,073 tons of NOx and 474 tons of SOx in 2013. Figure 2-5 illustrates the trading activity of discrete RTCs (excluding swaps) for calendar year 2014.

Figure 2-5
Calendar Year 2014 Trading Activity for Discrete RTCs (Excluding Swaps)



IYB RTC Trading Activity

In calendar year 2014, there were 58 IYB NOx trades and four IYB SOx trades. The IYB NOx trades included Compliance Years 2013, 2014, 2015, 2018, and 2019 as the start year, while the IYB SOx trades all had Compliance Year 2014 as the start year. Of the 58 IYB NOx trades, 49 trades were with price and nine trades were with zero price. All of the four IYB SOx trades were with price.

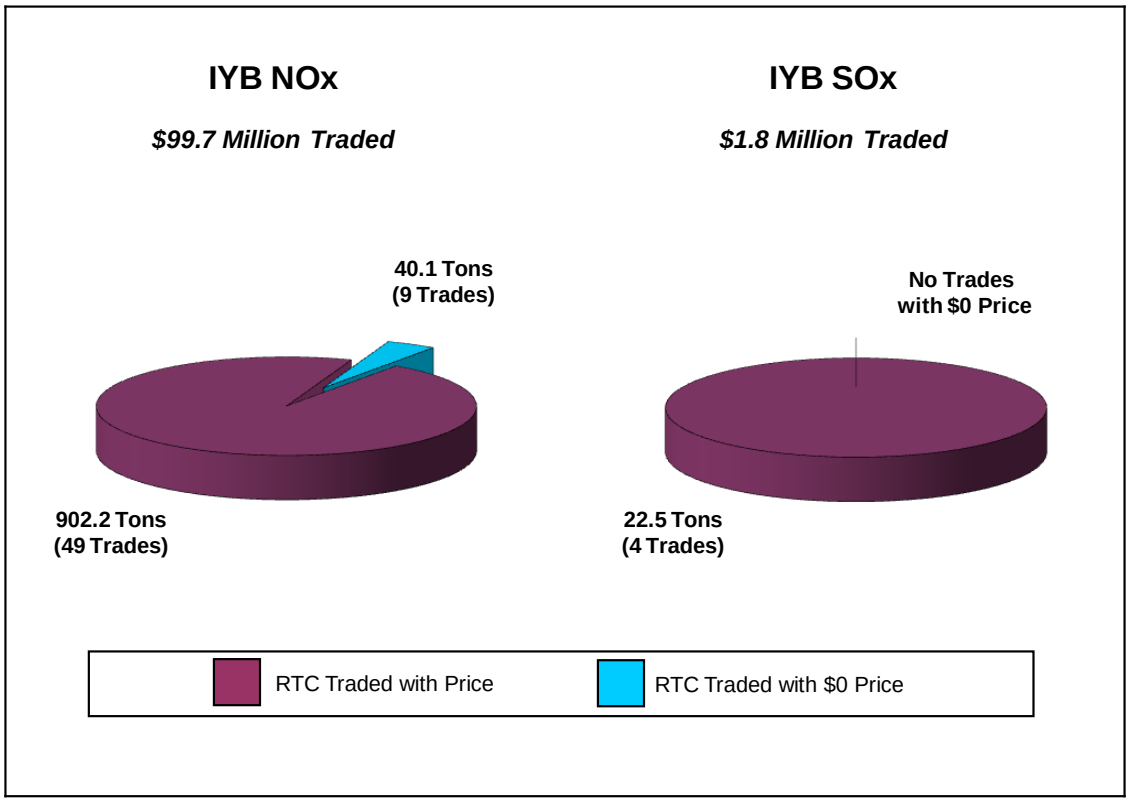
The 49 IYB NOx trades with price totaling almost $100 million in calendar year 2014 were much higher than the 17 trades with price for $12 million in 2013. The four IYB SOx RTC trades with price totaling $1.8 million in calendar year 2014 were much lower in value than the four trades and $14.4 million traded in 2013.

The total quantity of 942 tons of IYB NOx traded in calendar year 2014 was much lower than the 1,779 tons traded in calendar year 2013, however 902 of those tons were traded with price in calendar year 2014 compared to only 261 tons traded with price in calendar year 2013. The total quantity of IYB SOx traded in calendar year 2014 was 23 tons, which is considerably less than the 438 tons traded in calendar year 2013. All 23 tons of IYB SOx traded in 2014 were with price, lower than the 79 tons traded with price in calendar year 2013.

In addition to trades with price, there were also nine IYB NOx trades with zero price totaling 40 tons (there were no IYB SOx trades with zero price in calendar

year 2014). Figure 2-6 illustrates the calendar year 2014 IYB RTC trading activity excluding swap trades.

Figure 2-6
Calendar Year 2014 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.

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

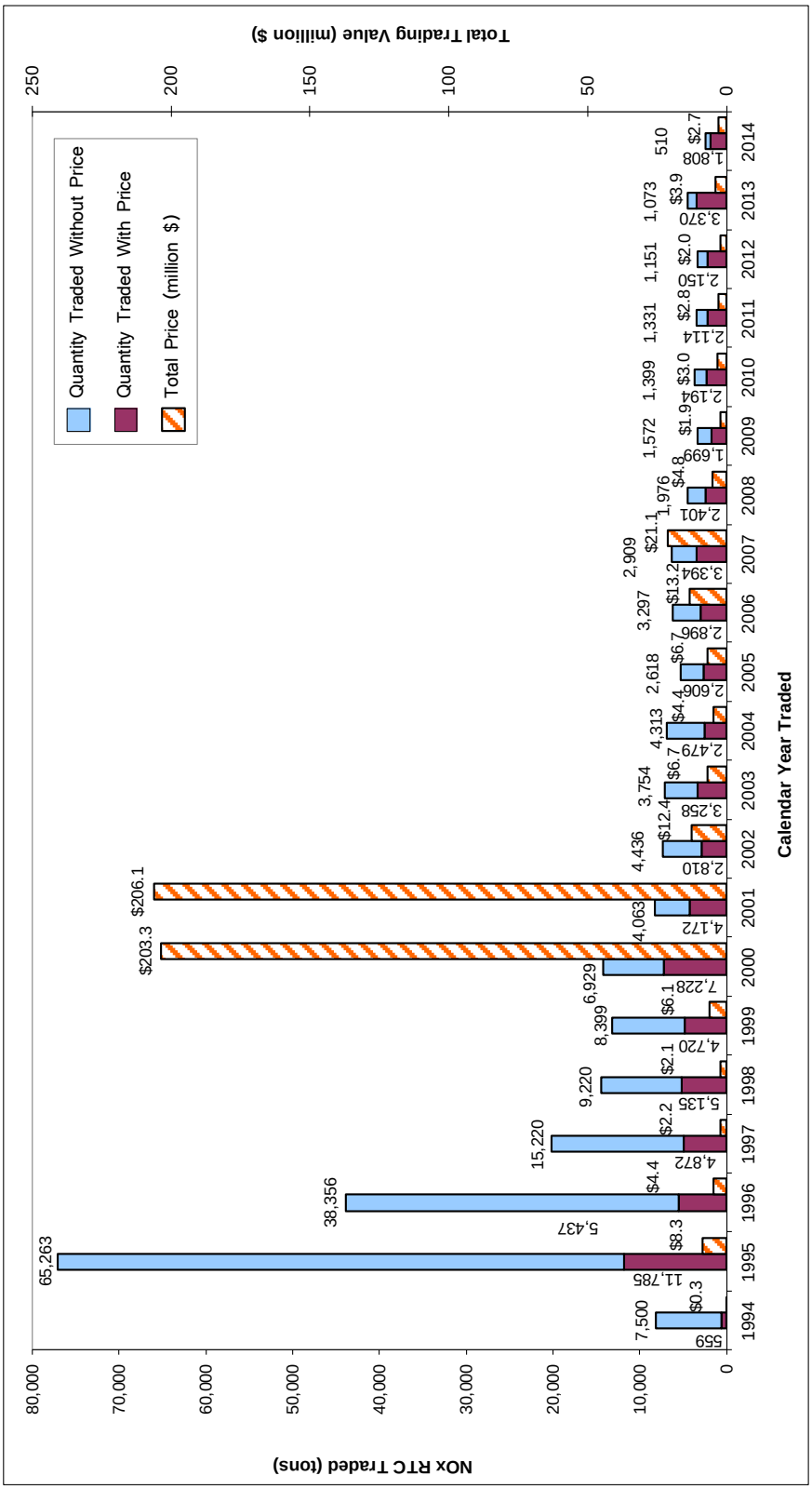


Figure 2-8
Discrete SOx RTC Trades (Excluding Swaps)

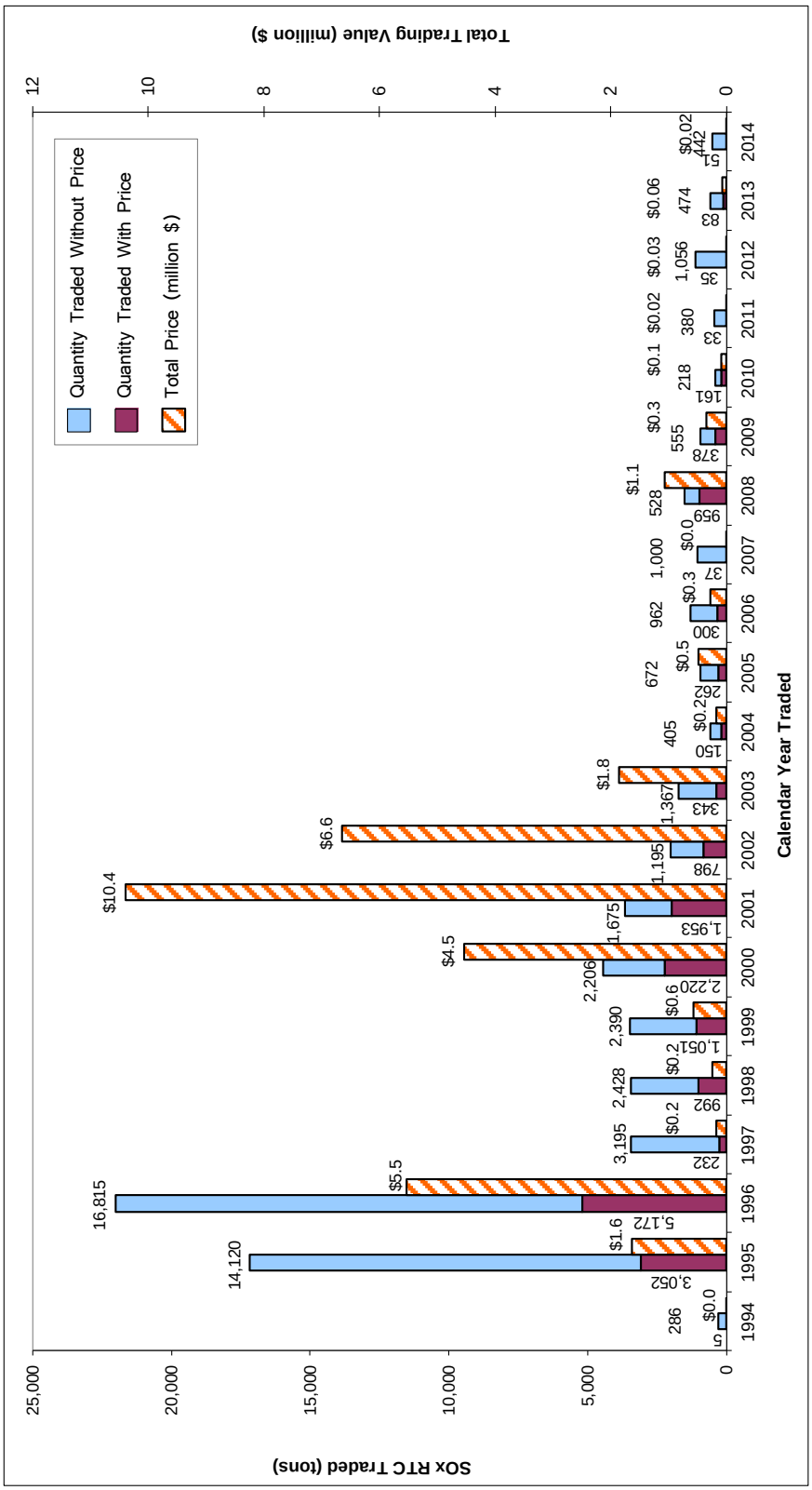


Figure 2-9
IYB NOx RTC Trades (Excluding Swaps)

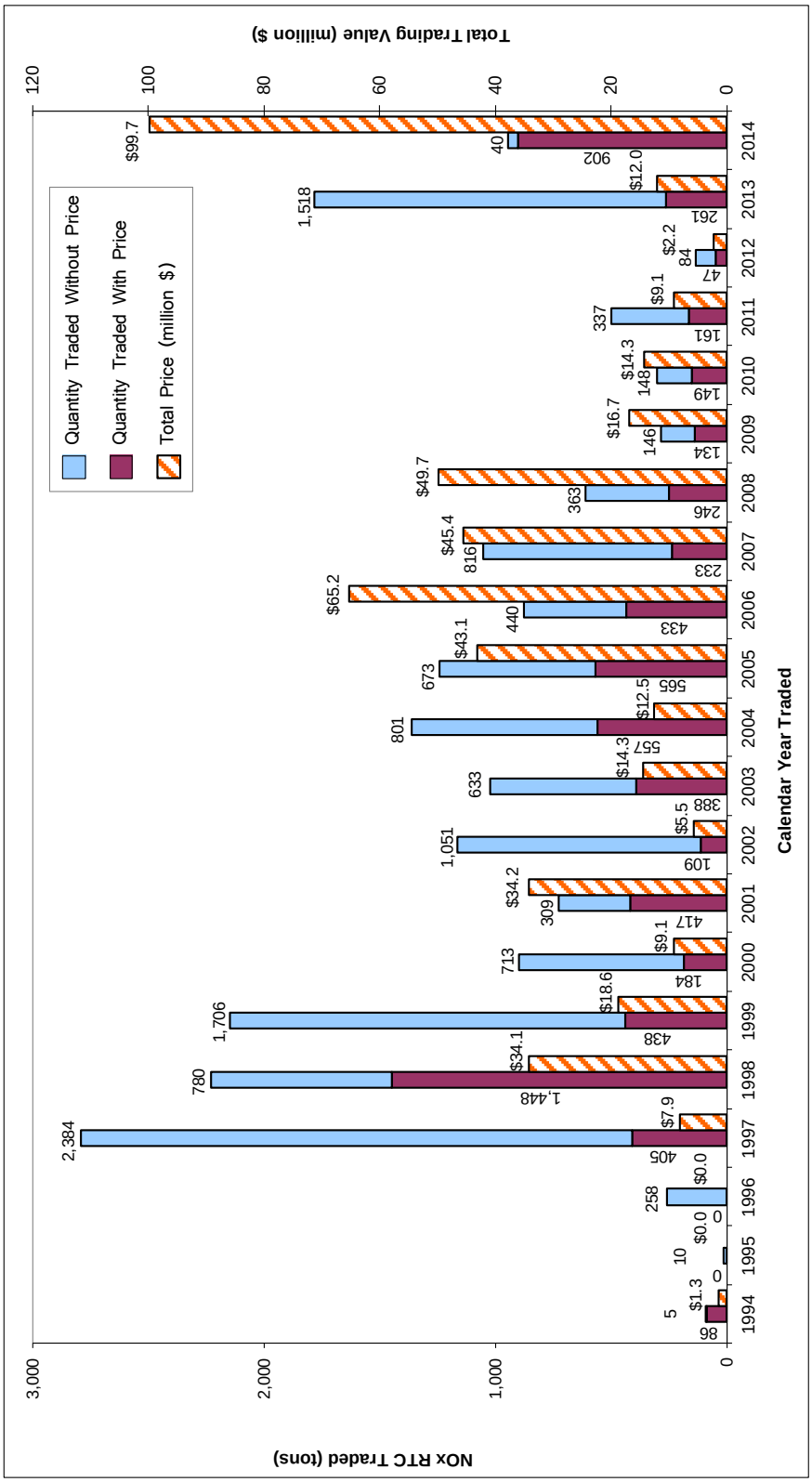
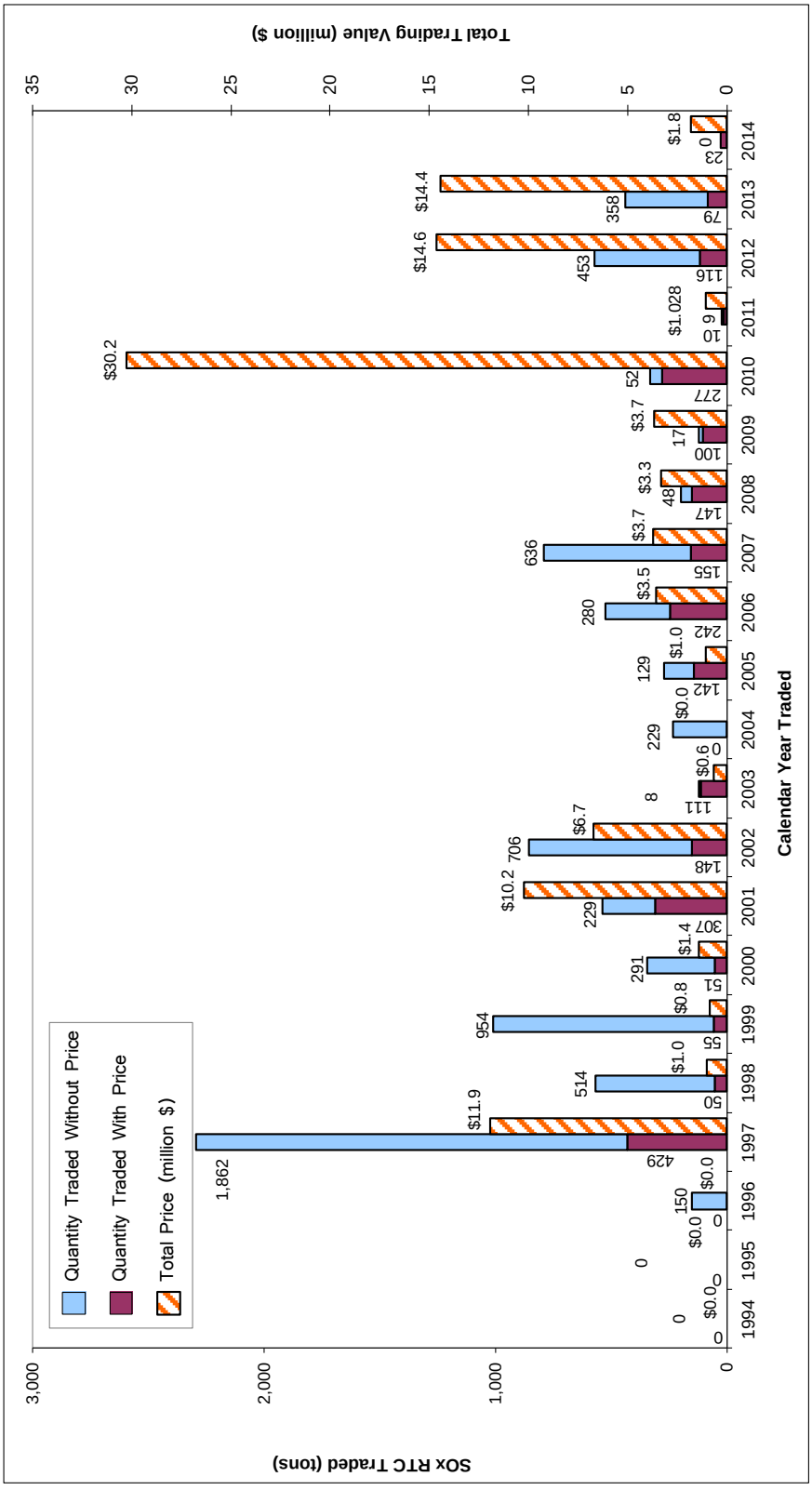


Figure 2-10
IYB SOx RTC Trades (Excluding Swaps)



Swap Trades

In addition to traditional trades of RTCs for a price, RTC swaps also occurred between trading partners. Most of the swap trades were exchanges of RTCs with different zones, cycles, expiration years, and/or pollutants. Some swaps involved a combination of RTCs and cash payment as a premium. There were also swaps of RTCs for ERCs. 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 $3.25 million in total value was reported from RTCs that were swapped in calendar year 2014, of which one swap trade involved trading NOx IYB for PM10 ERCs and was valued at over $2.42 million. 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 annual average prices dominated by swap transactions, and therefore, potentially not 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 2014 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
2014	$3.24	28.5	489.6	25	25

* 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
2014	$0.01	0.0	14.8	1	1

* 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 2014, the annual average prices for discrete-year NOx RTCs were $1,065 per ton for Compliance Year 2013, $1,910 per ton for Compliance Year 2014, and $3,779 per ton for Compliance Year 2015. The calendar year 2014 annual average prices for discrete-year SOx RTCs were $378 per ton for Compliance Year 2013, and $400 per ton for Compliance Year 2014[2].

Figures 2-11 and 2-12 present the annual average prices for discrete-year NOx and SOx RTCs during calendar years 2006 through 2014, 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.

Annual average prices in calendar year 2014 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 $40,612 per ton of NOx and $29,241 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 2015 traded in calendar year 2014.

Figure 2-11
Annual Average Prices for Discrete-Year NOx RTCs during Calendar Years 2006 through 2014

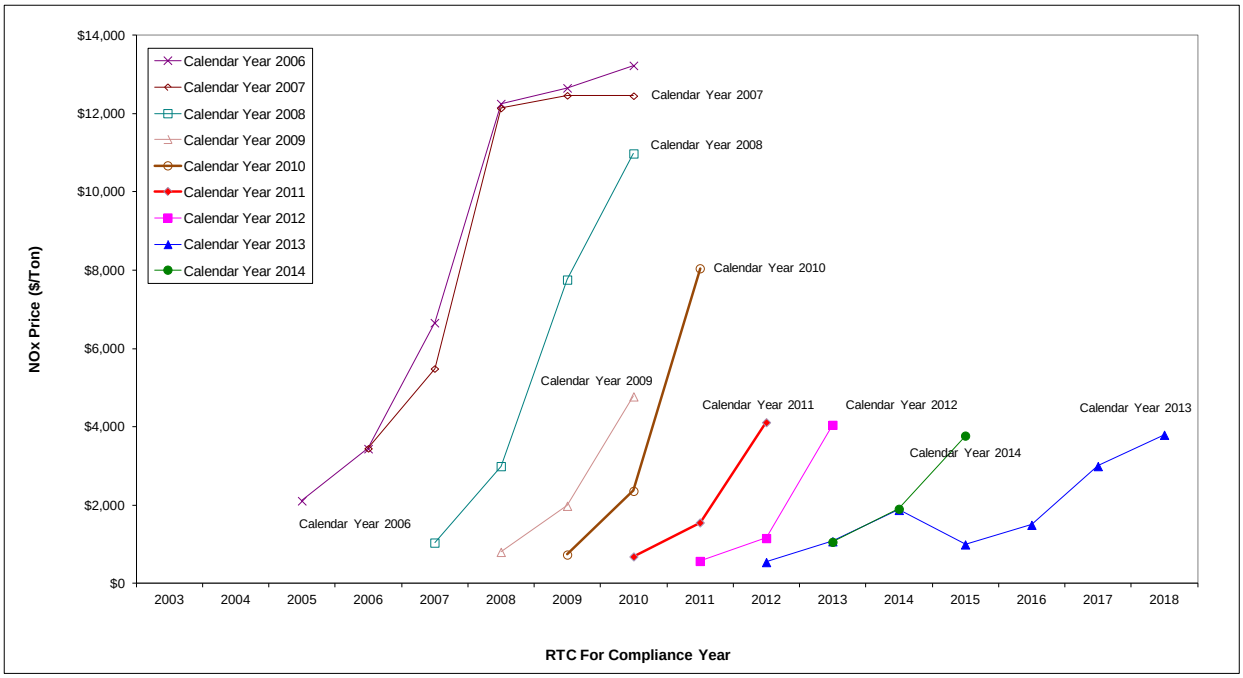
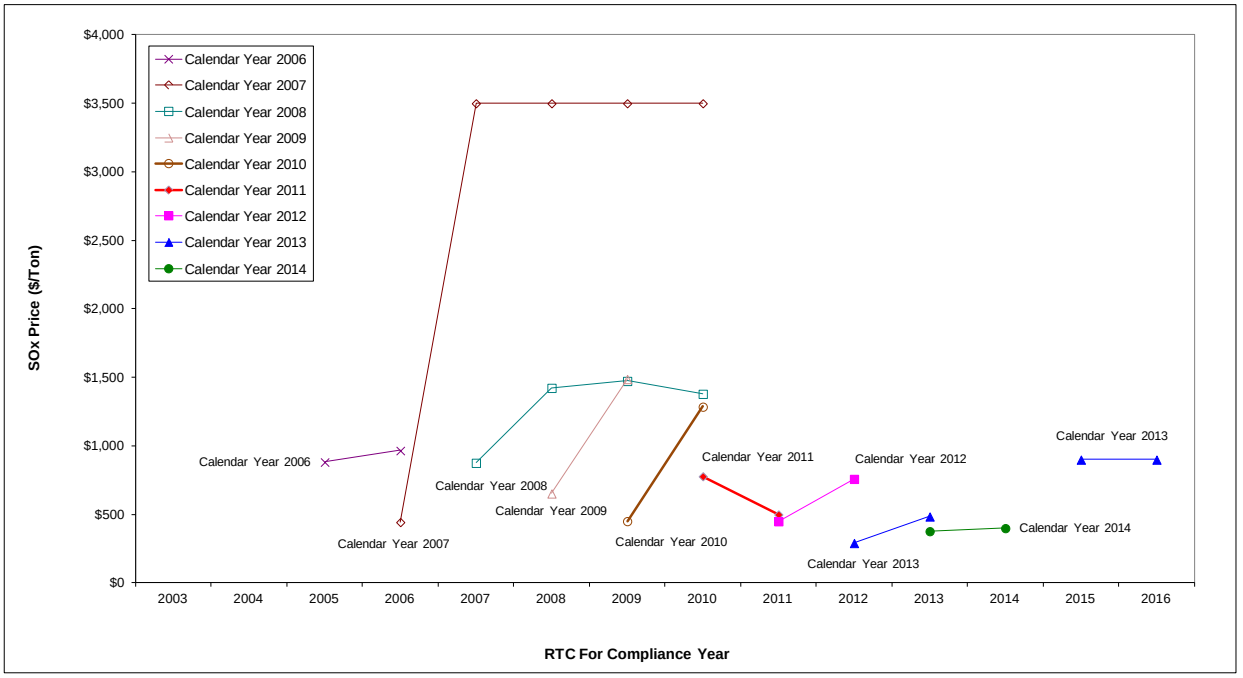


Figure 2-12
Annual Average Prices for Discrete-Year SOx RTCs during Calendar Years 2006 through 2014



Twelve-Month Rolling Average Prices of Compliance Year 2014 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 2014 NOx RTCs increased gradually from January 2014 through October and then decreased through the end of the year. However, from January through August 2014, the rolling average price for NOx RTCs was dominated by a single trade at a lower than market price (300,000 pounds at $0.50 per pound) that occurred in September 2013. Throughout 2014, the twelve-month rolling average prices did not exceed 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.

Table 2-4
Twelve-Month Rolling Average Prices of Compliance Year 2014 NOx RTCs

Reporting Month	12-Month Period	Average Price* ($/ton)
January 2014	January 2013 through December 2013	$1,788
February 2014	February 2013 through January 2014	$1,790
March 2014	March 2013 through February 2014	$1,899
April 2014	April 2013 through March 2014	$2,009
May 2014	May 2013 through April 2014	$2,032
June 2014	June 2013 through May 2014	$2,033
July 2014	July 2013 through June 2014	$2,128
August 2014	August 2013 through July 2014	$2,132
September 2014	September 2013 through August 2014	$2,120
October 2014	October 2013 through September 2014	$2,459
November 2014	November 2013 through October 2014	$2,362
December 2014	December 2013 through November 2014	$2,188
January 2015	January 2014 through December 2014	$1,910

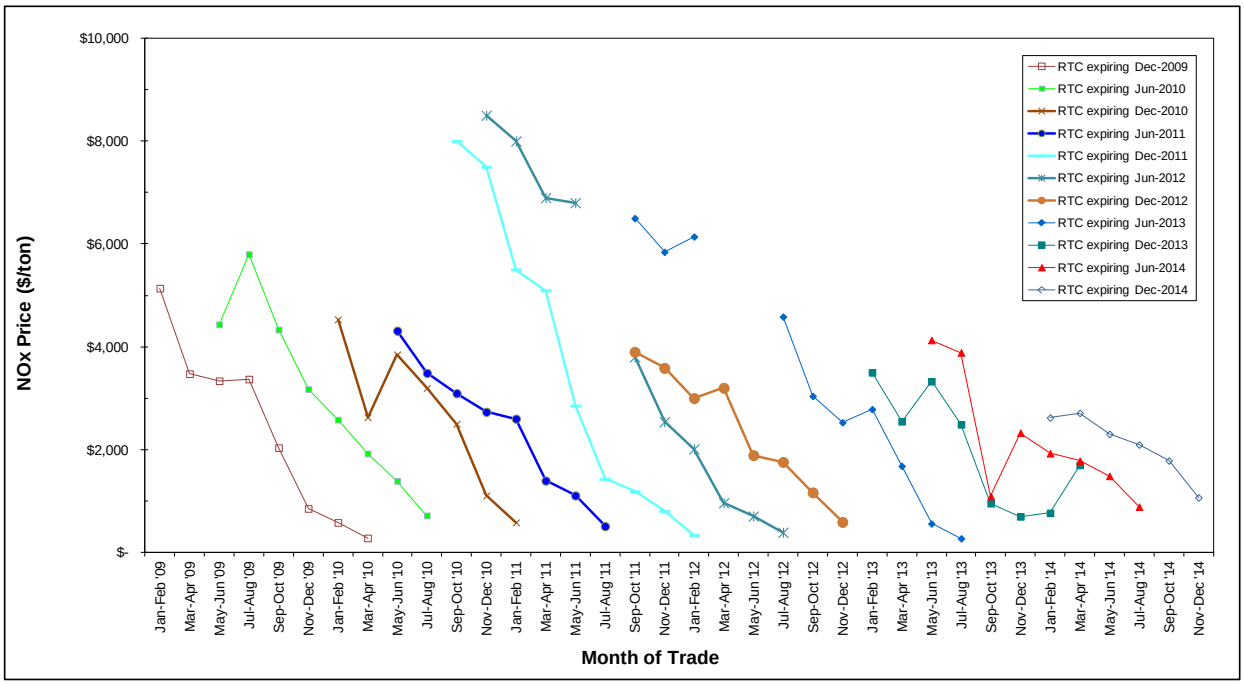
* Through August 2014, the Rolling Average Price for 2014 NOx RTCs was dominated by a single trade in September 2013 of 300,000 pounds at a cost of $0.50 per pound. Without this trade, the rolling average price for these periods would range from $2,465 to $3,197 per ton, instead of $1,788 to $2,120 per ton.

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 2014 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. For calendar year 2014, there were only six discrete SOx trades with price and these prices were flat throughout the year.

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 annual average price for IYB NOx RTCs traded in calendar year 2014 was $110,509 per ton, which is much higher than the annual average price of $45,914 per ton traded in calendar year 2013. The annual average price for IYB SOx RTCs traded in calendar year 2014 was $80,444 per ton, which is much lower than the $181,653 per ton traded in calendar year 2013. However, there were only four IYB SOx trades with price totaling 22.5 tons in 2014, which is lower than the 79 tons traded in 2013. A single facility was the buyer for all the IYB SOx traded. Data regarding IYB RTCs traded with price (excluding swap trades) for NOx and SOx RTCs and their annual average prices since 1994 are summarized in Tables 2-5 and 2-6, respectively. In calendar year 2014, the annual average IYB RTC prices did not exceed the $609,187 per ton of NOx RTCs or the $438,615 per ton of SOx RTCs program review thresholds established by the Governing Board for IYB RTCs 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
2014	$99.7	902.2	49	$110,509

* 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
2014	$1.8	22.5	4	$80,444

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

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 purchase RTCs. In those transactions, one party pays a premium for the contingent right (option) to purchase 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 the RTCs at a future date. These rights may or may not be actually exercised. RTC traders are obligated to report options to SCAQMD within five business days of reaching an agreement. These reports are posted on SCAQMD's website. There was no reported trade involving the contingent right to buy or sell RTCs in calendar year 2014.

As in prior years, RTCs were used in other programs during calendar year 2014. Five facilities surrendered a total of 5.2 tons of NOx RTCs and 0.2 tons of SOx RTCs to satisfy variance conditions. One facility surrendered 29.2 tons of NOx RTCs as part of the California Environmental Quality Act (CEQA) requirement to mitigate the emissions impact from a construction project. These consisted of discrete year RTCs only.

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. They do not need RTCs to offset or reconcile any emissions. For purposes of discussion in this report, "investors" include all parties who hold RTCs other than RECLAIM facility permit holders and brokers.

Investor Participation

In 2014 investors were actively involved in 134 of the 213 discrete NOx RTC trades with price, four of the six discrete SOx RTC trades with price, and 44 of the 49 IYB NOx trades with price. Investors were not involved in any of the four IYB SOx trades with price.

Investors' involvement in discrete NOx and SOx trades registered with price in calendar year 2014 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 46% and 55%, respectively, of the discrete NOx and SOx trades reported by value. Figure 2-15 is based on volume of discrete RTCs traded with price and shows that investors were involved in 47% and 57% of the discrete NOx and SOx trades by volume, respectively. Figures 2-16 and 2-17 provide similar data for IYB NOx and SOx trades, and show that investors were involved in 64% of IYB NOx trades on a reported value basis, and 59% of IYB NOx trades on the basis of the volume traded with price.

Figure 2-14
Calendar Year 2014 Investor-Involved Discrete NOx and SOx Trades Based on Value Traded

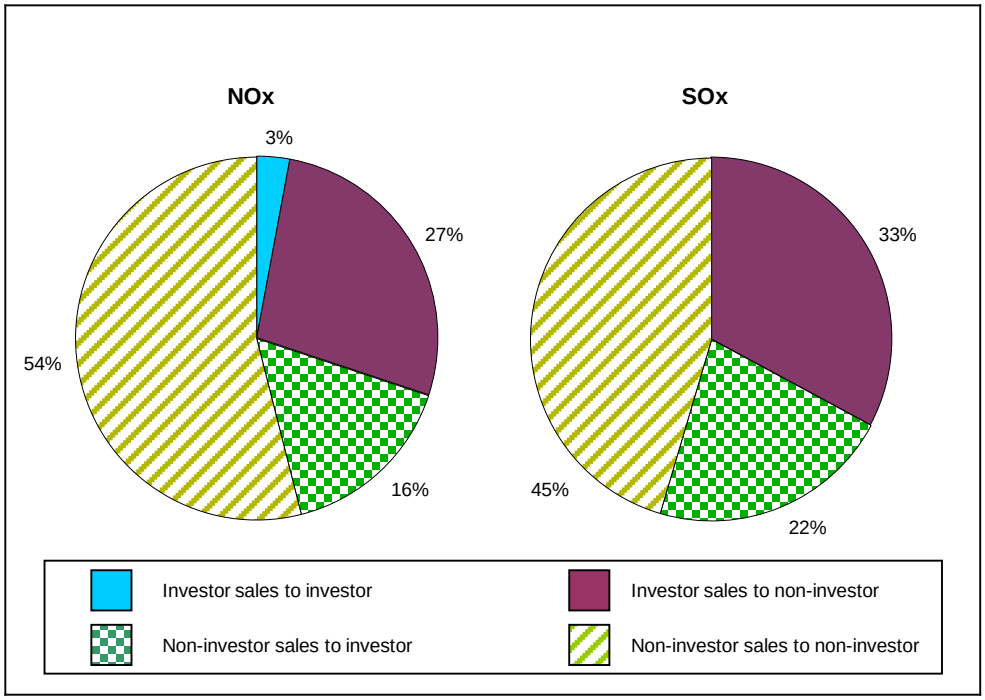


Figure 2-15
Calendar Year 2014 Investor-Involved Discrete NOx and SOx Trades Based on Volume Traded with Price

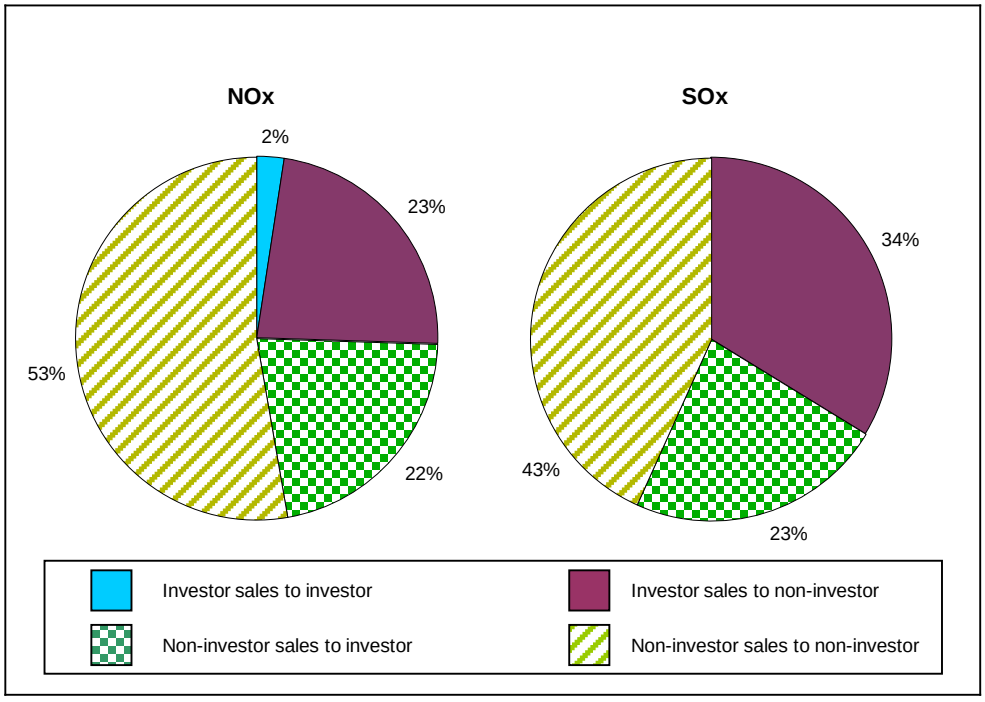


Figure 2-16
Calendar Year 2014 Investor-Involved IYB NOx and SOx Trades Based on Value Traded

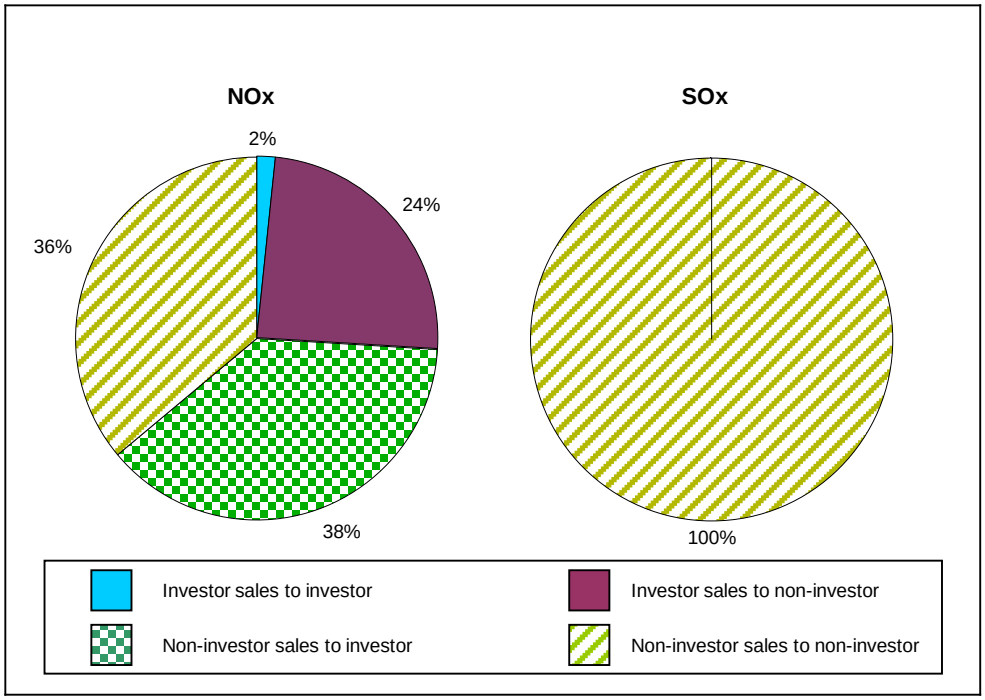
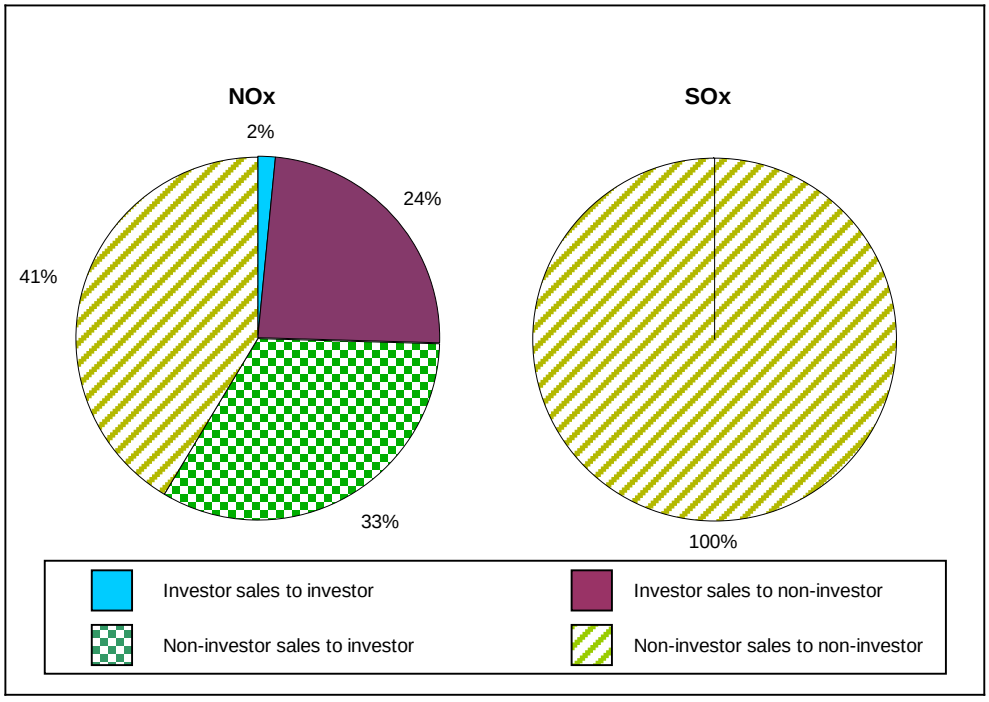


Figure 2-17
Calendar Year 2014 Investor-Involved IYB NOx and SOx Trades Based on Volume Traded with Price



As of the end of calendar year 2014, investors' holding of IYB NOx RTCs had decreased slightly to 4.6% compared to 4.9% at the end of calendar year 2013. Out of the 4.6% held, mutual fund investors held 1.4% of IYB NOx RTCs, down from 2.7% at the end of calendar year 2013. Investors' holding of IYB SOx RTCs was unchanged at 0.9% at the end of calendar year 2014. No IYB SOx RTCs are currently held by mutual fund investors.

The available supply of IYB RTCs are generally from facilities that have permanently reduced emissions through the installation of control equipment, the modification or replacement of old equipment, or equipment and/or facility shutdowns. There were four RECLAIM facilities that shut down during Compliance Year 2013. These four facilities participated in the NOx RECLAIM program only and held a total of 15.6 tons of IYB NOx RTCs prior to shutdown. With the exception of 1.6 tons of IYB NOx RTCs still held by one facility, the balance was sold to investors.

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, RECLAIM facility operators 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 facility audits. For Compliance Year 2013, the total RECLAIM NOx emissions were 7,326 tons. If the future total NOx emissions increased to the Compliance Year 2007 level of 8,796 tons (as illustrated in Figure 7-1), the NOx RTC surplus would be only 903 tons (9% of allocation), which is almost in line with the 10% compliance margin traditionally held by RECLAIM facilities. Therefore, the current aggregate investors' holdings of 4.6% of IYB NOx 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 (4.6% 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. Investors 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. Staff anticipates that there are two primary mechanisms that drive a facility to implement additional control technologies: Implementation of Best Available Control Technology (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 likely to be significant when RECLAIM facilities increase production or the supply of RTCs decreases as a result of amendments to Rule 2002 implementing BARCT as discussed in Chapter 3. The first iteration of amending Rule 2002 to reduce the NOx RTC supply to reflect changes in BARCT was adopted by the Governing Board in January 2005 and phased in from Compliance Year 2007 through Compliance Year 2011. Facilities had ample notice of these reductions to the NOx RTC supply and the market was able to respond as designed—emissions were reduced such that aggregate emissions remained below aggregate allocations each year. The first iteration for SOx (adopted November 2010 with phased implementation commencing in Compliance Year 2013 and full implementation starting with Compliance Year 2018) is currently underway. Again, facilities had ample notice and have been able to keep aggregate SOx emissions below aggregate allocations without significant price increases. A second round of amendments to Rule 2002 to implement BARCT by reducing the NOx RTC supply is currently under development and is discussed in more detail in Chapter 3. Adoption of such amendments will put pressure on RECLAIM facility operators to reduce emissions so as to keep them below their RTC holdings. It is too soon to tell how the market will respond to the enacted SOx reduction and the proposed NOx amendments, but if adequate emissions controls are not implemented in a timely manner there is the potential for a seller's market for NOx RTCs to develop, which would make RTCs held by investors increasingly important to the market, as described above. SCAQMD staff will continue to monitor market activity and prices throughout the implementation and will report back to the Governing Board regularly.

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.

CHAPTER 3
EMISSION REDUCTIONS ACHIEVED

Summary

For Compliance Year 2013, aggregate NOx emissions were below total allocations by 24% and aggregate SOx emissions were below total allocations by 35%. No emissions associated with breakdowns were excluded from reconciliation with facility allocations in Compliance Year 2013. 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 2013. With respect to the Rule 2015 backstop provisions, Compliance Year 2013 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 reductions in allocations as a result of BARCT implementation. In January 2005, the Board adopted an amendment to Rule 2002 to further reduce RECLAIM NOx allocations to implement the latest BARCT. These changes resulted in cumulative NOx allocation reductions of 22.5% (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. The Board also amended Rule 2002 in November 2010 to implement changes in BARCT for SOx. Specifically, the November 2010 amendments call for reducing aggregate RECLAIM SOx emissions by 48% (2,081 tons/year), with the reductions phased-in from Compliance Year 2013 through Compliance Year 2019. A little over half of the SOx reductions occurred in Compliance Year 2013. Finally, there is an ongoing rulemaking effort to achieve additional NOx reductions pursuant to the 2012 AQMP Control Measure CMB-01 and to address requirements for demonstrating Best Available Retrofit Control Technology (BARCT) equivalency in accordance with California Health and Safety Code §40440. The extent of the NOx emission reductions is currently under discussion. This rule is scheduled to be amended in the second quarter 2015.

Emissions Audit Process

Since the inception of the RECLAIM program, SCAQMD staff 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 NOx emissions for each facility are posted on SCAQMD's web page after the audits are completed. 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.

Since the last annual report, five facilities' previous year audits were re-opened because either the SCAQMD staff discovered additional information while performing current year audits or the facility self-disclosed information that affected emission calculations. The re-opened audits affected NOx emissions reported for Compliance Years 2007 through 2012. For some of the five facilities, multiple years' audits were impacted. Table 3-1 summarizes the changes to the audited emissions for the impacted facilities. The resulting changes to the overall audited RECLAIM NOx emissions for each compliance year were less than 0.1% increases for Compliance Years 2007 through 2011. For Compliance Year 2012, the changes caused a decrease of 1.5% in overall audited NOx emissions. None of these changes resulted in aggregate RECLAIM NOx emissions exceeding RECLAIM aggregate Allocations for the corresponding compliance years.

Table 3-1
Summary of Re-Opened Audits

Compliance Year	Original Audited NOx Emissions (lbs)	Updated Audited NOx Emissions (lbs)	Change in Audited NOx Emissions (lbs)	% Change	Number of Facilities Involved
2007	253,572	256,442	2,870	1.1%	2
2008	239,075	245,117	6,042	2.5%	2
2009	215,166	226,068	10,902	5.1%	2
2010	215,711	226,499	10,788	5.0%	2
2011	138,861	138,850	-11	-0.01%	2
2012	751,134	514,107	-237,027	-31.6%	1

Table 3-2 and Figure 3-1 show aggregate audited NOx emissions for Compliance Years 1994 through 2013. 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 due to the California energy crisis. Since Compliance Year 2007, the first year of the programmatic reduction in RECLAIM NOx allocations that was 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. Specifically, Compliance Year 2013 NOx emissions were below total allocations by 24%. Even though there was a slight increase in aggregate NOx emissions in Compliance Year 2012 when compared to Compliance Year 2011 emissions, Compliance Year 2013 levels are back down to the emission levels seen in Compliance Years 2009 and 2011.

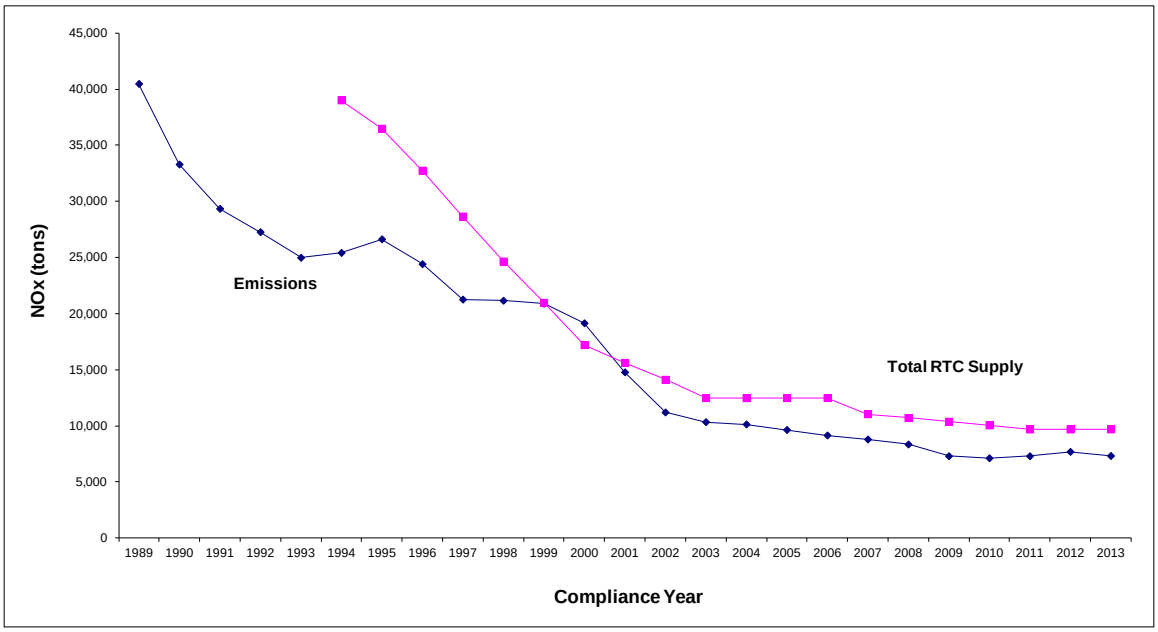
Table 3-2
Annual NOx Emissions for Compliance Years 1994 through 2013

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%	39,016	13,596	35%
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	8,796	-65%	11,046	2,250	20%
2008	8,349	-67%	10,705	2,356	22%
2009	7,306	-71%	10,377	3,071	30%
2010	7,121	-72%	10,053	2,932	29%
2011	7,302	-71%	9,690	2,388	25%
2012	7,691	-70%	9,689	1,998	21%
2013	7,326	-71%	9,699	2,373	24%

[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 3-2 and Figure 3-1 for NOx, Table 3-3 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 3-3 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 2013, SOx emissions were below total allocations by 35%. The unused SOx RTCs from Compliance Year 2009 and on has remained 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.

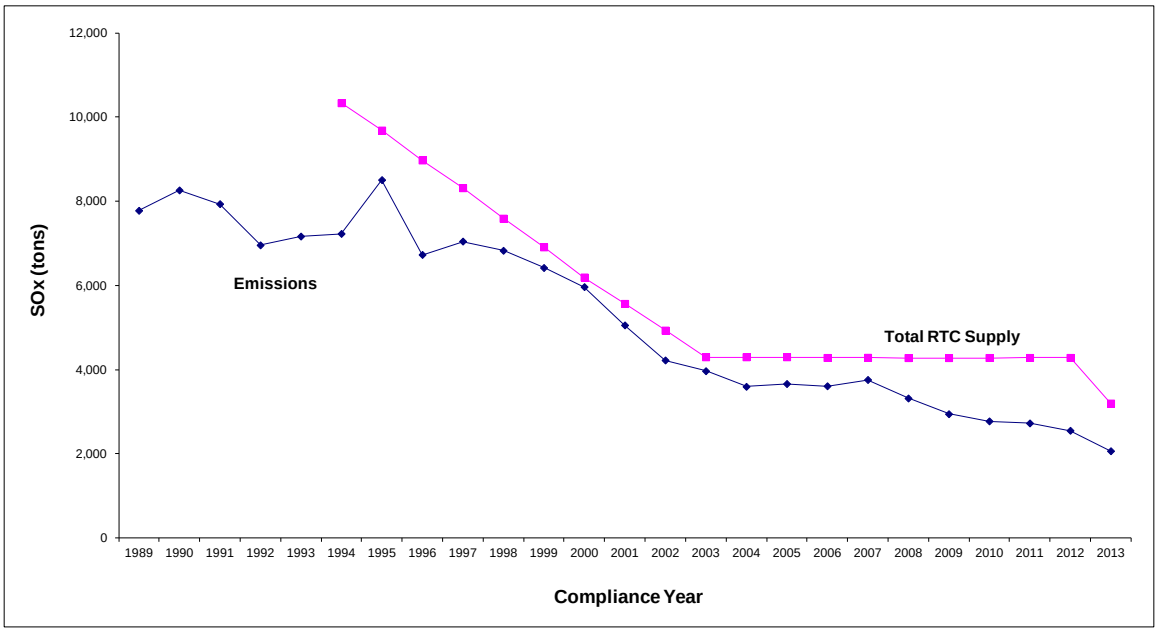
Table 3-3
Annual SOx Emissions for Compliance Years 1994 through 2013

Compliance Year	Audited Annual SOx Emissions[1] (tons)	Audited Annual SOx Emissions Change from 1994 (%)	Total SOx RTCs[2] (tons)	Unused SOx RTCs (tons)	Unused SOx RTCs (%)
1994	7,230	0%	10,336	3,106	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%
2013	2,066	-71%	3,198	1,132	35%

[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.

None of the new or amended rules approved during the time period of this annual audit would result in different impacts to RECLAIM or non-RECLAIM facilities.

During Compliance Year 2013, one of the subsumed Regulation XIII rules, 1309 – Emission Reduction Credits and Short Term Credits, was amended on July 5, 2013. This rule amendment allowed the reissuance of unused ERCs, provided the request is made within two years of issuance of the Permit to Construct and construction had not commenced. Another Regulation XIII subsumed rule, Rule 1304.1 – Electrical Generating Facility Fee For Use Of Offset Exemptions, adopted September 6, 2013, set a fee for Electric Generating Facilities electing to meet their emissions offset obligations for boiler replacement projects by using offsets provided by the SCAQMD. These fee proceeds are invested in air pollution improvement strategies consistent with the AQMP goals. Although the provisions of Regulation XIII apply to all facilities, Rule 2001 identifies Regulation XIII as subsumed by RECLAIM, and thereby the requirements of amended Rule 1309 and adopted Rule 1304.1 do not apply to NOx at NOx RECLAIM facilities or

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

to SOx at SOx RECLAIM facilities. The other requirements of both rules apply equally to both RECLAIM and non-RECLAIM facilities.

Two other subsumed rules, Rules 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters, and 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters, were amended on November 1, 2013. The amendments to both Rules 1146 and 1146.1 addressed a SIP approvability issue relating to rule enforceability raised by U.S. EPA. The amendment to each rule clarified that source test results indicating a unit's exceedance of the rule limits constitute a rule violation. However, both amended rules still allow diagnostic emission checks for boiler maintenance purposes. None of the changes affected rule emission limits. Since the November 2013 amendments to Rules 1146 and 1146.1 do not affect NOx or SOx, they apply equally to both RECLAIM and non-RECLAIM facilities.

Other rules amended or adopted during Compliance Year 2013 but not subsumed by RECLAIM include Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities, Rule 1130 – Graphic Arts, Rule 1155 – Particulate Matter (PM) Control Devices, Rule 2202 – On-Road Motor Vehicle Mitigation Options, Rule 301 – Permitting and Associated Fees, and Rule 311 – Air Quality Investment Program (AQIP) Fees.

On January 10, 2014, Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities was amended to establish requirements for owners or operators of large lead-acid battery recycling facilities to reduce emissions of arsenic and other key toxic air contaminants. The purpose of the amendment was to continue to ensure attainment of the National Ambient Air Quality Standards (NAAQS) for Lead as well as reduce emissions of arsenic, benzene, and 1,3-butadiene and other toxic air contaminant emissions contributing to health risks from large lead-acid battery recycling facilities. The amendment also included requirements for ambient air concentration limits for arsenic, as well as hourly emission limits of arsenic, benzene, and 1,3-butadiene. Additionally, the amendment contained administrative, monitoring and source testing requirements for stack emissions.

During the public hearing for this amendment, the Governing Board removed the requirement that affected facilities conduct a multi-metals demonstration program to continuously monitor lead, arsenic, and other metals. The Governing Board directed staff to work with stakeholders and return to the March 7, 2014 Public Hearing for Board action on the multi-metal CEMS demonstration program. As a result, on March 7, 2014, Rule 1420.1 was amended requiring affected facilities to provide funding and participate in a multi-metals CEMS demonstration program. Clarifying language was also added to require affected facilities to reimburse SCAQMD for funds spent to deploy independent third party contractors who conducted investigations of unplanned shutdowns.

The May 2, 2014 amendment to Rule 1130 – Graphic Arts incorporated certain U.S. EPA Control Techniques Guidelines (recommendations applicable to printing operations that were not included in prior amendments) that pertain to the overall add-on control device efficiency and VOC content requirements for fountain solutions. Amended Rule 1130 further added prohibition of storage of

non-compliant VOC-containing materials at a worksite, removed obsolete rule language, updated definitions for consistency with other SCAQMD rules, added a rule exemption for graphic arts materials that have a VOC content of no more than 10 g/L, as applied, and made minor corrections and clarifications.

Rule 1155 – Particulate Matter (PM) Control Devices was amended on May 2, 2014 to address concerns raised by U.S. EPA in July of 2010. The amendment to Rule 1155 in May 2014 clarified that certain provisions of Rule 401 – Visible Emissions and the provisions of Rule 404 – Particulate Matter - Concentration are applicable to equipment subject to Rule 1155.

Finally, Rule 2202 – On-Road Motor Vehicle Mitigation Options, along with the accompanying rule Implementation Guidelines, Rule 311 – Air Quality Investment Program (AQIP) Fees, and Rule 301 – Permitting and Associated Fees were amended on June 6, 2014. Sections of Rule 2202 and the Implementation Guidelines were amended to address the use of ERCs and clarify the use of other existing emission credits. Rule 311, which is a program option for applicable worksites within Rule 2202, was amended to reduce the AQIP per employee fee, to more accurately reflect the costs to obtain the required emission reductions. The purpose of these amendments was to address the future availability of ERCs for use by stationary sources by no longer allowing ERCs to be transferred into the Rule 2202 program and subjecting those ERCs that currently reside in the program to an annual discount to establish a more level playing field for the various compliance options. The amendments to Rule 301 add a transfer fee for the administration and tracking of Short Term Emission Reduction Credits,

Since Rules 1420.1, 1130, 1155, 2202, 301 and 311 are not subsumed under RECLAIM, the requirements of these rules apply equally to RECLAIM and non-RECLAIM facilities. The amendments to Rules 1309, 1304.1, 1146 and 1146.1 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 had remained unchanged at the Compliance Year 2012 level, then emissions would exceed allocations in Compliance Year 2017. On the other hand, aggregate Compliance Year 2013 emissions were below aggregate allocations for 2019 and all subsequent years, so if overall SOx emissions remain constant at the Compliance Year 2013 level they would remain below allocations. Similarly, aggregate NOx emissions in Compliance Year 2005 and all subsequent compliance years were below aggregate allocations for Compliance Year 2013 and all subsequent years. It is anticipated that the on-going effort (described below) to reduce NOx allocations pursuant to Control Measure CMB-01 is likely to require further NOx emission reductions from RECLAIM facilities.

During Compliance Year 2013, there were no new amendments to Regulation XX adopted by SCAQMD's Governing Board. However, on December 7, 2012 the SCAQMD Governing Board adopted 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 extent of the NOx emission reductions is currently under discussion. The proposed amendment is expected to implement Control Measure CMB-01, and also address Best Available Retrofit Control Technology (BARCT) equivalency in accordance with California Health and Safety Code §40440. Changes to some RECLAIM monitoring and reporting requirements are also proposed. Rule development is currently underway to implement this control measure with an anticipated public hearing in the second quarter of 2015.

Breakdowns

Pursuant to Rule 2004(i) – Breakdown Provisions, a facility may request that emission 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 total unused RTCs within the program, 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 3-4, a review of APEP reports for Compliance Year 2013 found that no facilities requested to exclude breakdown emissions from being counted against their allocations. Thus, for Compliance Year 2013, no additional RTCs are required to offset breakdown emissions pursuant to Rule 2015(d)(3).

Table 3-4
Breakdown Emission Comparison for Compliance Year 2013

Emittant	Compliance Year 2013 Unused RTCs (tons)	Unmitigated Breakdown Emissions[1] (tons)	Remaining Compliance Year 2013 RTCs (tons)
NOx	2,373	0	2,373
SOx	1,132	0	1,132

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

Impact of Changing Universe

As discussed in Chapter 1, six NOx facilities were included, one existing NOx facility was included into the SOx market, no facility was excluded and four facilities shut down in Compliance Year 2013. 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. Existing facilities 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. In Compliance Year 2013, one existing facility chose to opt into the RECLAIM program and three existing facilities were included into the RECLAIM program based on the Rule 2001 threshold of actual NOx and/or SOx emissions greater than or equal to four tons per year. One of these three existing facilities included based on meeting or exceeding the Rule 2001 threshold, was already a NOx RECLAIM facility that amended its reported SOx emissions for past years and, as such, was included in SOx RECLAIM. An additional RECLAIM facility that was previously shut down re-started its operation and was included back into the universe of active RECLAIM facilities in Compliance Year 2013.

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 were no new facilities that elected to opt-in during Compliance Year 2013. However, one facility that was included pursuant to the Rule 2001 threshold is considered a new facility, as defined by Rule 2000. 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. In Compliance Year 2013, there were no facilities included into the RECLAIM universe as a result of the partial change of operator of a facility already in RECLAIM. Although there were no partial changes of operator in Compliance Year 2013, there was a partial relocation of a RECLAIM facility to a new location. Similar to a partial change of operator, no additional allocations were issued as a consequence of the partial relocation. As such, the supply of RTCs was not impacted by this partial relocation.

The shutdown of a RECLAIM facility results in a reduction in actual emissions. The shut down 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. Shut down 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, four RECLAIM facilities (all NOx-only facilities) shut down permanently in Compliance Year 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 in Compliance Year 2013.

In summary, 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 2013 NOx and SOx audited emissions and initial allocations for facilities that were shut down, excluded, or included into the program during Compliance Year 2013 are summarized in Tables 3-5 and 3-6.

[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 3-5
NOx Emissions Impact from the Changes in Universe (Tons)

Category	Compliance Year 2013 NOx Emissions (tons)	Allocations Issued for Compliance Year 2013 NOx RTCs (tons)
Shutdown Facilities	2.1	29.8
Excluded Facilities	Not applicable	Not applicable
Included Facilities	22.1	10.8
RECLAIM Universe	7,326	9,699

Table 3-6
SOx Emissions Impact from the Changes in Universe (Tons)

Category	Compliance Year 2013 SOx Emissions (tons)	Allocated Compliance Year 2013 SOx RTCs (tons)
Shutdown Facilities	Not applicable	Not applicable
Excluded Facilities	Not applicable	Not applicable
Included Facilities	20.8	0.05
RECLAIM Universe	2,066	3,198

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 annual average price of RTCs exceeds $15,000 per ton. Compliance Year 2013 aggregate NOx and SOx emissions were both below aggregate allocations as shown in Figures 3-1 and 3-2. At the same time, annual average prices for NOx and SOx RTCs in calendar year 2013 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 2013, a total of 70 NOx RECLAIM facilities had NSR NOx emission increases, and 11 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 2013, RECLAIM provided an offset ratio based on the compliance year's total unused allocations and total NSR emission increases of 6-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 2013. 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). The same BACT guidelines are used to determine applicable BACT to RECLAIM and non-RECLAIM facilities.

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].

[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).

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 major sources to employ federal BACT/California BARCT at a minimum 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, at a minimum, California BACT for all new or modified sources with increases in hourly potential to emit of RECLAIM pollutants. SCAQMD uses the same BACT guidelines in applying BACT to RECLAIM and non-RECLAIM facilities. Furthermore, BACT for major sources is at least as stringent as LAER (LAER is not applicable to minor facilities as defined in Rule 1302(t)). Thus, RECLAIM complies with both 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 all new RECLAIM facilities[2] and all other RECLAIM facilities that increase their annual allocations above the level of their starting allocations plus non-tradable/non-usable credits to provide sufficient RTCs to offset the annual potential emissions increase from new or modified 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 1.2-to-1 offset requirement for NOx on an aggregate basis. This annual program audit report assesses NSR permitting activities for Compliance Year 2013 to verify that

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

programmatic compliance of RECLAIM with federal and state NSR requirements has been maintained.

NSR Activity

Evaluation of NSR data for Compliance Year 2013 shows that RECLAIM facilities were able to expand and modify their operations while complying with NSR requirements. During Compliance Year 2013, a total of 70 NOx RECLAIM facilities (39 in Cycle 1 and 31 in Cycle 2) were issued permits to operate, which resulted in a total of 439.7 tons per year of NOx emission increases from starting operations of new or modified sources, and 11 SOx RECLAIM facilities (six facilities in Cycle 1 and five facilities in Cycle 2) experienced a total of 693.1 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: 2,373 tons, SOx: 1,132 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 what RACT is 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 70 RECLAIM facilities resulted in 439.72 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 2013), 2,373 tons of Compliance Year 2013 NOx RTCs remained unused. Therefore, the Compliance Year 2013 NOx programmatic offset ratio calculated from this methodology is 6-to-1 as shown below:

$$\text{Offset Ratio} = \left(1 + \frac{2{,}373 \text{ tons}}{439.72 \text{ tons}}\right)\text{-to-1}$$

$$= 6\text{-to-1}$$

RECLAIM continues to generate sufficient excess emission 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 1,132 tons of excess (unused) SOx RTCs for Compliance Year 2013. 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 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 2013 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 2013, 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), Southern California Edison (Facility ID 160437) was required to submit modeling analysis for its NOx emissions in Compliance Year 2013.

CHAPTER 5
COMPLIANCE

Summary

*Of the 279 NOx RECLAIM facilities audited during Compliance Year 2013, a total of 271 facilities (97%) complied with their NOx allocations, and 31 of the 33 SOx facilities (94%) complied with their SOx allocations. The eight facilities that exceeded their NOx allocations had aggregate NOx emissions of 173.2 tons and did not have adequate allocations to offset 18.5 tons (or 10.6%) of their combined emissions. This exceedance amount is small compared to the overall allocations for Compliance Year 2013 (0.19% of total NOx allocations). Two SOx facilities had SOx emissions that exceeded their SOx allocations by two pounds in one case and seven pounds in the other case. The exceedances from these facilities did not impact the overall RECLAIM emission reduction goals. Pursuant to Rule 2010(b)(1)(A), these 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 2013 allocations. The overall RECLAIM NOx and SOx emission reduction targets and goals were met for Compliance Year 2013 (*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 provide 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 in Rule 2002. For a facility in existence prior to October 1993, it is issued allocations by 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 are issued RTCs generated by converting the surrendered ERCs to RTCs. 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. These reconciliation periods are provided for facilities to review and correct their emission reports as well as securing adequate allocations. Each RECLAIM facility must hold sufficient RTCs in its allocation account to cover (or reconcile with) 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. For Compliance Year 2013, these inspections revealed that some facilities did not obtain or record valid monitoring data, were unable to substantiate reported emissions with valid records, failed to submit emission reports when due, made errors in quantifying their emissions (*e.g.*, arithmetic errors), used incorrect adjustment factors (*e.g.*, bias adjustment factors), used emission calculation methodologies not allowed under the rules, or used MDP inappropriately. Other common mistakes included reporting non-RECLAIM

emissions and/or omitting reportable emissions. Appropriate compliance actions are also taken based on audit findings.

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 nine RECLAIM facilities failed to reconcile their emissions (seven NOx-only facilities, one NOx and SOx facility that only exceeded its SOx allocation, and one facility that exceeded both its NOx and SOx allocations). Eight of these nine facilities (seven NOx-only facilities and the NOx and SOx facility that exceeded both) failed to secure sufficient RTCs to cover their reported emissions during either the quarterly or annual reconciliation periods (*i.e.*, they failed to hold sufficient RTCs to cover their reported emissions, as opposed to facilities that have exceedances because they under-reported their emissions and held sufficient RTCs to reconcile their reported emissions but not enough to reconcile their audited emissions). Of these eight facilities, one facility (a NOx-only facility), had an additional reason for NOx exceedance in that they used an incorrect pressure correction factor to correct fuel usage readings to standard conditions. At a different facility, an additional reason for NOx exceedance was that the facility omitted reportable emissions. In the one remaining case, the facility failed to account for SOx emissions from a diesel-fired IC engine. Overall, the Compliance Year 2013 allocation compliance rates for facilities are 97% (271 out of 279 facilities) for NOx RECLAIM and 94% (31 out of 33 facilities) for SOx RECLAIM. For purposes of comparison, the allocation compliance rates for Compliance Year 2012 were 95% and 97% for NOx and SOx RECLAIM facilities, respectively. The eight facilities that had NOx emissions in excess of their individual NOx allocations had 173.2 tons of NOx emissions and did not have adequate RTCs to cover 18.5 of those tons (or 10.6%). This exceedance amount (0.19% of aggregate NOx allocations) is small compared to the overall allocations for Compliance Year 2013. Two facilities had SOx emissions that exceeded its SOx allocations by only two pounds in one case and seven pounds in the other case. Pursuant to Rule 2010(b)(1)(A), all nine 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 2013 allocations.

Impact of Missing Data Procedures

MDP was designed to provide a method for determining emissions when an emission monitoring system does not 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 Emissions 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 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, 107 NOx facilities and 15 SOx facilities used MDP in reporting portions of their annual emissions during Compliance Year 2013. In terms of mass emissions, 3.9% of the total reported NOx emissions and 5.6% of the total reported SOx emissions in the APEP reports were calculated using MDP for Compliance Year 2013. Table 5-1 compares the impact of MDP on reported annual emissions for the last few compliance years to the second compliance year, 1995 (MDP was not fully implemented during Compliance Year 1994).

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

[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)
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)
2013	3.9% (107 / 287)	5.6% (15 / 113)

* 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, 107 facilities reported NOx emissions using MDP in Compliance Year 2013. Even though the number of facilities is higher than in 1995, the percentage of emissions reported using MDP during Compliance Year 2013 is much lower than it was in 1995 (3.9% compared to 23%). Additionally, in terms of quantity, NOx emissions in Compliance Year 2013 were about 5% of those in Compliance Year 1995 (287 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 4% of reported NOx annual emissions were calculated using MDP in Compliance Year 2013. 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 4% 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 2013, a majority of NOx MDP emissions data (55%) and SOx MDP emissions data (93%) 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. On the other hand, as discussed in Chapter 7, a power plant was about two months late in conducting a RATA, resulting in application of MDP for the period from the due date until the date of the RATA. A more conservative tier of MDP was required to be used due to the length of the missing period. As such, this power plant's reported emissions are likely significantly over-estimated emissions.

Emissions Monitoring

Overview

The reproducibility of reported RECLAIM facility emissions (and the underlying calculations)—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 Emissions Monitoring System (CEMS)	Fuel Meter or Continuous Process Monitoring System (CPMS)	Fuel Meter, Timer, or CPMS
Reporting Frequency	Daily	Monthly	Quarterly

Continuous Emissions 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.

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 SCAQMD to be equivalent to CEMS in relative accuracy, reliability, reproducibility, and timeliness

Even though the number of major sources monitored by either CEMS or Alternative Continuous Emissions Monitoring Systems (ACEMS) represent 19% and 60% of all permitted RECLAIM NOx and SOx sources, respectively, reported emissions for Compliance Year 2013 revealed that 79% of all RECLAIM NOx emissions and 97% of all RECLAIM SOx emissions were determined by CEMS or ACEMS.

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 SCAQMD's 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: The relative accuracy of the CEMS results relative to the reference method results must be within ±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 2013 and 2014 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 2013

Concentration						Stack Flow Rate				Mass Emissions			
NOx		SO_2		Total[1] Sulfur		In-Stack Monitor		F-Factor Based Calc.		NOx		SOx[2]	
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] Includes Cylinder Gas Audit (CGA) tests.

[2] Does not include SOx emissions calculated from total sulfur analyzers.

Table 5-4
Passing Rates Based on RATAs of Certified CEMS in 2014[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
351	100	83	100	13	100	47	100	390	100	351	100	46	100

[1] All passing rates calculated from data submitted before January 16, 2015 and may exclude some data from the fourth quarter of calendar year 2014.

[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 2013 and 2014 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 (approximately two percent of calendar year 2013 and approximately two percent of calendar year 2014 RATA results were submitted in paper form rather than electronically).

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 uses 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 SCAQMD's 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 on a daily basis without human intervention.
- 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 SCAQMD's 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 SCAQMD's 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.

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 upgrade or replace the current Central Station. SCAQMD will initiate a Working Group of all interested and pertinent parties in 2015 to start discussions on alternatives to electronic reporting via modem. Key factors that need to be considered include ease of implementation and cost impacts on RECLAIM facilities and SCAQMD. Any proposed alternative must be broadly applicable, be capable to support automatic daily transmission of reports without any human intervention, and allow adequate time for testing and implementation. 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. Additional benefits to the local economy (*e.g.*, generating jobs for consulting firms, source testing firms and CEMS vendors) attributable to the RECLAIM program, as well as factors outside of RECLAIM (*e.g.*, the prevailing economic climate), impact the job market. However, these factors are not evaluated in this report. Also, job losses and job gains are strictly based on RECLAIM facilities' reported information. SCAQMD staff is not able to independently verify the accuracy of the reported job impact information.*

According to the Compliance Year 2013 employment survey data gathered from APEP reports, RECLAIM facilities reported a net gain of 4,180 jobs, representing 4.01% of their total employment. Two facilities reported a gain of one job each due to RECLAIM while one facility reported a loss of four jobs due to RECLAIM. None of the four RECLAIM facilities that shut down during Compliance Year 2013 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 the number of jobs at the beginning of Compliance Year 2013 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 2013 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 2013. 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 2013 and clarifying information collected by SCAQMD staff. SCAQMD staff is not able to verify the accuracy of the reported job impact information.

Job Impacts

Table 6-1 summarizes job impact data gathered from Compliance Year 2013 APEP reports and follow-up contacts with facilities. A total of 121 facilities reported 12,003 job gains, while 141 facilities reported a total of 7,823 job losses. Net job gains were reported in two of the three categories: sales of products (39), and non-manufacturing (5,509), whereas net job losses were reported in the remaining category: manufacturing (1,368). Table 6-1 shows a total net gain of 4,180 jobs, which represents a net jobs increase of 4.01% at RECLAIM facilities during Compliance Year 2013.

Table 6-1
Job Impacts at RECLAIM Facilities for Compliance Year 2013

Description	Manufacture	Sales of Products	Non-Manufacture	Total[1]
Initial Jobs	37,737	930	65,650	104,317
Overall Job Gain	1,834	185	9,984	12,003
Overall Job Loss	3,202	146	4,475	7,823
Final Jobs	36,369	969	71,159	108,497
Net Job Change	-1,368	39	5,509	4,180
Percent (%) Job Change	-3.63%	4.19%	8.39%	4.01%
Facilities Reporting Job Gains	83	26	69	121
Facilities Reporting Job Losses	102	35	90	141

[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 four RECLAIM facilities that were reported to be shut down or ceasing operations in Compliance Year 2013 as listed in Appendix C. One of the shut down facilities had all equipment removed from the site and the property was sold for development as a warehouse/distribution center. The second facility shut down because of declining demand for its products, while the third facility was shut down because the cost of manufacturing, production, or raw materials was too high. Lastly, the fourth facility was shut down because it had filed for bankruptcy. These shutdowns led to a loss of 9 manufacturing jobs and 130 non-manufacturing jobs. However, none of these losses was attributed to RECLAIM in Compliance Year 2013 (refer to Appendix E).

Of the RECLAIM facilities in operation, only three attributed job gains or losses to RECLAIM for Compliance Year 2013. One facility reported a loss of four jobs due to increasing costs of RECLAIM. Two facilities reported a gain of one job each: One hired a CEMS technician, while the other hired a person to help with the MRR requirements of the RECLAIM Program.

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 for these facilities. 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 2013 NOx emissions decreased 4.8% relative to Compliance Year 2012 and Compliance Year 2013 SOx emissions were 19.0% less than the previous year. Quarterly calendar year 2013 NOx emissions fluctuated within 18 percent of the mean NOx emissions for the year. Quarterly calendar year 2013 SOx emissions fluctuated within 16 percent of the year's mean SOx emissions. There was no significant shift in seasonal emissions from the winter season to the summer season for either pollutant.

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 2014, 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 and/or Rule 1401.1). 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 emissions reports are used to identify candidates for the Toxics Hot Spots program (AB2588). This program requires emission inventories and depending on the type and amount of emissions, facilities may be required to do public notice and/or prepare and implement a plan to reduce emissions. There is no evidence that RECLAIM has caused or allowed higher toxic risk in areas adjacent to RECLAIM facilities.

Background

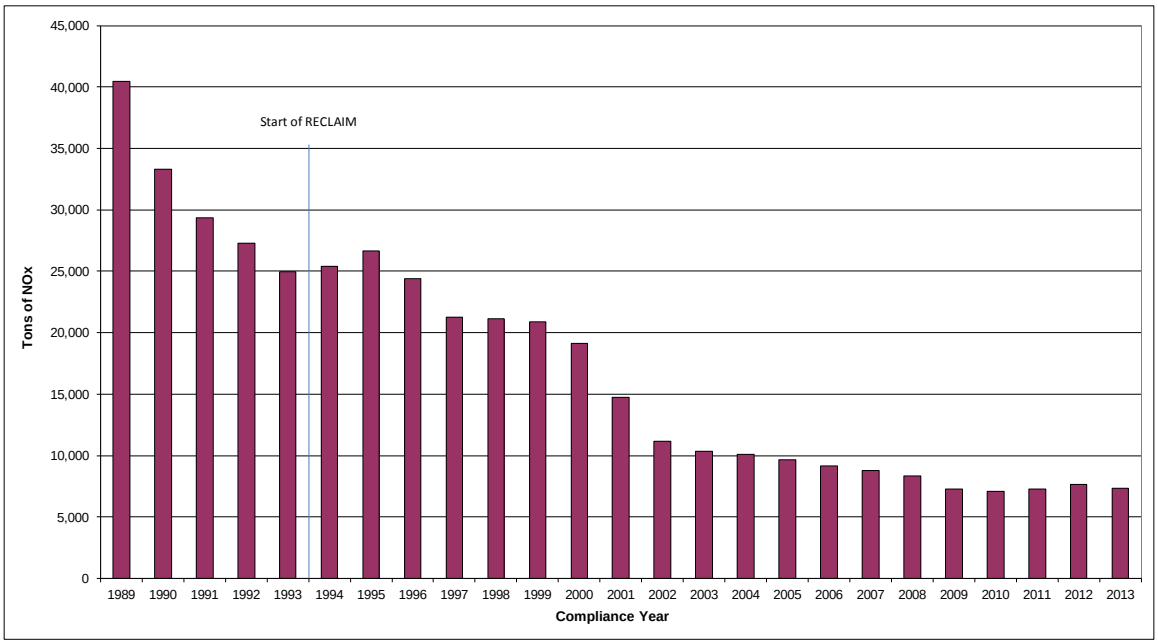
RECLAIM is designed to achieve the same, or higher level of, air quality and public health benefits as would have been achieved from implementation of the control measures and command-and-control rules that RECLAIM subsumed. Therefore, as a part of each annual program audit, SCAQMD staff evaluates per capita exposure to air pollution, toxic risk reductions, emission trends, and seasonal fluctuations in emissions. SCAQMD staff also generates quarterly emissions maps depicting the geographic distribution of RECLAIM emissions. These maps are generated and posted quarterly on SCAQMD's webpage (http://www.aqmd.gov/home/programs/business/about-reclaim/quarterly-emission-maps), 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

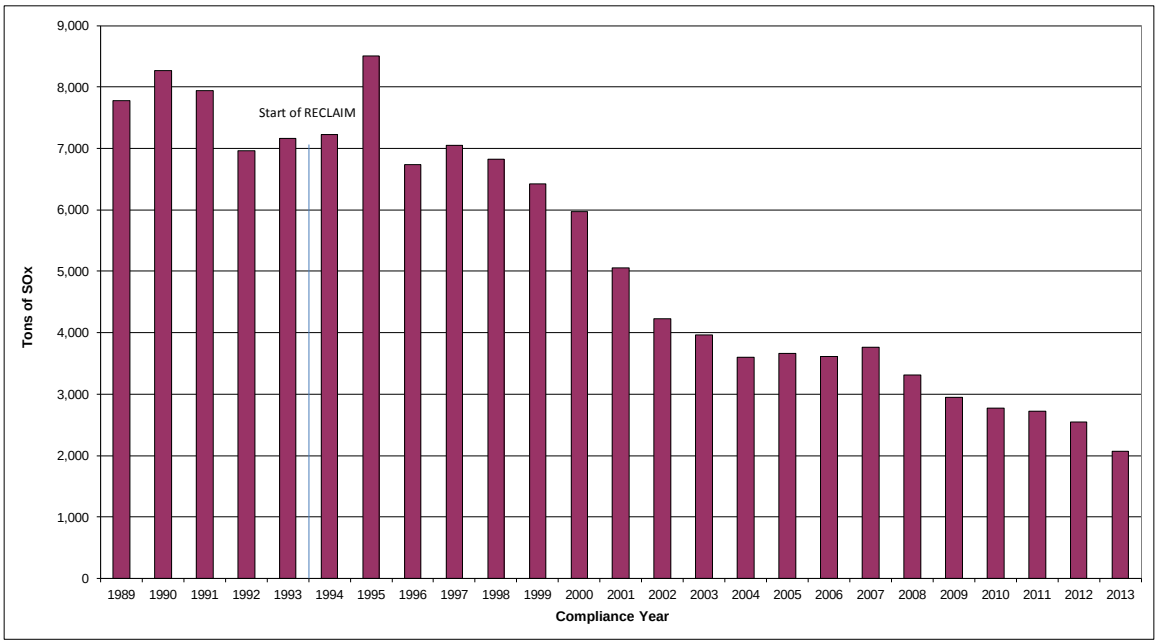
Concerns were expressed during program development that RECLAIM might cause sources to increase their aggregate emissions during the early years of the program due to perceived over-allocation of emissions. As depicted in Figures 7-1 and 7-2, which show NOx and SOx emissions from RECLAIM sources since 1989, the analysis of emissions from RECLAIM sources indicates that overall, RECLAIM emissions have been in a downward trend since program inception and the emission increases during early years of RECLAIM that were anticipated by some 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 and 2012, NOx emissions increased slightly but were still much lower than the programmatic goal as shown in Table 3-2 and Figure 3-1. NOx emissions in Compliance Year 2013 decreased when compared to Compliance Year 2012 and returned to levels comparable to Compliance Years 2009 and 2011. 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 2013.

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 early years of the program.

Seasonal Fluctuation in Emissions for RECLAIM Sources

Another concern during program development was that RECLAIM might cause facilities to shift emissions from the winter season into the summer ozone season and exacerbate poor summer air quality since RECLAIM emission goals are structured on an annual basis. To address this concern, "seasonal fluctuations" were added as part of the analysis required by Rule 2015. 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 2013 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 2013 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 through 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 for the reasons described above. 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.

Figure 7-3 shows the 2013 mean quarterly NOx emission level, which is the average of the four quarterly aggregate emissions, and the 2013 audited quarterly emissions. It shows that first quarter NOx emissions were 10 percent below the mean quarterly NOx emission level and second quarter NOx emissions were 18 percent above the mean quarterly NOx emission level. This shows that

[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 did not peak in summer quarterly emissions in 2013. However, as shown in Figure 7-4, calendar year quarterly emission profile is not consistent with the corresponding profiles for prior years and, therefore, warrants further analysis.

Figure 7-3
Calendar Year 2013 NOx Quarterly Emissions

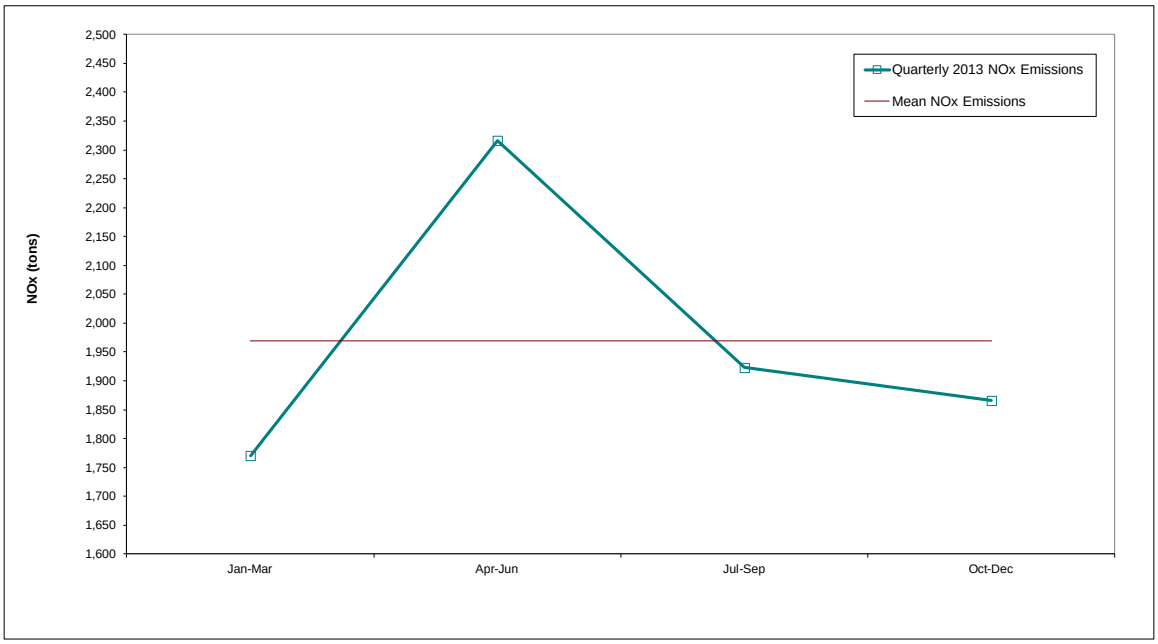
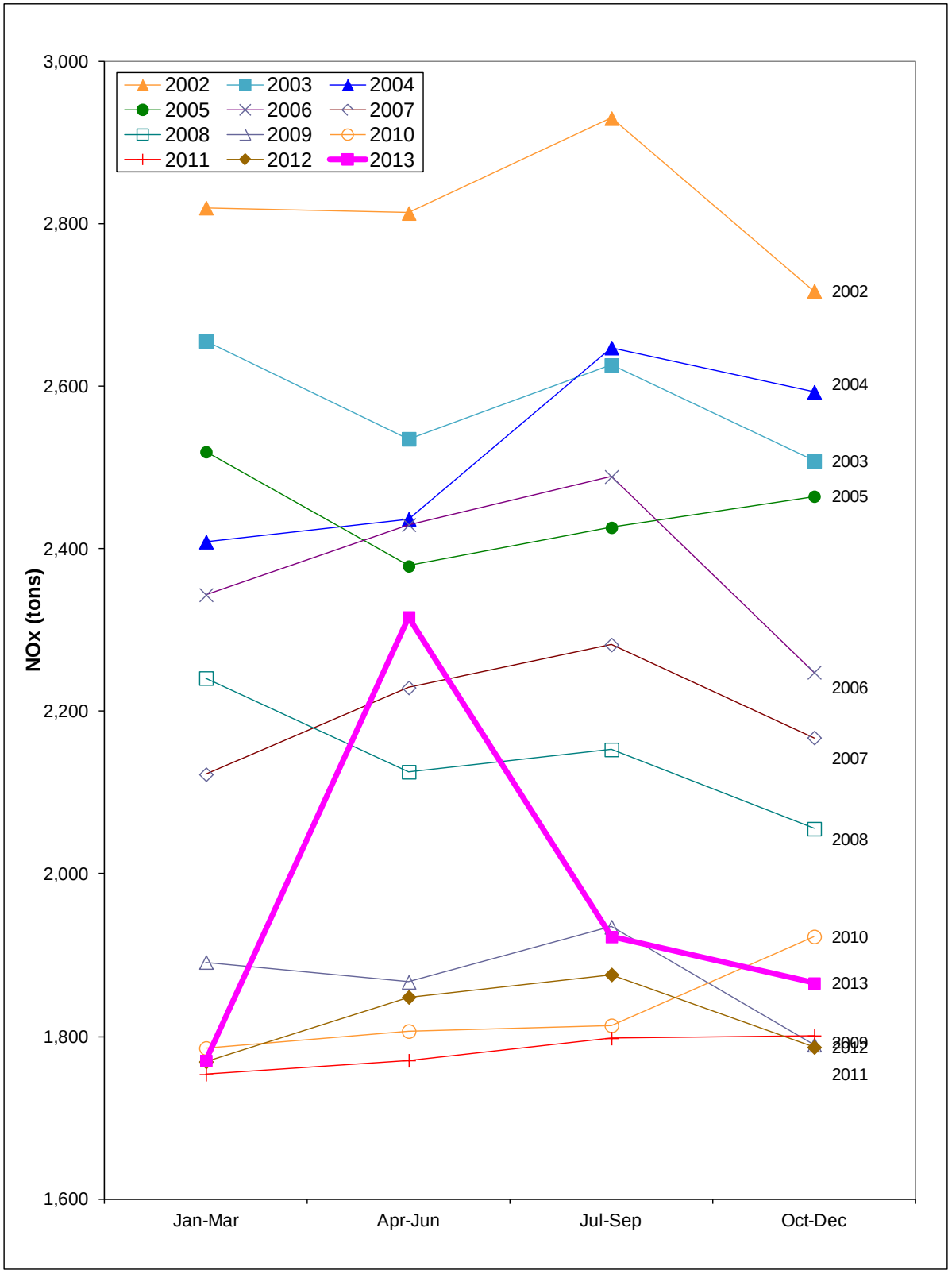


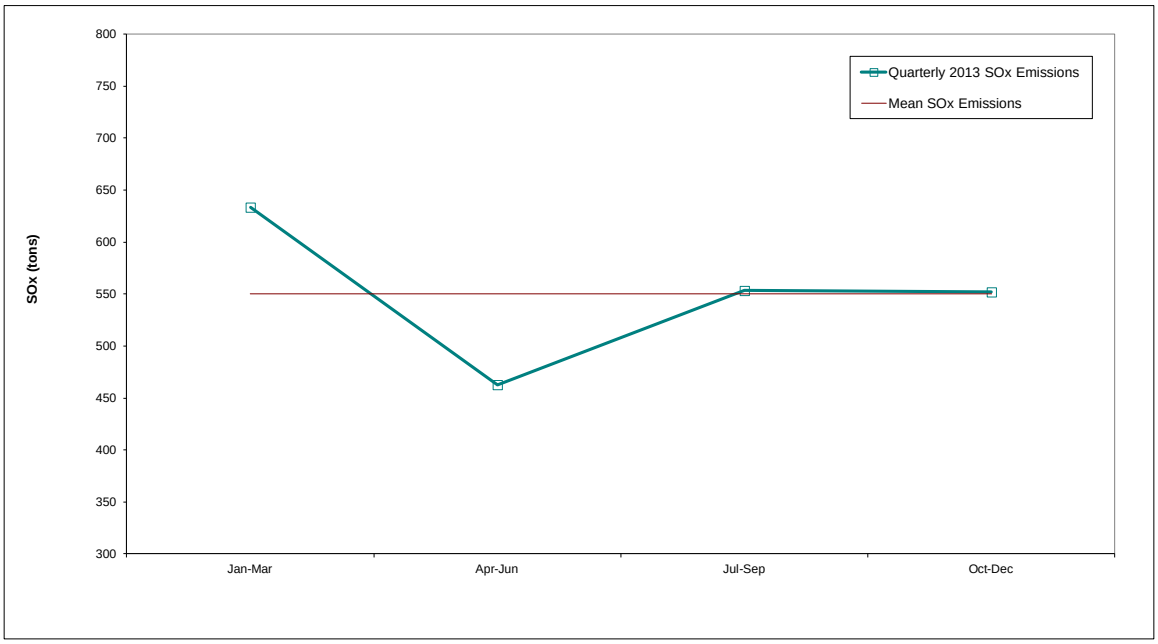
Figure 7-4 compares the 2013 quarterly NOx emissions with the quarterly emissions from 2002 through 2012. Figures 7-3 and 7-4 both point to an relatively high emission level in the second quarter. Further investigation reveals that the increase in NOx emissions in the second quarter can be attributed to two facilities reporting their emissions using MDP. One facility failed to conduct a RATA by the required due date, resulting in the application of MPD for more than two months until the test was conducted and passed. The second facility is a refinery that applied MDP for an extended period because a CEMS component failed and locating a replacement was difficult. In both cases, the durations of the missing data periods required the application of more conservative tiers of MDP. As such, the resulting reported emissions based on MDP were significantly elevated relative to these facilities' typical emissions. Thus, the peak in RECLAIM NOx emissions during the second quarter of calendar year 2013 illustrated in Figures 7-3 and 7-4 is reflective of the application of conservative MDP rather than an actual shift in emissions. Furthermore, this peak is not during summer months. As such, the calendar year 2013 NOx emissions data do not suggest a shift in emissions to the summer ozone season.

Figure 7-4
Quarterly NOx Emissions from Calendar Years 2002 through 2013



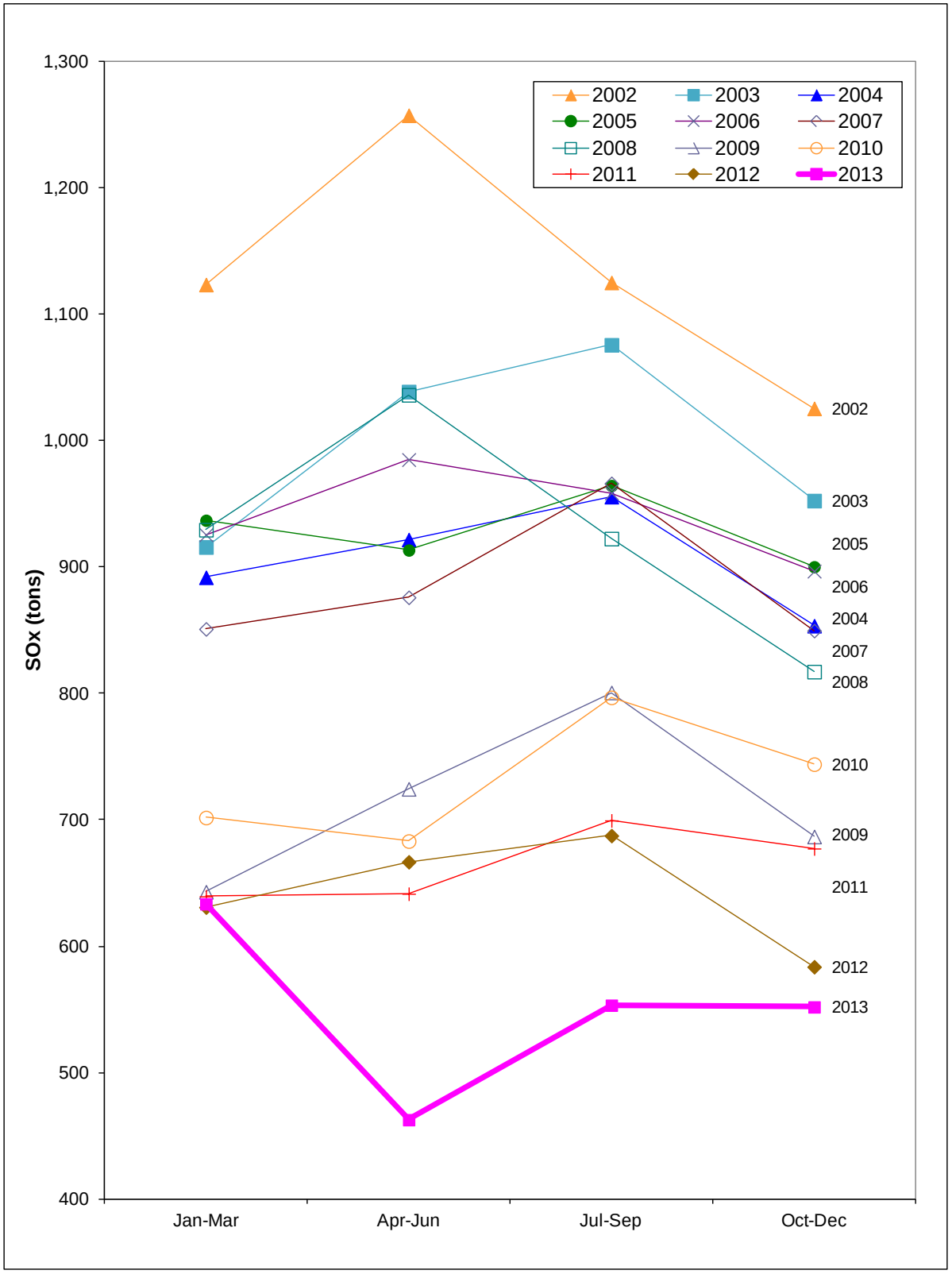
Similar to Figure 7-3 and 7-4 for NOx quarterly emissions, Figure 7-5 presents the 2013 mean quarterly SOx emissions and the 2013 audited quarterly emissions, and Figure 7-6 compares the 2013 quarterly SOx emissions with the quarterly emissions from 2002 through 2012. Figure 7-5 shows that quarterly SOx emissions during calendar year 2013 varied from fifteen percent above the mean in the first quarter (January through March) to sixteen percent below the mean in the second quarter (April through June) while quarterly SOx emissions during the third and fourth quarters (July through December) were both very close to the mean. Again this demonstrates that emissions did not peak in the summer ozone season in 2013. However, as shown in Figure 7-6, the quarterly emission profile is not consistent with prior years and also warrants further analysis.

Figure 7-5
Calendar Year 2013 SOx Quarterly Emissions



Both Figures 7-5 and 7-6 point to an elevated emission level in the first quarter, and Figure 7-5 shows second quarter emissions well below the mean. Further investigation reveals that the increase in SOx emissions in the first quarter is the result of higher than normal SOx emissions at a refinery while it came out of a turnaround during the quarter. As with the second-quarter peak in aggregate NOx emissions, the first quarter SOx peak did not occur during the summer season. Furthermore, it is not the result of a temporal shift in production. The low second quarter aggregate SOx emissions are attributable to a calciner turnaround. Specifically, the calciner did not operate—and therefore did not emit—for a couple of months during the quarter. This analysis shows that the quarterly SOx emissions data is not suggestive of a seasonal shift in production enabled by the RECLAIM market.

Figure 7-6
Quarterly SOx Emissions from Calendar Years 2002 through 2013



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 2014 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 1-hour state and 8-hour federal ambient ozone standards in calendar year 2014 were the lowest since calendar year 2001. However, the number of days that exceeded the 8-hour state standard increased by 11 days when compared to Calendar Year 2013, which was the lowest since 2001. The Basin's maximum ozone concentrations were at or very close to the lowest levels since 2001, based on both the 1-hour and 8-hour averaging periods.

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
2014	76	134	93	0.142	0.114

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. For calendar year 2014, the actual per capita exposure for the Basin was 1.8 hours, which represents a 98% 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
2014 actual	1.837	1.263	0.293	1.472	6.022
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 wholly 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 as are 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 SCAQMD. Beginning with the FY 2000-01 reporting cycle, toxics emission reporting for the AB2588 Program was incorporated into 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/home/regulations/compliance/toxic-hot-spots-ab-2588) 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 June 2014, SCAQMD staff has reviewed and approved 311 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 to issue public notices informing the community. A public meeting is held at which SCAQMD discusses their health risk. To date, SCAQMD has conducted 50 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 SCAQMD's 2013 Annual Report on AB 2588 Air Toxics "Hot Spots" program[3], 22 facilities were required to

[3] Data and descriptions about the AB2588 Program were taken from SCAQMD's June 2014 Annual Report on AB 2588 Air Toxics "Hot Spots" Program. http://www.aqmd.gov/docs/default-source/planning/risk-assessment/annual_report_2013.pdf

reduce risks and all of these facilities have reduced risks well below the action risk levels mandated by Rule 1402.

Finally, 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 fourth version of MATES (*i.e.*, MATES IV) was conducted over a one year period from July 2012 to June 2013. Monitoring conducted at that time indicated that the basin-wide population-weighted air toxics exposure was reduced by 57 percent since MATES III (conducted from April 2004 to March 2006). The Draft Report for MATES IV was released for the 90-day public review period on October 3, 2014.

There have been concerns voiced raised 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. Other SCAQMD rules and programs for toxic air contaminants apply to facilities regardless of them being in RECLAIM or under traditional command and control rules. Emission increases at permit units are subject to new source review. RECLAIM facilities must also comply with any applicable Regulation XIV rule for toxics. Permits generally include limiting throughput conditions for new source review or applicable source specific rules. AB2588 and/or Rule 1402 could also be triggered and the appropriate risk reduction measures would be required for any facility with emissions of toxic air contaminants that would trigger these requirements.

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.

APPENDIX A
RECLAIM UNIVERSE OF SOURCES

The RECLAIM universe of active sources as of the end of Compliance Year 2013 is provided below.

Facility ID	Cycle	Facility Name	Program
800088	2	3M COMPANY	NOx
23752	2	AEROCRAFT HEAT TREATING CO INC	NOx
175124	1	AEROJET ROCKETDYNE OF DE, INC.	NOX
115394	1	AES ALAMITOS, LLC	NOx
115389	2	AES HUNTINGTON BEACH, LLC	NOx/SOx
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 LLC., (LA BREWERY)	NOx/SOx
117140	2	AOC, LLC	NOx
124619	1	ARDAGH METAL PACKAGING USA INC.	NOx
167066	1	ARLON GRAPHICS L.L.C.	NOx
174406	1	ARLON GRAPHICS LLC	NOx
12155	1	ARMSTRONG WORLD INDUSTRIES INC	NOx
122666	2	A'S MATCH DYEING & FINISHING	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

Facility ID	Cycle	Facility Name	Program
166073	1	BETA OFFSHORE	NOx
155474	2	BICENT (CALIFORNIA) MALBURG LLC	Nox
132068	1	BIMBO BAKERIES USA INC	NOx
1073	1	BORAL ROOFING LLC	NOx
174544	2	BREITBURN OPERATING 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
14944	1	CENTRAL WIRE, INC.	NOx/SOx
42676	2	CES PLACERITA INC	NOx
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
38440	2	COOPER & BRAIN - BREA	NOx
68042	2	CORONA ENERGY PARTNERS, LTD	NOx
152707	1	CPV SENTINEL LLC	NOx

Facility ID	Cycle	Facility Name	Program
50098	1	D&D DISPOSAL INC,WEST COAST RENDERING CO	NOx
63180	1	DARLING INTERNATIONAL INC	NOx
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
175154	2	FREEPORT-MCMORAN OIL & GAS	NOx
175191	1	FREEPORT-MCMORAN OIL & GAS	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
153033	2	GEORGIA-PACIFIC CORRUGATED LLC	NOx
176934	1	GI TC IMPERIAL HIGHWAY, LLC	NOx
124723	1	GREKA OIL & GAS, INC	NOx
137471	2	GRIFOLS BIOLOGICALS INC	NOx
156741	2	HARBOR COGENERATION CO, LLC	NOx

Facility ID	Cycle	Facility Name	Program
157359	1	HENKEL ELECTRONIC MATERIALS, LLC	NOx
123774	1	HERAEUS PRECIOUS METALS NO. AMERICA, LLC	NOx
113160	2	HILTON COSTA MESA	NOx
800066	1	HITCO CARBON COMPOSITES INC	NOx
2912	2	HOLLIDAY ROCK CO INC	NOx
800003	2	HONEYWELL INTERNATIONAL 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
90957	2	J PACIFIC INC, DELTA DYEING & FINISHING	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
36909	2	LA CITY, DEPARTMENT OF AIRPORTS	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 OPERATING INC	NOx
151532	2	LINN OPERATING, INC	NOx
152054	1	LINN WESTERN OPERATING INC	NOx
151415	2	LINN WESTERN OPERATING, INC	NOx
115314	2	LONG BEACH GENERATION, 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

Facility ID	Cycle	Facility Name	Program
14049	2	MARUCHAN INC	NOx
3029	2	MATCHMASTER DYEING & FINISHING INC	NOx
2825	1	MCP FOODS INC	NOx
173290	1	MEDICLEAN	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
115563	1	NCI GROUP INC., DBA, METAL COATERS OF CA	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
115315	1	NRG CALIFORNIA SOUTH LP, ETIWANDA GEN ST	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 COMPANY/LOS ANGELES REFINERY	NOx/SOx
137520	1	PLAINS WEST COAST TERMINALS LLC	NOx
800416	1	PLAINS WEST COAST TERMINALS LLC	NOx

Facility ID	Cycle	Facility Name	Program
800417	2	PLAINS WEST COAST TERMINALS LLC	NOx
800419	2	PLAINS WEST COAST TERMINALS LLC	NOx
800420	2	PLAINS WEST COAST TERMINALS LLC	NOx
176708	2	POMONA POWER GENERATION LLC	NOx
11435	2	PQ CORPORATION	NOx/SOx
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
20203	2	RECYCLE TO CONSERVE INC.	NOx
15544	2	REICHHOLD INC	NOx
52517	1	REXAM BEVERAGE CAN COMPANY	NOx
61722	2	RICOH ELECTRONICS INC	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
14926	1	SEMPRA ENERGY (THE GAS CO)	NOx
800129	1	SFPP, L.P.	NOx
37603	1	SGL TECHNIC INC, POLYCARBON DIVISION	NOx
131850	2	SHAW DIVERSIFIED SERVICES INC	NOx

Facility ID	Cycle	Facility Name	Program
117227	2	SHCI SM BCH HOTEL LLC, LOEWS SM BCH HOTE	NOx
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
114801	1	SOLVAY USA, INC.	NOx/SOx
14871	2	SONOCO PRODUCTS CO	NOx
160437	1	SOUTHERN CALIFORNIA EDISON	NOx
800338	2	SPECIALTY PAPER MILLS INC	NOx
1634	2	STEELCASE INC, WESTERN DIV	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/SOx
174591	1	TESORO REF & MKTG CO LLC,CALCINER	NOX/SOx
174655	2	TESORO REFINING & MARKETING CO, LLC	NOX/SOx
151798	1	TESORO REFINING AND MARKETING CO, LLC	NOx/SOx
800436	1	TESORO REFINING AND MARKETING CO, LLC	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
115241	1	THE BOEING COMPANY	NOx
800067	1	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

Facility ID	Cycle	Facility Name	Program
62548	2	THE NEWARK GROUP, INC.	NOx
97081	1	THE TERMO COMPANY	NOx
800330	1	THUMS LONG BEACH	NOx
129497	1	THUMS LONG BEACH CO	NOx
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
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
800393	1	VALERO WILMINGTON ASPHALT PLANT	NOx
9053	1	VEOLIA ENERGY LOS ANGELES, INC	NOx
11034	2	VEOLIA ENERGY LOS ANGELES, INC	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, LLC	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

APPENDIX B
FACILITY INCLUSIONS

As discussed in Chapter 1, six facilities were added to the RECLAIM universe in Compliance Year 2013. The included facilities are identified, and the reasons for inclusion are also provided.

Facility ID	Cycle	Facility Name	Market	Date	Reason
1634	2	STEELCASE INC, WESTERN DIV	NOx	7/1/2013	Reactivation of a previously shut down facility
36909	2	LA CITY, DEPARTMENT OF AIRPORTS	NOx	7/1/2013	Reported emissions from permitted sources exceeded four tons of NOx in a year
90957	2	J PACIFIC INC, DELTA DYEING & FINISHING	NOx	9/10/2013	Reported emissions from permitted sources exceeded four tons of NOx in a year
122666	2	A'S MATCH DYEING & FINISHING	NOx	9/10/2013	Reported emissions from permitted sources exceeded four tons of NOx in a year
174406	1	ARLON GRAPHICS LLC	NOx	9/11/2013	Partial relocation of an existing facility
800129	1	SFPP	NOx	4/1/2013	Opt-in at facility's request

One facility was added to the SOx market, but this inclusion did not affect the number of facilities in the entire RECLAIM universe because it formerly participated in the NOx-only market. The data presented below is associated with the entry of this facility into the SOx market.

Facility ID	Cycle	Facility Name	Market	Date	Reason
18391	2	TAMCO	NOx/SOx	12/4/2013	Reported emissions from permitted sources exceeded four tons of SOx in a year

APPENDIX C
RECLAIM FACILITIES CEASING OPERATION OR EXCLUDED

SCAQMD staff is aware of the following RECLAIM facilities that permanently shut down all operations, inactivated all their RECLAIM permits, or were excluded from the RECLAIM universe during Compliance Year 2013. 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	16737
Facility Name	Atkinson Brick Co
City and County	Huntington Beach, Orange County
SIC	3259
Pollutant(s)	NOx
1994 Allocation	25,870
Reason for Shutdown	All equipment removed from site and property sold for development as a warehouse/distribution center.

Facility ID	152857
Facility Name	Georgia-Pacific Gypsum LLC
City and County	Long Beach, Los Angeles County
SIC	3275
Pollutant(s)	NOx
1994 Allocation	95,914
Reason for Shutdown	Declining demand for products.

Facility ID	158950
Facility Name	Windsor Quality Food Co. Ltd
City and County	Riverside, Riverside County
SIC	5142
Pollutant(s)	NOx
1994 Allocation	8,066
Reason for Shutdown	High cost of manufacturing, production, or raw material.

Facility ID	800210
Facility Name	Conexant Systems Inc
City and County	Newport Beach, Orange County
SIC	3674
Pollutant(s)	NOx
1994 Allocation	12,496
Reason for Shutdown	The facility claimed that it had been consolidated to another ID within SCAQMD. However, the facility had closed down and filed for bankruptcy, and its permits had expired; the facility that took over the property did not obtain any permits through the change of operator process.

APPENDIX D
FACILITIES THAT EXCEEDED THEIR ANNUAL ALLOCATION FOR COMPLIANCE YEAR 2013

The following is a list of facilities that did not have enough RTCs to cover their NOx and/or SOx emissions in Compliance Year 2013 based on the results of audits conducted by SCAQMD staff.

Facility ID	Facility Name	Compliance Year	Emittant
1073	BORAL ROOFING LLC	2013	NOx
18931	TAMCO	2013	NOx
19390	SULLY-MILLER CONTRACTING CO.	2013	NOx
122666	A'S MATCH DYEING & FINISHING	2013	NOx
133996	PLAINS EXPLORATION & PRODUCTION CO	2013	NOx
145836	AMERICAN APPAREL DYEING & FINISHING, INC	2013	NOx
153199	THE KROGER CO/RALPHS GROCERY CO	2013	NOx
800182	RIVERSIDE CEMENT CO	2013	NOx & SOx
800373	LAKELAND DEVELOPMENT CO	2013	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 2013, three facilities reported actual job gains or losses attributable to RECLAIM.

Facilities with reported job gains or losses attributed to RECLAIM:

Facility ID	115536
Facility Name	AES Redondo Beach, LLC
City and County	Redondo Beach, Los Angeles County
SIC	4911
Pollutant(s)	NOx
Cycle	1
Job Gain	1
Job Loss	0
Comments	The facility hired an additional Continuous Emissions and Monitoring Systems (CEMS) technician to ensure proper operation of the CEMS at the site.
Facility ID	141295
Facility Name	Lekos Dye and Finishing, Inc
City and County	Compton, Los Angeles County
SIC	2269
Pollutant(s)	NOx
Cycle	2
Job Gain	0
Job Loss	4
Comments	The facility stated that the cost of RECLAIM was too large to bear and that expense cutting such as employee reduction had to be made.
Facility ID	800074
Facility Name	LA City, DWP Haynes Generating Station
City and County	Long Beach, Los Angeles County
SIC	4911
Pollutant(s)	NOx
Cycle	1
Job Gain	1
Job Loss	0
Comments	The facility hired an additional person in order to comply with the RECLAIM Monitoring, Reporting and Recordkeeping (MRR) requirements for new equipment that it began operating in the 2013 Compliance Year.