RECLAIM TRANSITION PLAN

Version 1.0

South Coast AQMD

March 2018

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List of Acronyms

APEP	Annual Permit Emissions Program
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BARCT	Best Available Retrofit Control Technology
BTU	British Thermal Unit
CARB	California Air Resources Board
CEMS	Continuous Emissions Monitoring System(s)
EGF	Electricity Generating Facility
ERC	Emission Reduction Credit
MM	Million
MRR	Monitoring, Reporting, and Recordkeeping
NOx	Oxides of Nitrogen
NSR	New Source Review
RECLAIM	REgional CLean Air Incentives Market
RTC	RECLAIM Trading Credit
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SOx	Oxides of Sulfur
USEPA	United Stated Environmental Protection Agency

Preface

The South Coast Air Quality Management District (SCAQMD) Governing Board adopted the REgional CLean Air Incentives Market (RECLAIM) program on October 15, 1993. When RECLAIM was adopted, a total of 394 facilities were identified as the initial "universe" of sources. The RECLAIM program represented a significant departure from traditional command-and-control regulations. The RECLAIM program is a market-based program where each facility received RECLAIM Trading Credits (RTCs) that were equivalent to their initial allocation of emissions. Under RECLAIM, each facility's allocation decreases over time, and amendments to the RECLAIM program further reduced each facility's allocation. Facilities in the RECLAIM program are required to meet a mass emissions target and demonstrate that their mass emissions are less than or equal to the amount of RTC holdings. Facilities in the RECLAIM program had the flexibility to meet their emission target through purchasing RTCs or implementing emission reduction projects such as installation of pollution controls, process changes, or equipment replacement.

When the RECLAIM program was adopted, it was thought that facilities that could make cost-effective emission reductions, would install air pollution controls, and sell their RTCs to facilities where installation of pollution controls were not as cost-effective. Over time, however, some large RECLAIM facilities shutdown, providing a windfall of RTCs in the market allowing some facilities to delay installation of Best Available Retrofit Control Technology (BARCT). Based on SCAQMD's permit database, well over half of the equipment at RECLAIM facilities is currently not at BARCT. Much of this equipment resides at some of the largest NOx emitting facilities in the Basin.

In response to the growing concern that a number of pieces of equipment in RECLAIM are not at BARCT, the December 2015 amendment was adopted to achieve programmatic NOx RECLAIM Trading Credit (RTC) reductions of 12 tons per day from compliance years 2016 through 2022 and the October 2016 amendment addressed RTCs from facility shutdowns. In addition, the 2016 Air Quality Management Plan (AQMP) included a control measure, CMB-05, to achieve an additional five tons per day of NOx emissions as soon as practicable, but no later than 2025 and to transition RECLAIM to a command-and-control regulatory structure. Recent legislation, AB617, accelerated SCAQMD efforts by requiring that air districts establish BARCT schedules no later than January 1, 2019, and implement BARCT no later than December 31, 2023 for facilities in the state greenhouse gas cap and trade program.

The transition of facilities in RECLAIM to a command-and-control regulatory structure is a complex process with a number of policy issues that need to be addressed. This RECLAIM Transition Plan provides an overview of key policy issues and how such issues could be addressed under the program. This Transition Plan represents the SCAQMD staff's current thinking about the overall transition and as the working group process with stakeholders progresses, it is expected that there will be revisions and additional policy issues will be identified. The Transition Plan is intended to be a living document and will be updated throughout the transition process. The second release of the Transition Plan will update information in this version and incorporate new policy issues.

Introduction

The purpose of the RECLAIM Transition Plan is to summarize the transition process of the NOx RECLAIM program to a command-and-control regulatory structure. Transitioning RECLAIM facilities to command-and-control will require substantial rulemaking efforts to ensure that as facilities exit RECLAIM, there are corresponding command-and-control rules for their equipment. The overall goal is to transition facilities out of RECLAIM by the end of 2019 so owners and operators can begin emission reduction projects. This document provides guiding principles that will be used as staff addresses a variety of policy issues. This is the first draft of the RECLAIM Transition Plan, and it is expected that this document will be updated throughout the transition process.

Background

The South Coast Air Quality Management District (SCAQMD) Governing Board (Board) adopted the 2016 AQMP on March 3, 2017, which includes control measure CMB-05 (Further NOx Reductions from RECLAIM Assessment). The adopting Resolution directed staff to modify control measure CMB-05 to achieve the five tons per day NOx emission reduction as soon as practicable, but no later than 2025, in addition to transitioning the program to a command-and-control regulatory structure requiring Best Available Retrofit Control Technology (BARCT) as soon as practicable. In addition, staff was asked to return in 60 days to the Board to report on feasible target dates for sunsetting the RECLAIM program. The five tons per day NOx emission reduction is in addition to the 12 tons per day RECLAIM programmatic RTC reduction approved by the Board in 2015.

Report to Board Regarding Sunsetting the RECLAIM Program

At the May 5, 2017 Board meeting, staff provided an overview of the challenges for transitioning RECLAIM to a command-and-control regulatory structure, highlighting the complexity of the program, which currently consists of 268 facilities that include over 2,500 individual pieces of equipment. Adding to the challenge are the many issues that need to be addressed through the transition process, such as New Source Review (NSR), permitting, rule development, monitoring, reporting, and recordkeeping, BARCT determinations, environmental and economic impact assessments, as well as a variety of other policy decisions. Staff provided a general overview of the transition approach, which included potential early, mid-term, and longer-term recommendations and action items. Staff committed to developing a RECLAIM Transition Plan and commencing efforts to initiate the rulemaking process with the first phase of rules targeted for completion in 2018. Lastly, the Board directed staff to report quarterly to the Stationary Source committee on the progress and recommendations.

AB-617

California State Assembly Bill 617, which addresses non-vehicular air pollution (criteria pollutants and toxic air contaminants), was signed by the Governor on July 26, 2017. It is companion legislation to Assembly Bill 398, which was also approved, and extends California's cap-and-trade program for reducing greenhouse gas emissions. RECLAIM facilities that are in the state greenhouse gas cap and trade program are subject to the requirements of AB-617. Among the requirements of this bill is an expedited schedule for implementing BARCT at those facilities. Air

Districts are to develop, by January 1, 2019, an expedited schedule for the implementation of BARCT no later than December 31, 2023. The highest priority is to be given to older, higher polluting units that will need to install retrofit controls. A list of cap and trade facilities that are also in RECLAIM can be found in Appendix B.

Public Process

Throughout the transition process, staff will be collaborating with all stakeholders. There are a number of Working Group Meetings as well as individual meetings that the staff will use to discuss key policy issues and collaborate with all stakeholders. Working Group Meetings are open to the public and provide an opportunity for stakeholders to participate in the transition process. Presentation materials for Working Group Meetings are available on the SCAQMD's website at: http://www.aqmd.gov/home/rules-compliance/rules/proposed-rules. The following provides a summary of the various Working Group Meetings for the RECLAIM transition.

RECLAIM Working Group Meetings

Throughout the transition process, staff has conducted and continues to conduct monthly meetings with the RECLAIM Working Group. The RECLAIM Working Group Meetings are held on the second Thursday of the month at 10 a.m. at the SCAQMD Headquarters in Diamond Bar. The RECLAIM Working Group consists of a wide variety of stakeholders which includes facility representatives, consultants, industry organizations, other agencies, and environmental and community groups. The RECLAIM Working Group meetings cover topics that are generally applicable to all RECLAIM facilities and to the overall transition process. Amendments to rules under Regulation XX – RECLAIM are also discussed in the RECLAIM Working Group meetings. In addition, staff will provide a summary of rule-specific Working Group Meetings at the RECLAIM Working Group to keep all stakeholders informed on the various rule development efforts.

Rule-Specific Working Group Meetings

In addition, to the RECLAIM Working Group, the staff is also conducting rule-specific Working Group Meetings for Rule 1135 (electricity generating facilities), Rule 1110.2 (internal combustion engines), etc. The rule-specific Working Group Meetings will focus on establishing BARCT emission limits, timing for implementation of BARCT, and monitoring, recordkeeping, and reporting requirements (MRR). In addition to RECLAIM facilities, the rule-specific Working Group Meetings may also include non-RECLAIM facilities as amendments may affect both RECLAIM and non-RECLAIM facilities. Rule-specific Working Group Meetings are focused on the proposed rule or its amendments and are generally held every four to six weeks.

Sub-Topic Working Group Meetings

Through the transition process, staff is anticipating conducting Sub-Topic Working Group Meetings. Sub-topic Working Group Meetings include certain topics that are critical to the transition of RECLAIM facilities, but may be too technical or specific for the general RECLAIM Working Group. Some sub-topic Working Group Meetings that staff anticipates are NSR, Title V Permitting, and MRR requirements for Title V facilities, to name a few.

Agency and Individual Stakeholder Meetings

Throughout the process, staff will collaborate with USEPA, CARB and other stakeholders to discuss key issues that are specific to that particular organization. Staff has been meeting every several weeks with EPA to discuss NSR and RTC accounting issues that are critical to the transition process. Staff encourages individual facilities to meet with staff so any issues that are unique to their operation that are germane to the transition are understood.

Identification of Key Issues

Throughout the transition process, staff is working with stakeholders to identify key issues. As key issues are identified, they will be discussed at Working Groups and in the RECLAIM Transition Plan. Progress in addressing the key issues will dictate the amount of information contained in the RECLAIM Transition Plan regarding the issues identified. The following is a list of the key issues that have been identified to date. A detailed discussion of strategic planning regarding how these issues are being addressed and the recommendations, if any, will be discussed below.

- Transition Process
- Transition Approaches
    - Source-Specific Rules
    - Industry-Specific Rules
    - Compliance Plans
    - Opt-Out
- BARCT Determination
- New Source Review
- Monitoring, Recordkeeping, and Reporting
- Permitting and Fees
- Implementation Schedule for BARCT Requirements

Transition Process

On January 5, 2018, the Board adopted amendments to Rules 2001 – Applicability and 2002 - Allocations for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx). Amendments to Rule 2001 ended the addition of any facilities into RECLAIM, and Rule 2002 included provisions to establish the overall process to transition facilities from the RECLAIM program to a command-and-control regulatory structure. Rule 2002 provides the process of notifying a facility and the criteria to determine if a facility is ready to be transitioned out of RECLAIM. Rule 2002 also provides how RECLAIM Trading Credits (RTCs) can or cannot be used once the final determination has been made to exit the facility from RECLAIM.

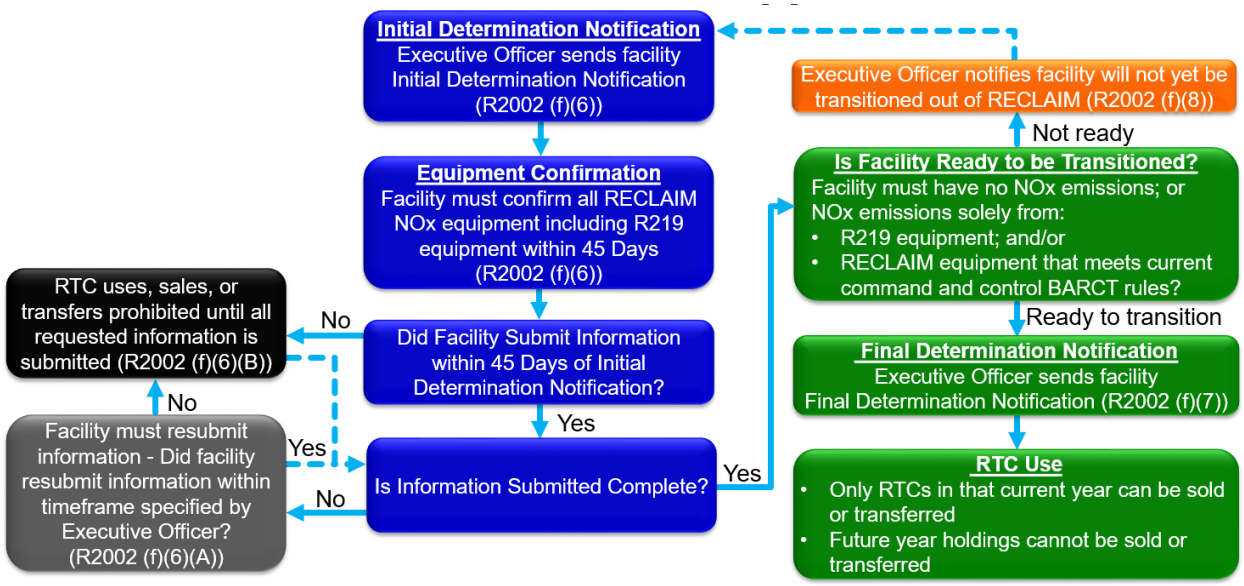
Initial Determination Notification

As shown in Figure 1, the transition process for a facility begins when the Executive Officer sends the facility an Initial Determination Notification. Pursuant to Rule 2002 paragraph (f)(6), the Executive Officer will send an Initial Determination Notification, notifying the owner or operator that the facility is under review for being transitioned out of NOx RECLAIM. Pursuant to Rule 2002 paragraph (f)(6), within 45 days of the date of Initial Determination Notification, the facility operator is required to identify all NOx RECLAIM emission equipment, including equipment that is exempt from permitting requirements per Rule 219. RECLAIM emission equipment can consist of either process units, large sources, major sources, or some combination thereof. Rule 219

equipment includes boilers and process heaters less than 2 million Btu/hour and generally includes any non-permitted equipment that is reported in the facility's Annual Permitted Emission Program (APEP) report. Other non-permitted equipment that reports emissions would also be included such as various location equipment and portable equipment. A sample of the Initial Notification letter is provided in Appendix C.

Staff will review the information and if the information is not complete, pursuant to Rule 2002 (f)(6)(A) the owner or operator will be required to resubmit the information on a timeline as specified by the Executive Officer. If the owner or operator fails to resubmit the information within the timeframe specified by the Executive Officer or fails to respond to the initial notification within 45 days, the operator will be prohibited from using, selling or transferring RTCs until all requested information is submitted (Rule 2002 (f)(6)(B)).

Figure 1
Overview of Transition Process



Final Determination Notification

The Executive Officer will provide a Final Determination Notification pursuant to Rule 2002 (f)(7) that the facility will be transitioned out of NOx RECLAIM if, after review of the information submitted, it is determined that the facility has no facility NOx emissions or has NOx emissions solely from the combination of the following:

- Rule 219 equipment, unless it would be subject to a command-and-control rule that it cannot reasonably comply with, various location permits, or permitted equipment, and/or
- RECLAIM equipment that meets current command-and-control BARCT rules.

RTC Use After Receipt of Final Determination Notification

An owner or operator of a RECLAIM facility that receives a Final Determination Notification cannot sell or transfer any future compliance year RTCs as of the date specified in the Final Determination Notification and may only sell or transfer RTCs in that current compliance year. The Final

Determination Notification will include a date that the facility is transitioned out of the RECLAIM program. When the facility is transitioned out of RECLAIM, operators may hold on to the RTCs, however, they cannot be transferred or sold upon exiting RECLAIM. Pursuant to Rule 2002 (f)(8), the Executive Officer will notify the facility if it is determined that the facility should not yet be transitioned out of NOx RECLAIM. The final fate of the RTCs is an issue that will be discussed in the Working Group, addressed in future rule amendments, and will be presented to the Board for their approval.

First Set of Initial Determinations

In February 2018, the first set of Initial Determination Notifications were sent to 37 facilities. This group of 37 facilities were identified as potentially ready to exit the NOx RECLAIM program because they have no facility NOx emissions or have NOx emissions solely from the combination of Rule 219 equipment (unless the equipment would be subject to a command-and-control rule that it cannot reasonably comply with), various location permits, or unpermitted equipment and/or RECLAIM equipment that meets current command-and-control BARCT rules. However, it should be noted that any RECLAIM combustion equipment at these 37 facilities that is exempt from permitting (e.g., small boilers and heaters) could become subject to future amendments to Rule 1146.2 after the facility transitions out of the NOx RECLAIM program.

Suspension of Final Determination Notifications

Staff will follow the transition process outlined in Rule 2002. However, until NSR issues regarding the future supply of Emission Reduction Credits (ERCs) are resolved, only facilities with a permitted potential to emit of less than 4 tons per year will be transitioned out of RECLAIM as these facilities can access the SCAQMD's internal bank under Regulation XIII if making future modifications or adding equipment that result in emission increases above their baseline potential to emit. Facilities with a permitted potential to emit of greater than or equal to 4 tons per year will not be transitioned out until future ERC supply issues are resolved. (See discussion under "New Source Review"). Staff will prepare these facilities to exit RECLAIM by issuing the Initial Determination Notification, reviewing requested information submitted by the facility and making the determination if the facility is ready to exit NOx RECLAIM. The Final Determination Notification for these facilities will be suspended, and following amendments to Regulation XIII, the Final Determination Notifications will be issued for these facilities. There are no restrictions on the purchase, sale, or transfer of RTCs until a facility receives a Final Determination Notification. Staff will attempt to minimize the suspension time because it can potentially lead to more RTC sales before credits are frozen.

Transition Approaches

Before a facility can be transitioned out of RECLAIM, the facility must either have all equipment at BARCT or be subject to a rule that establishes BARCT requirements for their equipment. As a result, it is expected that as applicable source-specific or industry-specific BARCT rules are adopted or amended, staff can initiate the transition process for facilities subject to those rules. In addition to BARCT rules, use of compliance plans that will address unique situations and an opt-out provision for facilities that meet specific criteria are two other transition approaches that are being considered. A summary of each of the following four transition approaches is discussed below.

- Source-Specific Command-and-control Rules

- Industry-Specific Command-and-control Rules
- Compliance Plans
- Opt-Out Provisions

Source-Specific Command-and-Control Rules

Source-specific command-and-controls rules generally apply to a specific category of equipment or processes such as engines, boilers, heaters, turbines, etc. and can apply to a variety of industries that use the equipment. For source-specific rules that apply to a broad category of equipment and industries, specific provisions within the source-specific rule can be incorporated to address specific situations and applications of the equipment. In general, source-specific rules include a purpose, applicability, definitions, emission limits, source testing requirements, monitoring, reporting, and recordkeeping provisions, and exemptions. Emission limits generally represent a Best Available Retrofit Control Technology (BARCT) emission level that can be expressed as an exhaust concentration limit such as 10 parts per million (ppm) of NOx or an emission rate, such as pounds of NOx per hour or pounds of NOx per unit of throughput. A discussion of the BARCT determination process is discussed under "BARCT Determination Process."

Based on analysis of all RECLAIM equipment, staff has identified, at a minimum, the following seven source-specific landing rules that will need to be adopted or amended as part of the RECLAIM transition.

- Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators and Process Heaters
- Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters
- Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters
- Rule 1118.1 – Control of Emissions from Non-Refinery Flares
- Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines
- Rule 1134 – Emissions of Oxides of Nitrogen from Stationary Gas Turbines
- Rule 1147 – NOx Reductions from Miscellaneous Sources

These rules apply to a wide variety of combustion equipment at RECLAIM facilities. With the exception of Rule 1118.1 for non-refinery flares that is currently under development for adoption, the other source-specific rules are existing rules that will need to be amended. Each of these source-specific rules will undergo its own rule development process where staff will be working with a rule-specific Working Group to discuss proposed provisions including establishing BARCT limits (if the current NOx limits are not representative of BARCT), monitoring, reporting and recordkeeping requirements, and details of the rule. (See Public Process). Table 1, below, provides a summary for each of the source-specific rules, the equipment covered in that rule, and the proposed date for the public hearing for Board consideration of the proposed rule or its amendments. Staff has concluded that diesel back-up engines that are regulated under Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines would not require BARCT since RECLAIM facilities are not exempt from Rule 1470.

Table 1
Proposed Rulemaking Schedule for Source-Specific Rules

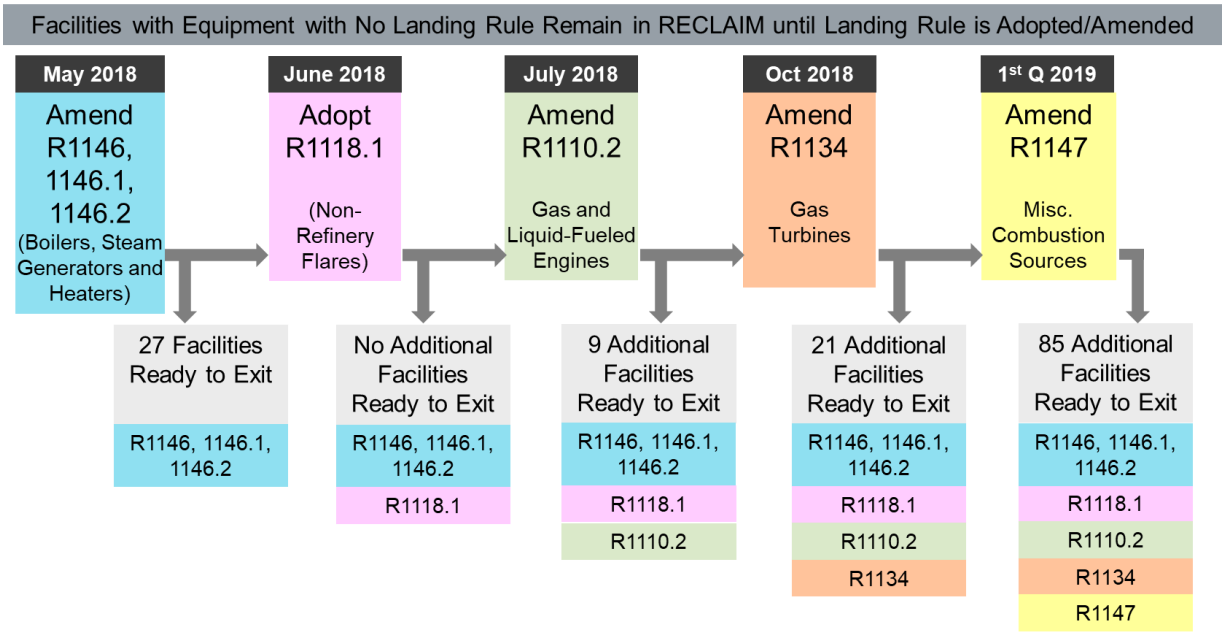
Rule	Applicability	Public Hearing Schedule
Rule 1146	Boilers, steam generators and process heaters ≥ 5 MM Btu/hour	May 2018
Rule 1146.1	Boilers, steam generators, and process heaters that are > 2 MM Btu/hour and < 5 MM Btu/hour	May 2018
Rule 1146.2	Large water heaters and small boilers and process heaters ≤ 2 MM Btu/hour	May 2018
Rule 1118.1	Control of emissions from non-refinery Flares	June 2018
Rule 1110.2	Emissions from Stationary Internal Combustion Engines	July 2018
Rule 1134	Emissions of Oxides of Nitrogen from Stationary Gas Turbines	October 2018
Rule 1147	Miscellaneous Combustion	1st Quarter 2019

Since existing source-specific rules currently exclude RECLAIM facilities, staff will be proposing amendments to these rules to apply to RECLAIM facilities that are currently in RECLAIM as well as to facilities that are transitioning out of RECLAIM. More specifically, a facility that is in RECLAIM can be subject to command-and-control requirements. For example, a facility that has a Rule 1146 boiler and a Rule 1110.2 engine may not yet be transitioned out of RECLAIM because Rule 1110.2 has not yet been amended. However, if Rule 1146 is amended and it has been determined that the rule represents BARCT, the facility will be required to comply with the Rule 1146 requirements while still in RECLAIM.

The specific implementation schedule, which is the effective compliance date that an owner or operator is required to meet the NOx concentration limit for each of the source-specific rules, will be specified in a separate rule, Rule 1100 – Implementation Schedule for NOx Facilities. This rule is discussed in more detail under "Implementation for Schedule for BARCT Requirements." Incorporating the implementation schedule in a rule outside of the source-specific rule will be less confusing for non-RECLAIM facilities that are also subject to the same rule. Facility operators are strongly encouraged to evaluate all the NOx emitting equipment at their facilities and propose an initial recommendation for when they could come into compliance with the emission limits in current command-and-control rules. This information, as well as the costs involved, will be beneficial as subsequent command-and-control rules are amended and implementation schedules are proposed. Facilities are encouraged to interact with equipment vendors and staff throughout this process. In addition, rules governing general monitoring, reporting, and recordkeeping requirements, such as Rules 218 and 218.1 may also be amended as necessary to support the amended BARCT rules.

The transition process will commence after the source-specific rule has been adopted or amended for all RECLAIM equipment at the facility. For example, as shown in Figure 2 below, the transition process for a facility that has only Rule 1146 equipment will begin after the adoption of amendments to Rule 1146. Based on the SCAQMD permit database there are 27 facilities with Rule 1146, 1146.1, and/or 1146.2 equipment where the transition process would be initiated after the adoption of amendments to these rules. After the adoption of Rule 1118.1 there are no additional facilities that will be transitioned out of NOx RECLAIM because facilities with Rule 1118.1 equipment have other equipment that is also regulated under other rules, such as Rules 1110.2, 1134 and/or 1147. As shown in Figure 2, after the adoption of amendments to Rule 1110.2 there will be an additional 9 facilities that will be ready to begin the transition process, which will represent a total of 36 facilities. After all source-specific rules are adopted, 142 facilities will be ready to be transitioned out of RECLAIM.

Figure 2
Transition Schedule for Source-Specific Rules



Industry-Specific Command-and-Control Rules

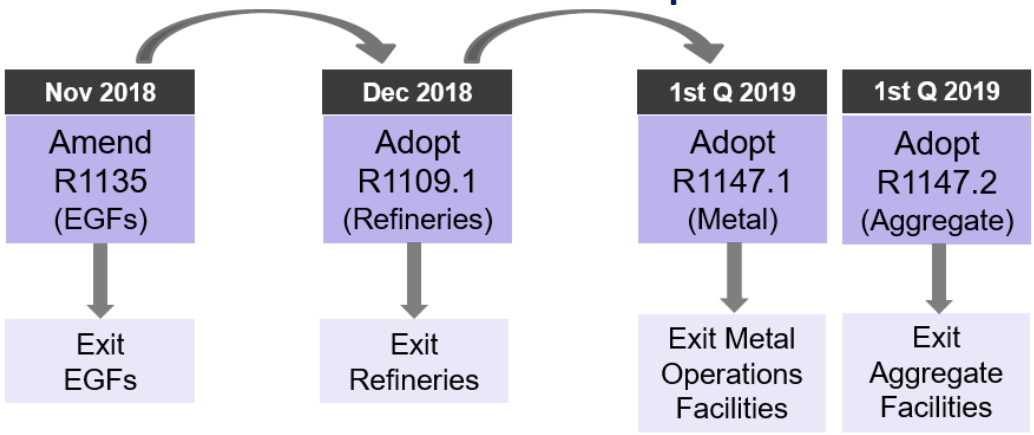
Industry-specific command-and-control rules generally apply to a specific industry category such as refineries and electricity generating facilities. Based on analysis of all RECLAIM equipment, staff has identified at a minimum, the following four industry-specific landing rules:

- Rule 1135 - Emissions of Oxides of Nitrogen from Electric Power Generating Facilities
- Rule 1109.1 - Refinery Equipment
- Rule 1147.1 - Metal Melting and Heat Treating Furnaces
- Rule 1147.2 - Emission Reductions for Equipment at Aggregate Facilities

Industry-specific rules will be focused on a specific industry and all equipment and the implementation schedule for that equipment will be addressed within that rule. Developing an

industry-specific rule is suited for industries that have similar equipment profiles or issues that are unique to that specific industry and will be difficult to address in separate source-specific rules. For industry categories such as refineries, staff will explore a variety of compliance options that will achieve the greatest emission reductions first, while recognizing the large number of emission reduction projects that will need to be implemented. In situations where an industry-specific rule includes equipment regulated under a source-specific rule, the industry-specific rule may reference the NOx limit in the applicable source-specific rule. As the rule development progresses for source-specific rules, additional industry-specific rules may be identified, particularly for equipment subject to Rule 1147, which covers a wide range of equipment over various sizes, industry categories, and applications.

Figure 3
Transition Schedule for Source-Specific Rules



For industry-specific rules, staff may initiate the transition process during the rule development process to collect information on NOx emitting equipment at the facility to ensure that the information about equipment which will be regulated under the industry-specific rule is accurate. The Final Determination Notifications would not be sent to a facility until after the adoption or amendment of the industry-specific rule. This approach will be more efficient as many of the facilities that will be regulated under an industry-specific rule have many pieces of equipment.

Proposed Amended Rule 1135 and Proposed Rule 1109.1 represent some of the largest NOx sources in the RECLAIM program. The public hearings for these two rules are scheduled for November and December 2018, and rulemaking efforts are underway for both of these industry-categories. Proposed Rules 1147.1 and 1147.2 for metal operations facilities and aggregate facilities, respectively, are scheduled for Board consideration in the first quarter of 2019.

Compliance Plans

The use of Compliance Plans to exit a facility from NOx RECLAIM is appropriate for facilities that have unique situations that cannot be addressed through a source-specific or industry-specific rule. Provisions for Compliance Plans will be established in Rule 2001 and will have specific

requirements regarding applicability, NOx emission limits, source testing, and monitoring, reporting, and recordkeeping requirements. Details regarding provisions for Compliance Plans will be established through a rulemaking process for Rule 2001. Proposed amendments to Rule 2001 to include a Compliance Plan option are scheduled for a September 2018 Public Hearing.

Opt-Out Provisions

Another transition approach is an Opt-out provision that would be available to facilities that meet specific criteria. Opt-out provisions will be incorporated in Rule 2001. In general, opt-out provisions will be designed for facilities already at BARCT or that do not have any RECLAIM equipment. Most of these facilities should have been identified in the first phase of facilities of the transition, but it is possible that there are other facilities that were not identified, or that have been recently modified. Through the rulemaking process to incorporate opt-out provisions, it is possible that other criteria may be identified. Proposed amendments to Rule 2001 to include an Opt-out Provision are scheduled for a September 2018 Public Hearing.

BARCT Determination Process

The California Health and Safety Code Section 40406 defines BARCT as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source." BARCT is reassessed periodically and is updated as technology advances.

Rule Development Requirements

The California Health and Safety Code Section 40920.6 establishes requirements prior to adopting rules or regulations regarding retrofit control technologies. Some of these requirements include:

- Identifying one or more potential control options which achieves the emission reduction objective for the regulation.
- Reviewing the information developed to assess the cost-effectiveness of the potential control option, where cost-effectiveness is defined as the cost, in dollars, of the potential control option divided by emission reduction potential, in tons (i.e., the amount of dollars per ton of NOx reduced).
- Calculating the incremental cost-effectiveness for the potential control options as defined as the difference in the costs divided by the difference in the emission reduction potential between each progressively more stringent potential control option as compared to the next less expensive control option.

In addition, other items for consideration and review at a public meeting include the effectiveness of the proposed control option in meeting the requirements of Section 40920.6 and the requirements adopted by the state board pursuant to subdivision (b) of Section 39610, the cost-effectiveness of each potential control option, and the incremental cost-effectiveness. At public hearings, these requirements are considered and included in the findings. The District provides the reasons for the adoption of the proposed control option or options which are also included in the adoption Resolution.

A district may establish its own BARCT requirement provided the following are met:

- Requirement meets the state definition of BARCT, as defined earlier (Section 40406).

- Rules and regulations include a process to approve alternative methods of complying with emission control requirements that provide equivalent emission reductions, emissions monitoring, or recordkeeping.
- Requirement is consistent with state law, and federal law, including, but not limited to, the applicable state implementation plan (SIP).

Guiding Principles for Establishing BARCT Levels

Staff has developed the following set of Guiding Principles for establishing BARCT levels for RECLAIM equipment:

- Development of BARCT levels must be consistent with state law and take into account environmental, energy, and economic impacts.
- The BARCT levels must adhere to Health and Safety Code Section 40920.6 which establishes requirements prior to adopting rules or regulations regarding retrofit control technologies.
- If an applicable, exiting, command-and-control source-specific rule establishes a NOx concentration limit that represents current BARCT, that NOx concentration limit will be used and an additional BARCT determination is not needed.
- Staff will conduct a BARCT review if the following occurs:
  - an applicable command-and-control source-specific rule has a NOx concentration limit that is not representative of BARCT;
  - the 2015 RECLAIM amendment NOx concentration levels need to be reassessed; or
  - a BARCT level has not been established for a specific equipment source category, fuel type, and/or specific application of the equipment.

BARCT review will follow a methodical process during the rule development process, and will include public participation. Because BARCT is an iterative process, it will be updated as new information becomes available. In addition to the overall cost-effectiveness, additional considerations consist of outliers, stranded assets, incremental cost-effectiveness, and accounting for recent installations or implementation of previous requirements for BARCT or BACT.

BARCT Process

BARCT is an iterative process requiring the analysis of the following elements:

1. Identifying technologies
2. Establishing emission levels
3. Cost information
4. Determination of emission reductions and cost effectiveness
5. Public process

Identifying Technologies

There are a variety of resources that staff will use to identify available pollution control technologies. Technologies are identified by control technology conferences, Technology Advancement Office demonstration projects, BACT assessments, AQMP control measure evaluations, installations at other air districts or other regions worldwide, rules from other air districts, and vendor contact with staff.

Establishing Emission Levels

An emission level can be established based on achievements in practice, source test results, and through equipment vendor guarantees/quotations. For each equipment source category, the emission levels can vary based on equipment size, fuel type, application, and other considerations. BARCT emission limits can be technology forcing based on demonstration projects, technology transfer, and technology assessments. For technology forcing BARCT emission limits, considerations are made to provide sufficient time for implementation.

Cost Information

Cost information can be obtained from technology vendors, installers/contractors, permitting evaluations, demonstration project reports, actual installations from facilities, and the EPA Office of Air Quality Planning and Standards Control Cost Manual. Design parameters from facility equipment are obtained from District records or from information obtained from facilities. Some information may be considered business confidential. The design parameters are evaluated to assess the feasibility of a proposed emission level or an alternate emission level. The design parameters are specific to the type of equipment and consider the rating/size, fuel, heating value, and stack parameters (e.g., flow rate, temperature, moisture content, oxygen content, pollutant concentration) from source tests or CEMS data. The two main components for costs are Total Installed Costs and Annual Costs. Total Installed Costs include, but are not limited to engineering and design; project management, labor and supervision; equipment costs (e.g., pollution control equipment, catalyst initial charge, controls, monitors, ductwork, etc.); freight, taxes. Contingencies can be based on the scope of work or other site-specific considerations (e.g., space limitations that may require additional structural materials and installation). Annual Costs include, but are not limited to consumables as a result of operation (e.g., periodic catalyst replacements, sorbent usage, reducing agent usage, water usage, etc.), power consumption, and periodic maintenance costs.

Determination of Emission Reductions and Cost Effectiveness

Prior to adopting rules or regulations to meet BARCT, staff conducts a cost-effectiveness calculation. The cost-effectiveness is calculated by using Present Worth Value (PWV) with the Discounted Cash Flow method.

Present Worth Value = Total Installed Costs + [Annual Costs x Present Worth Factor]

For example, if the Present Worth Factor assumes a 4% interest rate over an equipment life of 25 years, the Present Worth Factor is 15.622.

To calculate cost-effectiveness, the Present Worth Value is divided by the projected emission reductions over the life of the equipment.

Assuming an equipment life of 25 years (equipment life can vary):

Cost-Effectiveness ($ per ton) = PWV / Emission Reductions over 25 years

The range of cost-effectiveness can vary, depending on the control technology available to achieve the same emission level. In general, equipment with lower emission reductions have a higher cost

effectiveness. Cost-effectiveness can be calculated per device and for a general industry category as an average or a range. Some installations will be more cost-effective than others. Command-and-control rules take into account all applicable sources and may make exceptions for certain unique situations meeting certain specific criteria. Ancillary costs for construction are included in the total installed costs, but only if they pertain directly to the pollution control project. The costs for other projects that are conducted concurrently, such as upgrades to other pieces of equipment nearby and not directly affecting the emission source, are not included in the total installed costs.

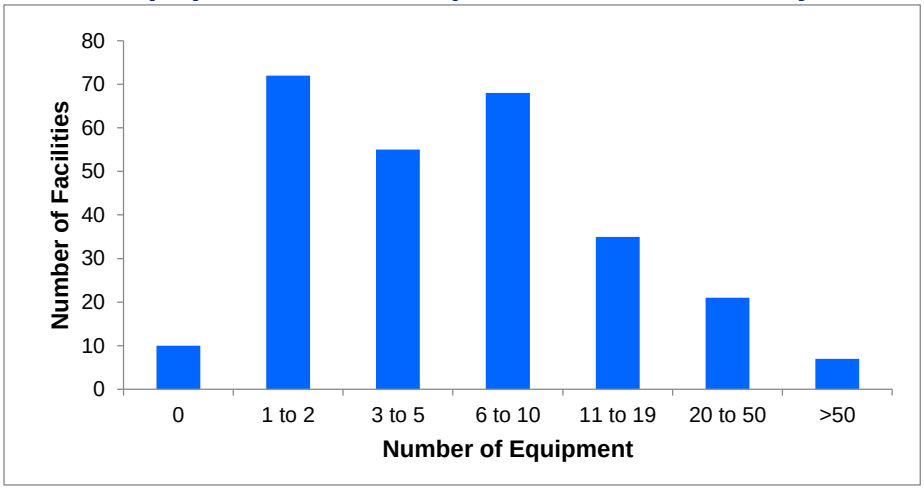
Public Process

During the public process, cost assumptions are discussed through the Working Group to solicit comments. Cost-effectiveness and incremental cost-effectiveness, if applicable, are discussed and presented during the rule Working Group Meetings, presented at the Public Workshop, included in the Draft Staff Report, and included in the Board Letter for the adoption hearing. The Socioeconomic analysis uses the cost data to estimate regional and industry-specific socioeconomic impacts from the proposed rules and its proposed controls.

Implementation Schedule for BARCT Requirements

Based on the SCAQMD permit database, there are over 2,400 permitted NOx sources in the RECLAIM program. As shown in Figure 4, the number of pieces of NOx equipment per facility can vary from 0 to more than 50 pieces of equipment per facility and adding to the complexity is that more than 100 facilities are subject to multiple landing rules. Facilities with no equipment have either shutdown their NOx RECLAIM equipment or may have non-permitted NOx sources. Staff's initial evaluation of RECLAIM universe is that more than 50 percent of equipment currently does not meet BARCT NOx levels. Coordinating the implementation schedules for the multiple BARCT landing rules is important to ensure resource impacts are taken into account as well as emphasizing that the greatest emission reductions occur earlier.

Figure 4
Equipment Counts per RECLAIM Facility



As discussed under "Source-Specific Command-and-control Rules" the implementation schedule to meet the NOx concentration limits for source-specific rules landing rules will be specified in a

separate rule, Rule 1100 – Implementation Schedule for NOx Facilities. For refinery and EGF industry-specific rules, the implementation schedule for all equipment at those facilities will be incorporated within those industry-specific rules. Staff is considering for metal processing and aggregate industry-specific rules, that the implementation schedule for the equipment associated with their main operation will be in the industry-specific rule, while the implementation schedule for equipment which is not associated with their main operations, will likely be incorporated in Rule 1100. Table 2 lists the estimated number of facilities to exit RECLAIM by rule amendment or adoption.

Table 2
Estimated Number of Facilities to Exit RECLAIM by Rule

Rule Action	Estimated Number of Facilities to Exit RECLAIM
Rule 2002 Initial Determination Notifications for first group of facilities	37
Rule 1146 Series (Boilers, Steam Generators and Heaters)	27
Rule 1118.1 (Non-Refinery Flares)	0
Rule 1110.2 (Gas and Liquid-Fueled Engines)	9
Rule 1134 (Gas Turbines)	21
Rule 1135 (Electrical Generating Facilities)	29
Rule 1109.1 (Refineries)	13
Rule 1147 (Misc. Combustion)	85
Rule 1147.1 (Metal Operations Facilities)	29
Rule 1147.2 (Aggregate Facilities)	18
TOTAL	268

Guiding Principles for Establishing the Implementation Schedule for BARCT Rules

Staff has developed a series of guiding principles that will be used through the transition process to take into consideration when establishing the implementation schedule for BARCT rules. Consistent with AB 617, in establishing the implementation schedule to achieve BARCT requirements staff will seek to achieve the greatest emission reductions first, where feasible. When amending a source-specific rule that already has BARCT limits, staff will take into consideration the implementation schedule allowed for non-RECLAIM sources. In general, the implementation schedule will take into account engineering design, permitting, installation, and commissioning of the equipment which includes source testing, if applicable. Staff will be proposing implementation schedules to achieve the most emission reductions by January 2022 and no later than December 2023.

Through Rule 1100, facilities that have multiple pieces of equipment that are affected by different source-specific landing rules will be considered. For example, if a facility has ten large internal combustion engines covered by Rule 1110.2 and a four small boilers subject to Rule 1146.1, the implementation schedule might focus on installation of BARCT controls on the engines before the small boilers. The implementation schedule will also take into consideration facilities that have many pieces of the equipment, and the time needed to install pollution controls.

Another consideration for the implementation schedule is industry categories. For most source-specific rules, implementation will cross various industry categories. As previously discussed in this Transition Plan, some rules will be industry-specific. Industry-specific rules will ensure that one business will not be advantaged or disadvantaged over another and the implementation schedule for the entire industry will be the same. In addition, some industries within a source-specific equipment category may have unique situations such as fuel type, equipment size or other factors that may require special consideration in the implementation timeframe. Staff will work with the rule Working Groups to discuss these issues. Individual facilities are also encouraged to discuss with staff their particular issue(s).

One more concern for the implementation schedule is resource impacts related to the SCAQMD, facility, and service providers. Staff will take into account SCAQMD resources to process permits, review source test protocols and reports, and conduct review of any plans. Permit processing times vary, depending on the complexity and number of applications submitted, analysis required under the California Environmental Quality Act, Federal Title V permitting requirements, public notices, and additional review by EPA, as applicable. Some potential options are to have a staggered submittal time period to provide a more even workload to reduce potential wait time in processing applications for permits. Regarding facility resources, the implementation schedule will take into account the ability to implement multiple emission reduction projects simultaneously, application submittal timeframes, installation, and commissioning. The availability of service providers such as installers, source testers, and contractors will also be taken consideration with the implementation schedule.

The implementation schedule will be discussed and developed through the rulemaking process for each of the source-specific and industry-specific rules. Stakeholders are encouraged to discuss any unique situations at their facility such as space limitations, turnaround schedules or outlying issues such as equipment size or fuel type that may pose additional challenges. Additional considerations in the implementation schedule may provide opportunities for longer implementation timeframes for facilities that elect to replace rather than retrofit equipment to meet the BARCT requirements, recognizing that replacing a unit may achieve additional emission reductions and in some cases, efficiency gains.

New Source Review

Rule 2005 establishes New Source Review (NSR) requirements for RECLAIM facilities that are new, modify, or increase emissions above their starting Allocation, plus non-tradeable credits. The purpose of Rule 2005 is to ensure that emissions from RECLAIM facilities do not interfere with progress in the attainment of the National Ambient Air Quality Standards, while ensuring that future economic growth in the South Coast Air Basin is not unnecessarily restricted. For non-RECLAIM facilities, NSR requirements are specified under Regulation XIII – New Source Review.

Currently under RECLAIM, staff conducts an annual program audit which includes an assessment of NSR activity from RECLAIM facilities in order to ensure that RECLAIM is complying with federal NSR requirements as well as state requirements for no net increase in emissions. For NOx

RECLAIM, compliance with the federal offset ratio of 1.2 to 1 is demonstrated on a programmatic basis based on the compliance year's total unused allocations and total NSR increases.

One major difference between RECLAIM NSR and non-RECLAIM NSR (under Regulation XIII) is the amount of offsets that must be provided and when. In general, a facility under RECLAIM with an NSR increase must have RECLAIM Trading Credits (RTCs) that will cover the permitted increase at the start of their compliance cycle for that particular unit. At the end of the compliance cycle, the facility must have sufficient RTCs to cover *actual* emissions for that unit and the owner or operator can use, sell or transfer any remaining RTCs up to the permitted increase associated with that unit. Under Regulation XIII, a facility must offset the permitted increase at an offset ratio of 1.2 to 1, at the time of permitting the new or modified source and must offset the emission increase in perpetuity using ERCs. Other provisions, such as the level of control (BACT), trading restrictions and air quality modeling are similar under RECLAIM NSR and non-RECLAIM NSR. One basic difference between the two requirements is the basis for determining emission potential – hourly for RECLAIM NSR and daily for non-RECLAIM NSR. Table 3, below, provides a comparison between Rule 2005 (RECLAIM NSR) and Regulation XIII (NSR) requirements.

Table 3
Comparison of NSR Requirements for RECLAIM and Non-RECLAIM

Element	Rule 2005 - RECLAIM NSR	Regulation XIII – NSR
Type of Credit	RTC is an Allocation	ERC is an Emission Reduction Credit
Facility Offset Ratio	1-to-1	1.2-to-1
Programmatic Offset Ratio	1.2 to 1	Not applicable
Offsetting Requirement	Permitted emissions at the beginning of each compliance cycle, and actual emissions at end of the compliance cycle	Permitted emissions at permitting and in perpetuity
Level of Control	BACT	BACT
Trading Restrictions	Trading Zones	Trading Zones
Air Quality Modeling	No significant increase in NO2	No significant increase in NO2
Time period for determining emission potential	Hourly	Daily

Changes in NOx emission potential are based on hourly emissions or permit limits, if imposed, as specified under Rule 2005 (d). The difference between permitted and actual emissions for some pieces of equipment can be substantial. . For future modifications at facilities previously subject to RECLAIM, a method for determining pre-modification potential to emit (PTE) needs to be defined to harmonize with PTE calculation method under current Regulation XIII – New Source Review. The current SCAQMD computer program being used to track New Source Review offset

requirements and potential to emit will also need to be upgraded to accommodate the new methodology.

There are a number of NSR policy issues that need to be resolved as facilities transition to a command-and-control regulatory structure. Staff has been working on these issues with the RECLAIM Working Group. In addition, staff will continue discussions with EPA on NSR issues. One of the most important NSR issues is the future availability of NOx ERCs in the open market and the concern that there is not a sufficient supply of ERCs in the open market for facilities that want to install new or modified equipment that triggers NSR. RECLAIM facilities that are comprised of the region's largest emitters would join an existing open market with a limited amount of ERCs. As discussed in more depth below, staff will suspend issuing Final Determination Notifications to transition facilities from RECLAIM until this issue can be resolved. Staff has identified the following list of NSR-related policy questions:

Question 1: Can ERCs that were converted to RTCs be converted back to ERCs post RECLAIM?
Question 2: Can equipment permitted pre-RECLAIM that is shutdown in RECLAIM create a shutdown ERC post RECLAIM?
Question 3: Can equipment permitted during RECLAIM that is shutdown post RECLAIM create a shutdown ERC?
Question 4: Can equipment permitted during RECLAIM that is shutdown during RECLAIM generate a shutdown ERC post RECLAIM?
Question 5: Is there a sufficient supply of NOx ERCs in the open market?

Question 1: Can ERCs that were converted to RTCs be converted back to ERCs post RECLAIM?

At the start of RECLAIM, some facilities converted ERCs to RTCs pursuant to Rule 2002. Based on SCAQMD records, 6.8 tons per day of ERCs were converted to RTCs at the beginning of the program (includes ERCs from active RECLAIM facilities, inactive RECLAIM facilities, broker, traders, etc.). This issue was discussed at the RECLAIM Working Group, and some stakeholders commented that facilities that converted ERCs to RTCs should be allowed to convert those RTCs back. Staff's initial recommendation was not to allow conversion of RTCs back to ERCs in part because tracking where these ERCs reside today is difficult and RTCs have been subject to past shaves. Over the past 20 years, there could have been trades, use, and adjustments (due to shaves). Once these ERCs were converted to RTCs, the facility has had the opportunity, over the course of RECLAIM, to use or sell the RTCs. In response to stakeholder comments, staff committed to looking into the list of facilities converted ERCs to RTCs. Staff will bring this issue back to the RECLAIM Working Group before making a final recommendation on whether ERCs that were converted to RTCs can be converted back to ERCs in some form, post RECLAIM.

Question 2: Can equipment permitted pre-RECLAIM that is shutdown in RECLAIM create a shutdown ERC post RECLAIM?

New and modified equipment permitted prior to the start of RECLAIM was required to be offset pursuant to Regulation XIII. When RECLAIM began, each facility received an Allocation of RTCs pursuant to Rule 2002. Under RECLAIM, if a piece of equipment is shutdown the RTCs allocated for that piece of equipment could be used, sold, or transferred. Those RTCs were not discounted,

where under Regulation XIII there is a specific formula for issuing an ERC that is associated with shutting down a permitted piece of equipment.

Staff is recommending that equipment permitted before the start of RECLAIM and shutdown during the time the RECLAIM program is in effect would not be able to create an ERC after the facility exits RECLAIM since the origin of all RTCs is from the issuance of the RECLAIM allocation. All RTCs, regardless of their origin could be used for compliance, sold, or transferred to another facility. In addition, under RECLAIM there is no way to distinguish the origin of an RTC and there is no issuance of a "shutdown RTC."

Question 3: Can equipment permitted during RECLAIM that is shutdown post RECLAIM create a shutdown ERC?

New equipment permitted after the start of RECLAIM is required to secure RTCs each year to account for any NSR emissions increase. As a RECLAIM facility transitions to command-and-control, RECLAIM NSR will no longer apply and the facility will be subject to Regulation XIII. SCAQMD staff is recommending that a facility that shuts down a piece of equipment post RECLAIM, can generate an ERC pursuant to Regulation XIII because the facility satisfied NSR requirements under RECLAIM and any generation of ERCs in command-and-control would be under Regulation XIII.

Question 4: Can equipment permitted during RECLAIM that is shutdown during RECLAIM generate a shutdown ERC post RECLAIM?

Similar to Question 2, staff is recommending that any equipment that is shutdown in RECLAIM cannot generate an ERC from that shutdown equipment post RECLAIM since the origin of all RTCs is from the issuance of the RECLAIM Allocation. There is no creation of a "shutdown RTC," and no ERC was generated.

Question 5: Is there a sufficient supply of NOx ERCs in the open market?

There needs to be a sufficient supply of ERCs so facilities can modernize and the economy can grow clean. Regulation XIII requires that all new and modified sources are equipped with Best Available Control Technology (BACT). The current supply of NOx ERCs in the open market is less than 0.5 tons per day. Based on the RECLAIM Annual Reports from 1994 through 2015, permitted NSR increases are about 2,975 tons per year which represents on average, annually about 135 tons per year or 0.37 ton per day. Thus the supply of ERCs in the open market is far too low to support ex-RECLAIM facilities in the future.

One reason why the supply of NOx ERCs in the open market is so low is that the largest NOx sources that could have generated ERCs were in RECLAIM. Shutdowns are one of the largest sources of the supply of ERCs. Staff has been having discussions with EPA to discuss options and seek approval for possibly using the SCAQMD's internal bank, which has 22 tons per day of NOx. Staff will work with all stakeholders and understands that more discussion is needed on this topic. This is one of the most important issues that needs resolution before all facilities can be transitioned out of RECLAIM. Another issue that needs further investigation is access to the District Offset Bank for small emitting sources (e.g. eligibility taking into account modifications while in RECLAIM, establishing prior uses and repayment when future emissions increases exceed the eligibility threshold). At this time, staff will suspend issuance of Final Determination Notifications for

facilities with a permitted PTE of greater than or equal than 4 tons per year until there is resolution of the future supply of NOx ERCs for compliance with Regulation XIII.

Monitoring, Reporting, and Recordkeeping

The Monitoring, Recordkeeping, and Reporting (MRR) requirements are an integral part of the RECLAIM program and are based on a mass emissions reporting approach for calculating annual emissions. Annual emissions from a facility's major sources, large sources, process units, and Rule 219 equipment must comply with the facility's respective annual allocations. Major sources are monitored by continuous emission monitoring systems (CEMS), large sources have the option to be monitored by a continuous process monitoring system (CPMS), and process units and Rule 219 equipment have the option to be monitored manually by a fuel meter and/or timer.

As facilities transition from RECLAIM to command-and-control, a comparison of the MRR requirements between RECLAIM and the applicable command-and-control rule will be assessed. Where there is general agreement between RECLAIM and the existing command-and-control MRR requirements, the command-and-control MRR requirements will be used (e.g., Rule 1146). Where there are differences, additional analysis will be needed recognizing that RECLAIM is based on mass emissions and the command-and-control rule is based on the NOx concentration or emission rate, and certain monitoring and reporting requirements may be less stringent under a command-and-control regulatory approach. This will evaluated during the rule development process.

To minimize changes to Title V permits that would require Public Notification requirements, during this initial transition period, facilities with Title V permits will maintain the RECLAIM MRR requirements with possible changes to reporting frequency. However, such changes will trigger Public Notification requirements and a Significant Title V Permit revision.

Command-and-Control Regulatory Approach

Under a command-and-control regulatory approach facilities will no longer have an allocation of RTCs. In general, a command-and-control regulatory approach is based on establishing a NOx concentration limit or an emission rate limit as compared to the RECLAIM program which was based on mass emissions. Under a command-and-control regulatory approach, throughput limits are established in the SCAQMD permit. Since the adoption of RECLAIM, some equipment and processes do not have NOx or SOx permit limits, however, throughput limitations are based on non-RECLAIM pollutants such as PM or CO. Ensuring equipment and processes have permitted limits as they transition to a command-and-control regulatory approach will be one of the permitting challenges as discussed below to avoid unlimited emissions.

Permitting

There are a number of considerations related to permitting as RECLAIM facilities undergo the transition to command-and-control. These include the structure of the permit and changes to permit conditions. The intent is to make the transition efficiently with minimal disruption and to keep fees as low as possible. The initial plans for the general structure of the permits are that the facility permit structure for current RECLAIM facilities will be maintained. The process to separate all the equipment in the RECLAIM permits into individual command-and-control permits would be

overly burdensome on staff resources. The facility permit structure would also still be required for Title V facilities in RECLAIM as well as facilities that are currently in the SOx RECLAIM program.

Another consideration for the facility permits involves the rule references as facilities transition. For example, for equipment subject to amended command-and-control rules, the references to the emission limits, as well as in the equipment-specific conditions in Sections D and H of the RECLAIM permit (Facility Specific and Equipment Specific Conditions) would need to be updated. In addition, the monitoring, reporting, and recordkeeping requirements in Sections F (RECLAIM Monitoring and Source Testing Requirements) and G (Recordkeeping and Reporting Requirements for RECLAIM Sources) would also need to be updated. In an effort to minimize the need for and extent of potential facility permit amendments during the transition period, staff is exploring alternate ways of addressing changes in Sections D, F, G and H of the facility permit. Such alternative mechanisms include retaining the applicability of relevant provisions of the NOx RECLAIM program rules (e.g. monitoring, New Source Review, etc.) and, thus, eliminating the need for an immediate facility permit amendment until the facility is in full compliance with current and yet to be developed BARCT rules. Staff is also exploring changes to the fee structure to minimize the financial cost to owner or operators as they transition to command-and-control.

Applications will be needed for removing RECLAIM provisions when facilities exit RECLAIM. Applications submitted solely for removing no longer applicable RECLAIM provisions will not cover any physical equipment modification nor any process change. Therefore, the permit action will not be a modification as defined under Regulation XIII and will not be considered as an NSR event. Permit fees are also under consideration for how they will be handled outside of RECLAIM. Staff is working internally to address groups of facilities transitioning and whether the fee rules will be amended all at once or during subsequent rule amendments.

The timing of these changes is also another consideration given the staff time that will be required to ensure the timely issuance of the new permit for a RECLAIM facility upon its transition into command-and-control.

Appendix A – List of RECLAIM Facilities

All RECLAIM Facilities

NOx RECLAIM Summary of Facility Assessment for the Transition to Command-and-Control 267 Facilities

(As of October 27, 2017)

This is an initial assessment of RECLAIM facilities and their equipment. Staff is continuing to evaluate these facilities and the NOx level of their equipment, along with the associated command-and-control rules. The following facility listings may be subject to further changes. Facilities are encouraged to contact SCAQMD staff if they have any questions or concerns regarding their status as the transition progresses.

Facilities with emissions from Rule 219 equipment only or no facility emissions (9 Facilities)

FID	NAME
1634	STEELCASE INC, WESTERN DIV
38440	COOPER & BRAIN – BREA
124838	EXIDE TECHNOLOGIES
142536	DRS SENSORS & TARGETING SYSTEMS, INC
143738	DCOR LLC
148896	CALIFORNIA RESOURCES PRODUCTION CORP
148897	CALIFORNIA RESOURCES PRODUCTION CORP
151601	CALIFORNIA RESOURCES PRODUCTION CORPORAT
151899	CALIFORNIA RESOURCES PRODUCTION CORP

Facilities with all RECLAIM source equipment meeting current Command-and-Control BARCT (30 Facilities)	
FID	**NAME**
2083	SUPERIOR INDUSTRIES INTERNATIONAL INC
2418	FRUIT GROWERS SUPPLY CO
2825	MCP FOODS INC
11119	THE GAS CO./ SEMPRA ENERGY
11887	NASA JET PROPULSION LAB
14049	MARUCHAN INC
14736	THE BOEING CO-SEAL BEACH COMPLEX
17623	LOS ANGELES ATHLETIC CLUB
20203	RECONSERVE OF CALIFORNIA-LOS ANGELES INC
38872	MARS PETCARE U.S., INC.
58622	LOS ANGELES COLD STORAGE CO
68118	TIDELANDS OIL PRODUCTION COMPANY ETAL
109914	THERMAL REMEDIATION SOLUTIONS, LLC
114997	RAYTHEON COMPANY
124808	INEOS POLYPROPYLENE LLC
125579	DIRECTV
130211	NOVIPAX, INC
137471	GRIFOLS BIOLOGICALS INC
143739	DCOR LLC
148340	THE BOEING COMPANY-BUILDING 800 COMPLEX
155221	SAVE THE QUEEN LLC (DBA QUEEN MARY)
157359	HENKEL ELECTRONIC MATERIALS, LLC
174406	ARLON GRAPHICS LLC
176934	GI TC IMPERIAL HIGHWAY, LLC
176952	MERCEDES-BENZ WEST COAST CAMPUS
183415	ONTARIO INTERNATIONAL AIRPORT AUTHORITY
800181	CALIFORNIA PORTLAND CEMENT CO
800330	THUMS LONG BEACH
800338	SPECIALTY PAPER MILLS INC
800344	CALIFORNIA AIR NATIONAL GUARD, MARCH AFB

Major Petroleum Refining Facilities (9 Facilities)	
FID	**NAME**
151798	TESORO REFINING AND MARKETING CO, LLC
171107	PHILLIPS 66 CO/LA REFINERY WILMINGTON PL
171109	PHILLIPS 66 COMPANY/LOS ANGELES REFINERY
174591	TESORO REF & MKTG CO LLC,CALCINER
174655	TESORO REFINING & MARKETING CO, LLC
181667	TORRANCE REFINING COMPANY LLC
800026	ULTRAMAR INC
800030	CHEVRON PRODUCTS CO.
800436	TESORO REFINING AND MARKETING CO, LLC

Electricity Generating Facilities (29 Facilities)	
FID	**NAME**
4477	SO CAL EDISON CO
14502	CITY OF VERNON, VERNON GAS & ELECTRIC
25638	BURBANK CITY, BURBANK WATER & POWER
56940	CITY OF ANAHEIM/COMB TURBINE GEN STATION
115314	LONG BEACH GENERATION, LLC
115315	NRG CALIFORNIA SOUTH LP, ETIWANDA GEN ST
115389	AES HUNTINGTON BEACH, LLC
115394	AES ALAMITOS, LLC
115536	AES REDONDO BEACH, LLC
115663	EL SEGUNDO POWER, LLC
127299	WILDFLOWER ENERGY LP/INDIGO GEN., LLC
128243	BURBANK CITY,BURBANK WATER & POWER,SCPPA
129810	CITY OF RIVERSIDE PUBLIC UTILITIES DEPT
129816	INLAND EMPIRE ENERGY CENTER, LLC
139796	CITY OF RIVERSIDE PUBLIC UTILITIES DEPT
146536	WALNUT CREEK ENERGY, LLC
152707	SENTINEL ENERGY CENTER LLC
153992	CANYON POWER PLANT
155474	BICENT (CALIFORNIA) MALBURG LLC
160437	SOUTHERN CALIFORNIA EDISON
164204	CITY OF RIVERSIDE, PUBLIC UTILITIES DEPT
172077	CITY OF COLTON
182561	COLTON POWER, LP
182563	COLTON POWER, LP
800074	LA CITY, DWP HAYNES GENERATING STATION
800075	LA CITY, DWP SCATTERGOOD GENERATING STN
800168	PASADENA CITY, DWP
800170	LA CITY, DWP HARBOR GENERATING STATION
800193	LA CITY, DWP VALLEY GENERATING STATION

Facilities with Equipment Command-and-Control Landing Rules (177 Facilities)	
FID	**NAME**
136	PRESS FORGE CO
346	FRITO-LAY, INC.
550	LA CO., INTERNAL SERVICE DEPT
1073	BORAL ROOFING LLC
1744	KIRKHILL - TA COMPANY
2912	HOLLIDAY ROCK CO INC
2946	PACIFIC FORGE INC
3029	MATCHMASTER DYEING & FINISHING INC
3417	AIR PROD & CHEM INC
3585	R. R. DONNELLEY & SONS CO, LA MFG DIV
3704	ALL AMERICAN ASPHALT, UNIT NO.01
3721	DART CONTAINER CORP OF CALIFORNIA
3968	TABC, INC
4242	SAN DIEGO GAS & ELECTRIC
5973	SO CAL GAS CO
5998	ALL AMERICAN ASPHALT
7411	DAVIS WIRE CORP
7416	PRAXAIR INC
7427	OWENS-BROCKWAY GLASS CONTAINER INC
8582	SO CAL GAS CO/PLAYA DEL REY STORAGE FAC
9053	ENWAVE LOS ANGELES INC.
9755	UNITED AIRLINES INC
11034	ENWAVE LOS ANGELES INC.
11435	PQ CORPORATION
11716	FONTANA PAPER MILLS INC
12155	ARMSTRONG FLOORING INC
12372	MISSION CLAY PRODUCTS
12428	NEW NGC, INC.
14871	SONOCO PRODUCTS CO
14926	SEMPRA ENERGY (THE GAS CO)
14944	CENTRAL WIRE, INC.
15504	SCHLOSSER FORGE COMPANY
16338	KAISER ALUMINUM FABRICATED PRODUCTS, LLC
16639	SHULTZ STEEL CO
16642	ANHEUSER-BUSCH LLC., (LA BREWERY)
16660	THE BOEING COMPANY

Facilities with Equipment Command-and-Control Landing Rules (177 Facilities)	
16978	CLOUGHERTY PACKING LLC/HORMEL FOODS CORP
17953	PACIFIC CLAY PRODUCTS INC
17956	WESTERN METAL DECORATING CO
18294	NORTHROP GRUMMAN SYSTEMS CORP
18455	ROYALTY CARPET MILLS INC
19167	R J. NOBLE COMPANY
19390	SULLY-MILLER CONTRACTING CO.
20604	RALPHS GROCERY CO
21598	ANGELICA TEXTILE SERVICES
21887	KIMBERLY-CLARK WORLDWIDE INC.-FULT. MILL
22607	CALIFORNIA DAIRIES, INC
22911	CARLTON FORGE WORKS
23752	AEROCRAFT HEAT TREATING CO INC
35302	OWENS CORNING ROOFING AND ASPHALT, LLC
40034	BENTLEY PRINCE STREET INC
40483	NELCO PROD. INC
42630	PRAXAIR INC
42676	CES PLACERITA INC
42775	WEST NEWPORT OIL CO
43201	SNOW SUMMIT INC
43436	TST, INC.
45746	PABCO BLDG PRODUCTS LLC,PABCO PAPER, DBA
46268	CALIFORNIA STEEL INDUSTRIES INC
47771	DELEO CLAY TILE CO INC
47781	OLS ENERGY-CHINO
50098	D&D DISPOSAL INC,WEST COAST RENDERING CO
51620	WHEELABRATOR NORWALK ENERGY CO INC
52517	REXAM BEVERAGE CAN COMPANY
53729	TREND OFFSET PRINTING SERVICES, INC
54402	SIERRA ALUMINUM COMPANY
59618	PACIFIC CONTINENTAL TEXTILES, INC.
61722	RICOH ELECTRONICS INC
61962	LA CITY, HARBOR DEPT
62548	THE NEWARK GROUP, INC.
63180	DARLING INGREDIENTS INC.
68042	CORONA ENERGY PARTNERS, LTD
74424	ANGELICA TEXTILE SERVICES
83102	LIGHT METALS INC

Facilities with Equipment Command-and-Control Landing Rules (177 Facilities)	
85943	SIERRA ALUMINUM COMPANY
89248	OLD COUNTRY MILLWORK INC
94872	METAL CONTAINER CORP
94930	CARGILL INC
95212	FABRICA
96587	TEXOLLINI INC
101656	AIR PRODUCTS AND CHEMICALS, INC.
101977	SIGNAL HILL PETROLEUM INC
105277	SULLY MILLER CONTRACTING CO
105903	PRIME WHEEL
107653	CALMAT CO
107654	CALMAT CO
107655	CALMAT CO
107656	CALMAT CO
113160	HILTON COSTA MESA
114264	ALL AMERICAN ASPHALT
115172	RAYTHEON COMPANY
115241	THE BOEING COMPANY
115563	NCI GROUP INC., DBA, METAL COATERS OF CA
117140	AOC, LLC
117227	SHCI SM BCH HOTEL LLC, LOEWS SM BCH HOTE
117290	B BRAUN MEDICAL, INC
118406	CARSON COGENERATION COMPANY
119104	CALMAT CO
119596	SNAK KING CORPORATION
122666	A'S MATCH DYEING & FINISHING
124619	ARDAGH METAL PACKAGING USA INC.
124723	GREKA OIL & GAS
126498	STEELSCAPE, INC
126536	CPP - POMONA
129497	THUMS LONG BEACH CO
131732	NEWPORT FAB, LLC
131850	SHAW DIVERSIFIED SERVICES INC
132068	BIMBO BAKERIES USA INC
132071	DEAN FOODS CO. OF CALIFORNIA
137508	TONOGA INC, TACONIC DBA
137520	PLAINS WEST COAST TERMINALS LLC
138568	CALIFORNIA DROP FORGE, INC

Facilities with Equipment Command-and-Control Landing Rules (177 Facilities)	
141295	LEKOS DYE AND FINISHING, INC
141555	CASTAIC CLAY PRODUCTS, LLC
143740	DCOR LLC
143741	DCOR LLC
144455	LIFOAM INDUSTRIES, LLC
148236	AIR LIQUIDE LARGE INDUSTRIES U.S., LP
148925	CHERRY AEROSPACE
150201	BREITBURN OPERATING LP
151394	LINN OPERATING INC
151415	LINN WESTERN OPERATING, INC
151532	LINN OPERATING, INC
152054	LINN WESTERN OPERATING INC
153199	THE KROGER CO/RALPHS GROCERY CO
155877	MILLERCOORS, LLC
156722	AMERICAN APPAREL KNIT AND DYE
156741	HARBOR COGENERATION CO, LLC
157363	INTERNATIONAL PAPER CO
161300	SAPA EXTRUDER, INC
165192	TRIUMPH AEROSTRUCTURES, LLC
166073	BETA OFFSHORE
168088	POLYNT COMPOSITES USA INC
169754	SO CAL HOLDING, LLC
171960	TIN, INC. DBA INTERNATIONAL PAPER
172005	NEW- INDY ONTARIO, LLC
173290	MEDICLEAN
173904	LAPEYRE INDUSTRIAL SANDS, INC
174544	BREITBURN OPERATING LP
176708	ALTAGAS POMONA ENERGY INC.
179137	QG PRINTING II LLC
180367	LINN OPERATING, INC.
180410	REICHHOLD LLC 2
181510	AVCORP COMPOSITE FABRICATION, INC
182049	TORRANCE VALLEY PIPELINE CO LLC
182050	TORRANCE VALLEY PIPELINE CO LLC
182051	TORRANCE VALLEY PIPELINE CO LLC
183564	ONNI TIMES SQUARE LP
183832	AST TEXTILE GROUP, INC.
800016	BAKER COMMODITIES INC

Facilities with Equipment Command-and-Control Landing Rules (177 Facilities)	
800037	DEMENNO-KERDOON DBA WORLD OIL RECYCLING
800038	THE BOEING COMPANY - C17 PROGRAM
800066	HITCO CARBON COMPOSITES INC
800067	THE BOEING COMPANY
800080	LUNDAY-THAGARD CO DBA WORLD OIL REFINING
800088	3M COMPANY
800113	ROHR, INC.
800127	SO CAL GAS CO
800128	SO CAL GAS CO
800129	SFPP, L.P.
800149	US BORAX INC
800150	US GOVT, AF DEPT, MARCH AIR RESERVE BASE
800183	PARAMOUNT PETR CORP
800189	DISNEYLAND RESORT
800196	AMERICAN AIRLINES, INC,
800205	BANK OF AMERICA NT & SA, BREA CENTER
800264	EDGINGTON OIL COMPANY
800335	LA CITY, DEPT OF AIRPORTS
800371	RAYTHEON SYSTEMS COMPANY - FULLERTON OPS
800372	EQUILON ENTER. LLC, SHELL OIL PROD. US
800393	VALERO WILMINGTON ASPHALT PLANT
800408	NORTHROP GRUMMAN SYSTEMS
800409	NORTHROP GRUMMAN SYSTEMS CORPORATION
800416	PLAINS WEST COAST TERMINALS LLC
800417	PLAINS WEST COAST TERMINALS LLC
800419	PLAINS WEST COAST TERMINALS LLC
800420	PLAINS WEST COAST TERMINALS LLC

Facilities with One or More Pieces of Equipment Without a Command-and-Control Landing Rule (13 Facilities)	
FID	**NAME**
8547	QUEMETCO INC
14495	VISTA METALS CORPORATION
18931	TAMCO
37603	SGL TECHNIC INC, POLYCARBON DIVISION
97081	THE TERMO COMPANY
123774	HERAEUS PRECIOUS METALS NO. AMERICA, LLC
142267	FS PRECISION TECH LLC
178639	ECO SERVICES OPERATIONS LLC
182970	MATRIX OIL CORP
184288	SENTINEL PEAK RESOURCES CALIFORNIA, LLC
184301	SENTINEL PEAK RESOURCES CALIFORNIA, LLC
800003	HONEYWELL INTERNATIONAL INC
800325	TIDELANDS OIL PRODUCTION CO

Appendix B - AB 617 Facilities

FACID	FACILITY	PRIMARY_SECTOR
151798	Tesoro Sulfur Plant	Refinery
171107	Phillips 66 Company - Los Angeles Refinery - Wilmington Plant	Refinery
171109	Phillips 66 Company - Los Angeles Refinery - Carson Plant	Refinery
174655	Tesoro Refining & Marketing Company LLC - Los Angeles Refinery - Carson	Refinery
181667	Torrance Refining Company LLC	Refinery
800026	Ultramar Inc - Valero Wilmington	Refinery
800030	Chevron Products Company - El Segundo Refinery 90245	Refinery
800080	Lunday-Thagard Company DBA World Oil Refining	Refinery
800183	Paramount Petroleum Corporation Refinery	Refinery
800264	Edgington Oil Company	Refinery
800436	Tesoro Wilmington	Refinery
3417	Air Products Carson Hydrogen Plant	Hydrogen Plant
42630	Praxair Inc.	Hydrogen Plant
101656	Air Products Wilmington Hydrogen Plant	Hydrogen Plant
148236	Air Liquide El Segundo Hydrogen Plant	Hydrogen Plant
4242	SDG&E - Moreno Compressor Station	Oil and Gas Production
5973	Southern California Gas Co - Honor Rancho Facility	Oil and Gas Production
68118	Tidelands Oil Production Company - 760 Los Angeles Basin	Oil and Gas Production
101977	Signal Hill Petroleum Facilities	Oil and Gas Production
129497	Thums Long Beach Company	Oil and Gas Production
150201	BreitBurn Operating LP - Los Angeles Basin Facility	Oil and Gas Production
151394	Linn Operating Inc	Oil and Gas Production
151415	Linn Operating Inc	Oil and Gas Production
151532	Linn Operating Inc	Oil and Gas Production
151594	Tidelands Oil Production Company - 760 Los Angeles Basin	Oil and Gas Production
151601	Tidelands Oil Production Company - 760 Los Angeles Basin	Oil and Gas Production
169754	Tidelands Oil Production Company - 760 Los Angeles Basin	Oil and Gas Production
174544	BreitBurn Operating LP - Los Angeles Basin Facility	Oil and Gas Production
800128	Southern California Gas Co - Aliso Canyon Facility	Oil and Gas Production
800325	Tidelands Oil Production Company - 760 Los Angeles Basin	Oil and Gas Production
800330	Thums Long Beach Company	Oil and Gas Production
550	Civic Center Cogen LA County	Other Combustion Source
3704	All American Asphalt - Corona	Other Combustion Source

FACID	FACILITY	PRIMARY_SECTOR
7427	Owens-Brockway Glass Container Inc	Other Combustion Source
8547	Quemetco Inc.	Other Combustion Source
12428	New NGC Inc - Long Beach	Other Combustion Source
14495	Vista Metals Corp.	Other Combustion Source
16639	Shultz Steel Company	Other Combustion Source
16642	Anheuser-Busch LLC - Los Angeles Brewery	Other Combustion Source
18931	TAMCO	Other Combustion Source
21887	Kimberly Clark Worldwide Inc.	Other Combustion Source
22911	Carlton Forge Works	Other Combustion Source
46268	California Steel Industries	Other Combustion Source
62548	Newark Pacific Paperboard (opt-in 2013)	Other Combustion Source
105903	Prime Wheel Corporation	Other Combustion Source
114801	Eco Services - Dominguez	Other Combustion Source
117290	Braun Medical Inc	Other Combustion Source
124838	Exide Technologies	Other Combustion Source
155877	MillerCoors	Other Combustion Source
172005	New-Indy Ontario LLC Linerboard Mill	Other Combustion Source
174591	Tesoro Los Angeles Refinery - Wilmington Calciner	Other Combustion Source
800037	DeMenno/Kerdoon	Other Combustion Source
800335	Los Angeles International Airport (LAX)	Other Combustion Source

Appendix C – Sample Initial Notification Letter

February 2, 2018

Subject: Initial Determination Notification for Transitioning Your Facility from RECLAIM to a Command-and-Control Regulatory Structure

Dear RECLAIM Facility Permit Holder,

The South Coast Air Quality Management District (SCAQMD) is transitioning facilities in the NOx Regional Clean Air Incentives Market (RECLAIM) program to a command-and-control regulatory structure. The SCAQMD's Governing Board has directed staff to implement the control measure for RECLAIM facilities in the 2016 Air Quality Management Plan (AQMP) to transition the RECLAIM program to a command-and-control regulatory structure requiring Best Available Retrofit Control Technology (BARCT) level controls at RECLAIM facilities as soon as practicable.

On January 5, 2018, the SCAQMD's Board adopted amendments to Rule 2002, which establishes the process to transition facilities in the RECLAIM program to a command-and-control regulatory structure. Pursuant to Rule 2002 paragraph (f)(6), this letter serves as an Initial Determination Notification that **FACILITY NAME: ABC, Facility ID # xxxxxx** is under review for being transitioned out of NOx RECLAIM. Pursuant to paragraph (f)(6), within 45 days you are required to identify all NOx RECLAIM emission equipment, including equipment exempt from written permits, pursuant to Rule 219. RECLAIM emission equipment can consist of either process units, large sources, major sources, or some combination thereof. To facilitate the process of identifying RECLAIM emission equipment, enclosed you will find a summary listing of your RECLAIM equipment based on SCAQMD permit data. Please make any corrections and identify any equipment at your facility that is exempt from written permits, pursuant to Rule 219, such as any small boilers or process heaters less than or equal to 2 million BTU per hour (e.g., Rule 219 small boilers and heaters). Please provide for each unit the type, size, and age of the unit.

Upon receiving the submitted summary list of RECLAIM equipment from your facility, SCAQMD staff will review and indicate in writing if the summary list is not complete. If the summary list is not complete, a resubmittal of the summary list for the RECLAIM equipment will be requested as indicated in Rule 2002 subparagraph (f)(6)(A). Failure to provide the completed initial information within 45 days or failure to revise an incomplete submission will result in the prohibition of all RTC uses, sales, or transfers by the facility until all the requested information is submitted, pursuant to Rule 2002 subparagraph (f)(6)(B).

Once SCAQMD staff deems your facility as ready to transition, a final determination notification will be sent, stating that your facility will be transitioned out of NOx RECLAIM. SCAQMD staff will be contacting you to schedule a meeting to discuss any potential issues with the transition from RECLAIM to command-and-control and to coordinate a site visit at your facility. In the event it is determined that your facility should not yet be transitioned out of the NOx RECLAIM program, you will also be notified. To provide a response and if you have any questions, please

do not hesitate to contact Kevin Orellana, Program Supervisor, at (909)396-3492 or via email at korellana@aqmd.gov. We look forward to working with you.

Sincerely,

FACILITY NAME: ABC
Facility ID: xxxxxx

Instructions:

Please review the list of equipment for the accuracy of the information. If you have any additional RECLAIM source equipment and/or equipment that is exempt from written permits, pursuant to Rule 219, please provide a list of this equipment. Hard copies or electronic submittals are acceptable. Also, identify any small boilers and process heaters with a heat input less than or equal to 2,000,000 BTU per hour at your facility.

RECLAIM Source Equipment List

FID	NAME	Equipment Category	Application Number	Device ID	Size	Units	Reclaim Source Type	Fuel Type	Landing Rules	RECLAIM Permit Section
xxxxxx	ABC	ICE Em	xxxxxx	Dxx	200	HP	Process Unit	DIESEL	1470	D
xxxxxx	ABC	ICE Em	xxxxxx	Dxx	650	HP	Process Unit	NG	1470	D
xxxxxx	ABC	Furnace	xxxxxx	Dxx	5	MMBTU/HR	Process Unit	NG	1147	D
xxxxxx	ABC	Oven	xxxxxx	Dxx	7	MMBTU/HR	Process Unit	NG	1147	D
xxxxxx	ABC	Boiler	xxxxxx	Dxx	30	MMBTU/HR	Large Source	NG	1146	D