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[\(PAR2002 090616\)](#)

**PROPOSED AMENDED RULE 2002. ALLOCATIONS FOR OXIDES OF  
NITROGEN (NO<sub>x</sub>) AND OXIDES OF  
SULFUR (SO<sub>x</sub>)**

(a) Purpose

The purpose of this rule is to establish the methodology for calculating facility Allocations and adjustments to RTC holdings for Oxides of Nitrogen (NO<sub>x</sub>) and Oxides of Sulfur (SO<sub>x</sub>).

(b) RECLAIM Allocations

- (1) RECLAIM Allocations will begin in 1994.
- (2) An annual Allocation will be assigned to each facility for each compliance year starting from 1994.
- (3) Allocations and RTC holdings for each year after 2011 are equal to the 2011 Allocation and RTC holdings, as determined pursuant to subdivision (f) unless, as part of the AQMP process, and pursuant to Rule 2015 (b)(1), (b)(3), (b)(4), or (c), the District Governing Board determines that additional reductions are necessary to meet air quality standards, taking into consideration the current and projected state of technology available and cost-effectiveness to achieve further emission reductions.
- (4) The Facility Permit or relevant sections thereof shall be re-issued at the beginning of each compliance year to include allocations determined pursuant to subdivisions (c), (d), (e), and (f) and any RECLAIM Trading Credits (RTC) obtained pursuant to Rule 2007 - Trading Requirements for the next fifteen years thereafter and any other modifications approved or required by the Executive Officer.
- (5) Annual emission reports submitted pursuant to Rule 301 more than five years after the original due date shall not be considered by the Executive Officer in determining facility Allocations.

(c) Establishment of Starting Allocations

- (1) The starting Allocation for RECLAIM NO<sub>x</sub> and SO<sub>x</sub> facilities initially permitted by the District prior to October 15, 1993, shall be determined by the Executive Officer utilizing the following methodology:

$$\text{Starting Allocation} = \Sigma[A \times B_1] + \text{ERCs} + \text{External Offsets}$$

Where

A = the throughput for each NO<sub>x</sub> and SO<sub>x</sub> source or process unit in the facility for the maximum throughput year from 1989 to 1992 inclusive; and

B<sub>1</sub> = the applicable starting emission factor for the subject source or process unit as specified in Table 1 or Table 2

- (2) (A) Use of 1992 data is subject to verification and revision by the Executive Officer or designee to assure validity and accuracy.
- (B) The maximum throughput year will be determined by the Executive Officer or designee from throughput data reported through annual emissions reports submitted pursuant to Rule 301 - Permit Fees, or may be designated by the permit holder prior to issuance of the Facility Permit.
- (C) To determine the applicable starting emission factor in Table 1 or Table 2, the Executive Officer or designee will categorize the equipment at each facility based on information relative to hours of operation, equipment size, heating capacity, and permit information submitted pursuant to Rule 201 - Permit to Construct, and other relevant parameters as determined by the Executive Officer or designee. No information used for purposes of this subparagraph may be inconsistent with any information or statement previously submitted on behalf of the facility to the District, including but not limited to information and statements previously submitted pursuant to Rule 301 - Permit Fees, unless the facility can demonstrate, by clear and convincing documentation, that such information or statement was inaccurate.
- (D) Throughput associated with each piece of equipment or NO<sub>x</sub> or SO<sub>x</sub> source will be multiplied by the starting emission factors specified in Table 1 or Table 2. If a lower emission factor was utilized for a given piece of equipment or NO<sub>x</sub> or SO<sub>x</sub> source pursuant to Rule 301 - Permit Fees, than the factor in Table 1 or

Table 2, the lower factor will be used for determining that portion of the Allocation.

- (E) Fuel heating values may be used to convert throughput records into the appropriate units for determining Allocations based on the emission factors in Table 1 or Table 2. If a different unit basis than set forth in Tables 1 and 2 is needed for emissions calculations, the Executive Officer shall use a default heating value to determine source emissions, unless the Facility Permit holder can demonstrate with substantial evidence to the Executive Officer that a different value should be used to determine emissions from that source.
- (3) All NO<sub>x</sub> and SO<sub>x</sub> ERCs generated at the facility and held by a RECLAIM Facility Permit holder shall be reissued as RTCs. RECLAIM facilities will have these RTCs added to their starting Allocations. RTCs generated from the conversion of ERCs shall have a zero rate of reduction for the year 1994 through the year 2000. Such RTCs shall have a cumulative rate of reduction for the years 2001, 2002, and 2003, equal to the percentage inventory adjustment factor applied to 2003 Allocations pursuant to paragraph (e)(1) of this rule and shall have a rate of reduction for compliance year 2004 and subsequent years determined pursuant to paragraph (f)(1) of this rule.
- (4) Non-RECLAIM facilities may elect to have their ERCs converted to RTCs and listed on the RTC Listing maintained by the Executive Officer or designee pursuant to Rule 2007 - Trading Requirements, so long as the written request is filed before July 1, 1994. Such RTCs will be assigned to the trading zone in which the generating facility is located. RTCs generated from the conversion of ERCs shall have a zero rate of reduction for the year 1994 through the year 2000. Such RTCs shall have a cumulative rate of reduction for the years, 2001, 2002, and 2003, equal to the percentage inventory adjustment factor applied to 2003 Allocations pursuant to paragraph (e)(1) of this rule.
- (5) External offsets provided pursuant to Regulation XIII - New Source Review, not including any offsets in excess of a 1 to 1 ratio, will be added to the starting Allocation pursuant to paragraph (c)(1) provided:
  - (A) The offsets were not received from either the Community Bank or the Priority Reserve.
  - (B) External offsets will only be added to the starting Allocation to the extent that the Facility Permit holder demonstrates that they have not already been included in the starting Allocation or as an ERC.

- RTCs issued for external offsets shall not include any offsets in excess of a 1 to 1 ratio required under Regulation XIII - New Source Review.
- (C) RTCs generated from the conversion of external offsets shall have a zero rate of reduction for the year 1994 through the year 2000. These RTCs shall have a cumulative rate of reduction for the years 2001, 2002, and 2003, equal to the percentage inventory adjustment factor applied to 2003 Allocations pursuant to paragraph (e)(1) of this rule, and for compliance year 2004 and subsequent years allocations shall be determined pursuant to paragraph (f)(1) of this rule. The rate of reduction for the year 2001 through year 2003 shall not be applied to new facilities initially totally permitted on or after January 7, 2005.
  - (D) Existing facilities with units that have Permits to Construct issued pursuant to Regulation II - Permits, dated on or after January 1, 1992, or existing facilities which have, between January 1, 1992 and October 15, 1993, installed air pollution control equipment that was exempt from offset requirements pursuant to Rule 1304 (a)(5), shall have their starting Allocations increased by the total external offsets provided, or the amount that would have been offset if the exemption had not applied.
  - (E) Existing facilities with units whose reported emissions are below capacity due to phased construction, and/or where the Permit to Operate issued pursuant to Regulation II - Permits, was issued after January 1, 1992, shall have their starting Allocations increased by the total external offsets provided.
- (6) If a Facility Permit holder can demonstrate that its 1994 Allocation is less than the 1992 emissions reported pursuant to Rule 301 - Permit Fees, and that the facility was, in 1992, operating in compliance with all applicable District rules in effect as of December 31, 1993, the facility's starting Allocation will be equal to the 1992 reported emissions.
  - (7) For new facilities initially totally permitted on or after January 1, 1993 but prior to October 15, 1993, the starting Allocation shall be equal to the external offsets provided by the facility to offset emission increases at the facility pursuant to Regulation XIII - New Source Review, not including any offsets in excess of a 1 to 1 ratio.

- (8) The Allocation for new facilities initially totally permitted on and after October 15, 1993, shall be equal to the total RTCs provided by the facility to offset emission increases at the facility pursuant to Rule 2005- New Source Review for RECLAIM.
- (9) The starting Allocation for existing facilities which enter the RECLAIM program pursuant to Rule 2001 - Applicability, shall be determined by the methodology in paragraph (c)(1) of this rule. The most recent two years reported emission fee data filed pursuant to Rule 301 - Permit Fees, may be used if 1989 through 1992 emission fee data is not available. For facilities lacking reported emission fee data, the Allocation shall be equal to the external offsets provided pursuant to Regulation XIII - New Source Review, not including any offsets in excess of a 1 to 1 ratio. The Allocation shall not include any emission offsets received from either the Community Bank or the Priority Reserve.
- (10) A facility may not receive more than one set of Allocations.
- (11) A facility that is no longer holding a valid District permit on January 1, 1994 will not receive an Allocation, but may, if authorized by Regulation XIII, apply for ERCs.
- (12) **Clean Fuel Adjustment to Starting Allocation**  
Any refiner who is required to make modifications to comply with CARB Phase II reformulated gasoline production (California Code of Regulations, Title 13, Sections 2250, 2251.5, 2252, 2260, 2261, 2262, 2262.2, 2262.3, 2262.4, 2262.5, 2262.6, 2262.7, 2263, 2264, 2266, 2267, 2268, 2269, 2270, and 2271) or federal requirements (Federal Clean Air Act, Title II, Part A, Section 211; 42 U.S.C. Section 7545) may receive (an) increase(s) in his Allocations except to the extent that there is an increase in maximum rating of the new or modified equipment. Each facility requesting an increase to Allocations shall submit an application for permit amendment specifying the necessary modifications and tentative schedule for completion. The Facility Permit holder shall establish the amount of emission increases resulting from the reformulated gasoline modifications for each year in which the increase in Allocations is requested. The increase to its Allocations will be issued contemporaneously with the modification according to a schedule approved by the Executive Officer or designee (i.e., 1994 through 1997 depending on the refinery). Each increase to the Allocations shall be equal to the increased emissions resulting from the modifications solely to comply with the state or federal reformulated gasoline requirements at the refinery or facility

producing hydrogen for reformulated gasoline production, and shall be established according to present and future compliance limits in current District rules or permits. Allocation increases for each refiner pursuant to this paragraph, shall not exceed 5 percent of the refiner's total starting Allocation, unless any refiner emits less than 0.0135 tons of NO<sub>x</sub> per thousand barrels of crude processed, in which case the Allocation increases for such refiner shall not exceed 20 percent of that refiner's starting Allocation. The emissions per amount of crude processed will be determined on the basis of information reported to the District pursuant to Rule 301 - Permit Fees, for the same calendar year as the facility's peak activity year for their NO<sub>x</sub> starting Allocation.

(d) Establishment of Year 2000 Allocations

- (1) (A) The year 2000 Allocations for RECLAIM NO<sub>x</sub> and SO<sub>x</sub> facilities will be determined by the Executive Officer or designee utilizing the following methodology:  
Year 2000 Allocation =  $\sum [A \times B_2]$  + RTCs created from ERCs + External Offsets,

Where

- A = the throughput for each NO<sub>x</sub> or SO<sub>x</sub> source or process unit in the facility for the maximum throughput year from 1987 to 1992, inclusive, as reported pursuant to Rule 301 - Permit Fees; and
- B<sub>2</sub> = the applicable Tier I year Allocation emission factor for the subject source or process unit, as specified in Table 1 or Table 2.
- (B) The maximum throughput year will be determined by the Executive Officer or designee from throughput data reported through annual emissions reports pursuant to Rule 301 - Permit Fees, or may be designated by the permit holder prior to issuance of the Facility Permit.
- (C) To determine the applicable emission factor in Table 1 or Table 2, the Executive Officer or designee will categorize the equipment at each facility based on information on hours of operation, equipment size, heating capacity, and permit information submitted pursuant to Rule 201 - Permit to Construct, and other parameters as determined by the Executive Officer or designee. No information used for purposes of this subparagraph may be inconsistent with any information or statement previously submitted on behalf of the

- facility to the District including but not limited to information and statements previously submitted pursuant to Rule 301 - Permit Fees, unless the facility can demonstrate, by clear and convincing documentation, that such information or statement was inaccurate.
- (D) Throughput associated with each piece of equipment or NO<sub>x</sub> or SO<sub>x</sub> source will be multiplied by the Tier I emission factor specified in Table 1 or Table 2. If a factor lower than the factor in Table 1 or Table 2 was utilized for a given piece of equipment or NO<sub>x</sub> or SO<sub>x</sub> source pursuant to Rule 301, the lower factor will be used for determining that portion of the Allocation.
  - (E) The fuel heating value may be considered in determining Allocations and will be set to 1.0 unless the Facility Permit holder demonstrates that it should receive a different value.
  - (F) The year 2000 Allocation is the sum of the resulting products for each piece of equipment or NO<sub>x</sub> or SO<sub>x</sub> source multiplied by any inventory adjustment pursuant to paragraph (d)(4) of this rule.
- (2) For facilities existing prior to October 15, 1993 which enter RECLAIM after October 15, 1993, the year 2000 Allocation will be determined according to paragraph (d)(1). The most recent two years reported emission fee data filed pursuant to Rule 301 - Permit Fees, may be used if 1989 through 1992 emission fee data is not available. For facilities lacking reported emission fee data, the Allocation shall be equal to their external offsets provided pursuant to Regulation XIII - New Source Review, not including any offsets in excess of a 1 to 1 ratio.
  - (3) No facility shall have a year 2000 Allocation [calculated pursuant to subdivision (d)] greater than the starting Allocation [calculated pursuant to subdivision (c)].
  - (4) If the sum of all RECLAIM facilities' year 2000 Allocations differs from the year 2000 projected inventory for these sources under the 1991 AQMP, the Executive Officer or designee will establish a percentage inventory adjustment factor that will be applied to adjust each facility's year 2000 Allocation. The inventory adjustment will not apply to RTCs generated from ERCs or external offsets.
- (e) Allocations for the Year 2003
    - (1) The 2003 Allocations will be determined by the Executive Officer or designee applying a percentage inventory adjustment to reduce each facility's

unadjusted year 2000 Allocation so that the sum of all RECLAIM facilities' 2003 Allocations will equal the 1991 AQMP projected inventory for RECLAIM sources for the year 2003, corrected based on actual facility data reviewed for purposes of issuing Facility Permits and to reflect the highest year of actual Basin-wide economic activity for RECLAIM sources considered as a whole during the years 1987 through 1992.

- (2) No facility shall have a 2003 Allocation (calculated pursuant this subdivision) greater than the year 2000 Allocation [calculated pursuant to subdivision (d)].
  
- (f) Annual Allocations for NO<sub>x</sub> and SO<sub>x</sub> and Adjustments to RTC Holdings
  - (1) Allocations for the years between 1994 and 2000, for RECLAIM NO<sub>x</sub> and SO<sub>x</sub> facilities shall be determined by a straight line rate of reduction between the starting Allocation and the year 2000 Allocation. For the years 2001 and 2002, the Allocations shall be determined by a straight line rate of reduction between the year 2000 and year 2003 Allocations. NO<sub>x</sub> Allocations for 2004, 2005, and 2006 and SO<sub>x</sub> Allocations for 2004 through 2012 are equal to the facility's 2003 Allocation, as determined pursuant to subdivision (e). NO<sub>x</sub> RTC Allocations and holdings subsequent to the year 2006 and SO<sub>x</sub> Allocations and holdings subsequent to the year 2012 shall be adjusted to the nearest pound as follows:
    - (A) The Executive Officer will adjust NO<sub>x</sub> RTC holdings, as of January 7, 2005 for compliance years 2007 and thereafter by multiplying the amount of RTC holdings by the following adjustment factors for the relevant compliance year, to obtain tradable/usable and non-tradable/non-usable holdings:

| Compliance<br><u>Year</u> | Tradable/Usable<br>NO <sub>x</sub> RTC<br><u>Adjustment Factor</u> |
|---------------------------|--|
| 2007                      | 0.883  |
| 2008                      | 0.856  |
| 2009                      | 0.829  |
| 2010                      | 0.802  |
| 2011 and<br>after         | 0.775  |

- (B) The Executive Officer shall adjust NO<sub>x</sub> RTCs held as of September 22, 2015 by the RTC holders identified in Table 7 and their successors using the following adjustment factors to obtain Tradable/Usable and Non-Tradable/Non-Usable RTC Holdings:



| Compliance<br><u>Year</u> | Tradable/Usable<br>NOx RTC<br><u>Adjustment Factor</u> | Non-tradable/<br>Non-usable NOx RTC<br><u>Adjustment Factor</u> |
|---------------------------|--|---|
| 2015                      | 1.0  | 0   |
| 2016                      | 0.906  | 0.094   |
| 2017                      | 0.906  | 0   |
| 2018                      | 0.859  | 0.047   |
| 2019                      | 0.812  | 0.047   |
| 2020                      | 0.719  | 0.093   |
| 2021                      | 0.625  | 0.094   |
| 2022                      | 0.437  | 0.188   |
| 2023 and<br>after         | 0.437  | 0   |

RTC holdings traded from RTC holders in Table 7 on and after September 22, 2015 and held by other RTC holders not listed in Table 7 shall be subjected to the above adjustment factors. The adjustment factor(s) for any RTC sold by an RTC holder that both purchased and sold RTCs between September 22, 2015 and December 4, 2015 shall be based on a last in/first out basis.

- (C) The Executive Officer shall adjust NOx RTCs held as of September 22, 2015 by the RTC holders identified in Table 8 and their successors using the following adjustment factors to obtain Tradable/Usable and Non-Tradable/Non-Usable RTC holdings:

| Compliance<br><u>Year</u> | Tradable/Usable<br>NOx RTC<br><u>Adjustment Factor</u> | Non-tradable/<br>Non-usable NOx RTC<br><u>Adjustment Factor</u> |
|---------------------------|--|---|
| 2015                      | 1.0  | 0   |
| 2016                      | 0.931  | 0.069   |
| 2017                      | 0.931  | 0   |
| 2018                      | 0.896  | 0.035   |
| 2019                      | 0.861  | 0.035   |
| 2020                      | 0.792  | 0.069   |
| 2021                      | 0.722  | 0.070   |
| 2022                      | 0.583  | 0.139   |
| 2023 and<br>after         | 0.583  | 0   |

RTC holdings traded from RTC holders in Table 8 on and after September 22, 2015 and held by other RTC holders not listed in Table 8 shall be subjected to the above adjustment factors. The adjustment factor(s) for any RTC sold by an RTC holder that both purchased and sold RTCs between September 22, 2015 and December 4, 2015 shall be based on a last in/first out basis.

- (D) RTCs designated as non-tradable/non-usable pursuant to subparagraphs (f)(1)(B) and (f)(1)(C) shall be held, but shall not be traded or used for reconciling emissions pursuant to Rule 2004.
- (E) Commencing on January 1, 2008 with NOx RTC prices averaged from January 1, 2007 through December 31, 2007, the Executive Officer will calculate the 12-month rolling average RTC price for all trades for the current compliance year. Commencing on May 1, 2016 with NOx RTC prices averaged from January 1, 2016 through March 31, 2016, the Executive Officer will calculate the 3-month rolling average NOx RTC price for all trades for the current compliance year NOx RTCs and the 12-month rolling average NOx RTC price for all trades for infinite year block NOx RTC as defined in subparagraph (f)(1)(I). The Executive Officer will update the 3-month and 12-month rolling average once per month. The computation of the rolling average prices will not include RTC transactions reported at no price or RTC swap transactions.
- (F) The Executive Officer shall transfer to a Regional NSR Holding account the amount of NOx RTCs holdings listed in Table 9 of this Rule from the corresponding facilities identified in the same table.
- (G) For purposes of meeting the NSR holding requirement as specified in subdivision (f) of Rule 2005, the facilities identified in Table 9 may use a combination of their Tradable/Usable and Non-tradable/Non-usable RTCs specified in subparagraph (f)(1)(C) and the amount listed for each facility in Table 9, which represents the RTCs in the Regional NSR Holding account.
- (H) In the event that the NOx RTC prices exceed \$22,500 per ton (current compliance year credits) based on the 12-month rolling average, or exceed \$35,000 per ton (current compliance year credits) based on the 3-month rolling average calculated pursuant to subparagraph (f)(1)(E), the Executive Officer will report the determination to the Governing Board. If the Governing Board finds that the 12-month rolling average RTC price exceeds \$22,500 per ton or the 3-month rolling average RTC price exceeds \$35,000 per ton, then the Non-tradable/Non-usable NOx RTCs, as specified in subparagraphs (f)(1)(B) and (f)(1)(C) valid for the period in which the RTC price is found to have exceeded the applicable

threshold, shall be converted to Tradable/Usable NO<sub>x</sub> RTCs upon Governing Board concurrence.

- (I) In the event that the infinite year block NO<sub>x</sub> RTC prices fall below \$200,000 per ton based on the 12-month rolling average, calculated pursuant to subparagraph (f)(1)(E) beginning in 2019 for the compliance year in which Cycle 1 facilities are operating, the Executive Officer will report the determination to the Governing Board.

For the purpose of this rule, infinite year block refers to trades involving blocks of RTCs with a specified start year and continuing into the future for ten or more years.

- (J) Pursuant to subparagraphs (f)(1)(H) and (f)(1)(I) the Executive Officer's report to the Board will also include a commitment and schedule to conduct a more rigorous control technology implementation, emission reduction, cost-effectiveness, market analysis, and socioeconomic impact assessment of the RECLAIM program. The Executive Officer's report to the Board will be made at a public hearing at the earliest possible regularly scheduled Board Meeting, but no more than 90 days from Executive Officer determination.

- (K) The NO<sub>x</sub> emission reductions associated with the RTC adjustment factors for compliance years 2016, and 2018 through 2022 shall not be submitted for inclusion into the State Implementation Plan until the adjustments have been in effect for one full compliance year. However, the amount of NO<sub>x</sub> RTCs adjustments specified in subparagraph (f)(1)(F) shall not be submitted for inclusion in the State Implementation Plan.

- (L) NO<sub>x</sub> Allocations for existing facilities that enter RECLAIM after December 4, 2015 for Compliance Year 2016 and all subsequent years shall be the amount determined pursuant to subparagraph (d)(1)(A) except the variable B2 shall be the lowest of:

- (i) The applicable 2000 (Tier I) Ending Emission Factor for the subject source(s) or process unit(s), as specified in Table 1 multiplied by the percentage inventory adjustment pursuant to subdivision (e) (0.72);
- (ii) The BARCT Emission factor for the subject source as specified in Table 3; and

(iii) The BARCT Emission factor for the subject source, as specified in Table 6.

(M) SO<sub>x</sub> RTC Holdings as of November 5, 2010, for compliance years 2013 and after shall be adjusted to achieve an overall reduction in the following amounts:

| Compliance Year | Minimum emission reductions<br>(lbs.) |
|-----------------|---------------------------------------|
| 2013            | 2,190,000                             |
| 2014            | 2,920,000                             |
| 2015            | 2,920,000                             |
| 2016            | 2,920,000                             |
| 2017            | 3,650,000                             |
| 2018            | 3,650,000                             |
| 2019 and after  | 4,161,000                             |

(N) The Executive Officer shall determine Tradable/usable SO<sub>x</sub> RTC Adjustment Factor for each compliance year after 2012 as follows:

$$F_{\text{compliance year } i} = 1 - [X_i / (A_i + B_i + C_i)]$$

Where:

$F_{\text{compliance year } i}$  = Tradable/usable SO<sub>x</sub> RTC Adjustment Factor for compliance year  $i$  starting with 2013

$A_i$  = Total SO<sub>x</sub> RTCs for compliance year  $i$  held as of November 5, 2010, by all RTC holders, except those listed in Table 5

$B_i$  = Total SO<sub>x</sub> RTCs for compliance year  $i$  credited to any facilities listed in Table 5 between August 29, 2009 and November 5, 2010, and not included in  $C_i$

$C_i$  = Total SO<sub>x</sub> RTCs held as of November 5, 2010 by facilities listed in Table 5 for compliance year  $i$  in excess of allocations as determined pursuant to subdivision (e).

$X_i$  = Amount to be reduced for compliance year  $i$  starting with 2013 as listed in subparagraph (f)(1)(M).

(O) The Executive Officer shall determine Non-tradable/Non-usable SO<sub>x</sub> RTC Adjustment Factors for compliance years 2017 through 2019 as follows:

$$N_{\text{compliance year } j} = F_{\text{compliance year } 2016} - F_{\text{compliance year } j}$$

Where:

$N_{\text{compliance year } j}$  = Non-tradable/Non-usable SO<sub>x</sub> RTC Adjustment Factor for compliance year  $j$

$F_{\text{compliance year } j}$  = Tradable/Usable SO<sub>x</sub> RTC Adjustment Factor for compliance year *j* as determined pursuant to subparagraph (f)(1)(N)

*j* = 2017 through 2019

$F_{\text{compliance year } 2016}$  = Tradable/usable SO<sub>x</sub> RTC Adjustment Factor for compliance year 2016 as determined pursuant to subparagraph (f)(1)(N)

Non-tradable/Non-usable SO<sub>x</sub> RTC Adjustment Factors for compliance years 2013, 2014, 2020, and all years after 2020 shall be 0.0.

- (P) The Executive Officer shall adjust the SO<sub>x</sub> RTC holdings as of November 5, 2010, for compliance years 2013 and after as follows:
- (i) Apply the Tradable/Usable SO<sub>x</sub> RTC Adjustment Factor ( $F_{\text{compliance year } i}$ ) and Non-tradable/Non-usable SO<sub>x</sub> RTC Adjustment Factor ( $N_{\text{compliance year } j}$ ) for the corresponding compliance year as published under subparagraph (f)(1)(Q) to SO<sub>x</sub> RTC holdings held by any RTC holder except those listed in Table 5;
  - (ii) Apply no adjustment to SO<sub>x</sub> RTC holdings that are held as of August 29, 2009 by a facility listed in Table 5, and that are less than or equal to the facility's allocations as determined pursuant to subdivision (e), and that were not credited between August 29, 2009 and November 5, 2010;
  - (iii) Apply the Tradable/Usable SO<sub>x</sub> RTC Adjustment Factor ( $F_{\text{compliance year } i}$ ) and Non-tradable/Non-usable SO<sub>x</sub> RTC Adjustment Factor ( $N_{\text{compliance year } j}$ ) for the corresponding compliance year as published under subparagraph (f)(1)(Q) to any SO<sub>x</sub> RTC holding as of November 5, 2010, that is held by a facility that is listed in Table 5, and that is over the facility's allocations as determined pursuant to subdivision (e); and

- (iv) Apply the Tradable/Usable SOx RTC Adjustment Factor ( $F_{\text{compliance year } i}$ ) and Non-tradable/non-usable SOx RTC Adjustment Factor ( $N_{\text{compliance year } j}$ ) for the corresponding compliance year as published under subparagraph (f)(1)(Q) to any SOx RTC holding that was acquired between August 29, 2009 and November 5, 2010, by a facility that is listed in Table 5.

No SOx RTC holding shall be subject to the SOx RTC adjustments as published under subparagraph (f)(1)(Q) more than once.

- (Q) The Executive Officer shall publish the SOx RTC Adjustment Factors determined according to subparagraphs (f)(1)(N) and (f)(1)(O) within 30 days after November 5, 2010.
- (R) Commencing on January 1, 2017 and ending on February 1, 2020, the Executive Officer will calculate the 12-month rolling average SOx RTC price for all trades during the preceding 12 months for the current compliance year. The Executive Officer will update the 12-month rolling average once per month. The computation of the rolling average prices will not include RTC transactions reported at no price or RTC swap transactions.
- (S) In the event that the SOx RTC prices exceed \$50,000 per ton based on the 12-month rolling average calculated pursuant to subparagraph (f)(1)(R), the Executive Officer will report to the Governing Board at a duly noticed public hearing to be held no more than 60 days from Executive Officer determination. The Executive Officer will announce that determination on the SCAQMD website. At the public hearing, the Governing Board will decide whether or not to convert any portion of the Non-tradable/Non-usable RTCs, as determined pursuant to subparagraphs (f)(1)(O) and (f)(1)(P), and how much to convert if any, to Tradable/Usable RTCs. The portion of Non-tradable/Non-usable RTCs available for conversion to Tradable/Usable RTCs shall not include any portion of Non-tradable/Non-usable RTCs that are designated for previous compliance years and has not already been converted by the Governing Board, or that has been otherwise included in the State Implementation Plan pursuant to subparagraph (f)(1)(T).

- (T) The Executive Officer will not submit the emission reductions obtained through subparagraph (f)(1)(M) for compliance years 2017 through 2019 for inclusion into the State Implementation Plan until the adjustments for the RTC Holdings have been in effect for one full compliance year.
  - (U) SOx Allocations for compliance years 2013 and after, for facilities that enter RECLAIM after November 5, 2010, and for basic equipment listed in Table 4 shall be determined according to the BARCT level listed in Table 4 or the permitted emission limits, whichever is lower.
  - (V) By no later than July 1, 2012, SOx emissions at the exhaust of a Fluidized Catalytic Cracking Unit, as measured at the final stack venting gases originating from the facility's FCC Regenerator, including after the CO Boiler or any additional controls in the system following the regenerator (the final stack shall constitute the only exhaust gas compliance point within the FCCU facility), shall not exceed a concentration of 25 ppm dry @ 0% oxygen on a 365-day rolling average. The numeric concentration-based limit does not apply during time periods in which SOx data are determined to be incorrect due to analyzer calibration or malfunction. For the purpose of demonstrating compliance with this limit, the operator of a FCCU shall commence the use of SOx reducing additives in the FCCU no later than July 1, 2011, unless the operator has an existing wet gas scrubber in operation at BARCT levels prior to November 5, 2010 or can demonstrate to the Executive Officer that the FCCU will achieve this limit by using other control methods.
- (2) New facilities initially totally permitted, on and after October 15, 1993, but prior to January 7, 2005, and entering the RECLAIM program after January 7, 2005 shall not have a rate of reduction until 2001. Reductions from 2001 to 2003, inclusive, shall be implemented pursuant to subdivision (e). New facilities initially totally permitted on or after January 7, 2005 using external offsets shall have a rate of reduction for such offsets pursuant to subparagraph (c)(5)(C). New facilities initially totally permitted on or after January 7, 2005 using RTCs shall have no rate of reduction for such RTCs, provided that RTCs obtained have been adjusted according to paragraph (f)(1), as applicable. The Facility Permit for such facilities will require the Facility Permit holder to, at the commencement of each compliance year,

hold RTCs equal to the amount of RTCs provided as offsets pursuant to Rule 2005.

- (3) Increases to Allocations for permits issued for Clean Fuel adjustments pursuant to paragraph (c)(12), shall be added to each year's Allocation.
- (4) During a State of Emergency declared by the Governor related to electricity demand or power grid stability within the SCAQMD jurisdictional boundaries, the current compliance year Non-tradable/Non-usable NOx RTCs held by electricity generating facilities as defined in Rule 2001(g)(1) that generate and distribute electricity to the grid system(s) affected by the State of Emergency may be used to offset their emissions after completely exhausting their own Tradable/Usable NOx RTCs.

If such a facility has completely exhausted their Non-tradable/Non-usable NOx RTCs, the owner or operator of the facility may apply for the use of the NOx RTCs in the Regional NSR Holding Account. The use of such RTCs in this Account shall be based on availability at the end of each quarter. The owner or operator of each electricity generating facility requesting NOx RTCs from the Regional NSR Holding Account shall submit a written request to the Executive Officer specifying the amount of RTCs needed and the basis for requesting the required amount.

The Executive Officer will determine the amount and distribution of the NOx RTCs from the Regional NSR Holding Account based on the requesting facility meeting the following criteria:

- (i) The State of Emergency related to electricity demand or power grid stability within the SCAQMD jurisdictional boundaries, as declared by the Governor, was the direct cause of the excess emissions;
- (ii) The facility has been ordered to generate electricity in an increased amount and/or frequency due to the State of Emergency;
- (iii) The facility has adequately demonstrated their need for the specific amount of RTCs from the Regional NSR Holding Account; and
- (iv) The facility owner or operator has not sold any part of their RTC holdings for the subject compliance year.

If the total RTCs requested exceed the supply of RTCs in this Account, the RTCs will be distributed proportionately according to the offset needs of the



facilities on a quarterly basis. These RTCs will be non-tradable, but usable to offset emissions.

- (5) The Executive Officer will report to the Governing Board within 60 days of the end of the quarter in which a State of Emergency was declared by the Governor related to electricity demand or power grid stability within the SCAQMD jurisdictional boundaries. Included in this report will be, as applicable:

- (i) the quantity of RTCs from the Regional NSR Holding Account that were distributed for compliance with the requirement to reconcile quarterly and annual emissions;
- (ii) any adverse impacts that the State of Emergency is having on the RECLAIM program; and
- (iii) any potential changes to the RECLAIM program that will be needed to help correct these impacts.

- (g) High Employment/Low Emissions (HILO) Facility

The Executive Officer or designee will establish a HILO bank funded with the following maximum total annual emission Allocations:

- (1) 91 tons per year of NO<sub>x</sub>
- (2) 91 tons per year of ~~So<sub>x</sub>~~SO<sub>x</sub>
- (3) After January 1, 1997, new facilities may apply to the HILO bank in order to obtain non-tradable RTCs. Requests will be processed on a first-come, first-served basis, pending qualification.
- (4) When credits are available, annual Allocations will be granted for the year of application and all subsequent years.
- (5) HILO facilities receiving such Allocations from the HILO bank must verify their HILO status on an annual basis through their APEP report.
- (6) Failure to qualify will result in all subsequent years' credits being returned to the HILO bank.
- (7) Facilities failing to qualify for the HILO bank Allocations may reapply at any time during the next or subsequent compliance year when credits are available.

- (h) Non-Tradable Allocation Credits

- (1) Any existing RECLAIM facility with reported emissions pursuant to Rule 301 - Permit Fees, in either 1987, 1988, or 1993, greater than its starting Allocation, shall be assigned non-tradable credits for the first three years of

the program which shall be determined according to the following methodology:

Non-tradable credit for NO<sub>x</sub> and SO<sub>x</sub>:

Year 1 = (Σ [A X B<sub>1</sub>]) - 1994 Allocation;

Where:

A = the throughput for each NO<sub>x</sub> or SO<sub>x</sub> source or process unit in the facility from the single maximum throughput year from 1987, 1988, or 1993; and

B<sub>1</sub> = the applicable starting emission factor, as specified in Table 1 or Table 2.

Year 2 = Year 1 non-tradable credits X 0.667

Year 3 = Year 1 non-tradable credits X 0.333

Year 4 and subsequent years = Zero non-tradable credit.

- (2) The use of non-tradable credits shall be subject to the following requirements:
- (A) Non-tradable credits may only be used for an increase in throughput over that used to determine the facility's starting Allocation. Non-tradable credits may not be used for emissions increases associated with equipment modifications, change in feedstock or raw materials, or any other changes except increases in throughput. The Executive Officer or designee may impose Facility Permit conditions necessary to ensure compliance with this subparagraph.
  - (B) The use of activated non-tradable credits shall be subject to a non-tradable RTC mitigation fee, as specified in Rule 301 subdivision (n).
  - (C) In order to utilize non-tradable credits, the Facility Permit holder shall submit a request to the Executive Officer or designee in writing, including a demonstration that the use of the non-tradable credits complies with all requirements of this paragraph, pay any fees required pursuant to Rule 301 - Fees, and have received written approval from the Executive Officer or designee for their use. The Executive Officer or designee shall deny the request unless the Facility Permit holder demonstrates compliance with all requirements of this paragraph. The Executive Officer or designee shall, in writing, approve or deny the request within three business days of submittal of a complete request and notify the Facility Permit holder of the decision. If the request is denied, the Executive Officer or designee will refund the mitigation fee.

(D) In the event that a facility transfers any RTCs for the year in which non-tradable credits have been issued, the non-tradable credit Allocation shall be invalid, and is no longer available to the facility.

(i) NO<sub>x</sub> RECLAIM Facility Shutdowns

- (1) The requirements specified in this subdivision shall be effective [date of adoption] and only apply to the NO<sub>x</sub> RECLAIM facilities listed in Tables 7 and 8 of this rule that had a RECLAIM Allocation as issued pursuant to subdivision (b).
- (2) An owner or operator of a NO<sub>x</sub> RECLAIM facility that permanently shuts down or surrenders all operating permits for the entire facility shall notify the Executive Officer in writing of this shutdown within 30 days.
- (3) An owner or operator of a NO<sub>x</sub> RECLAIM facility that shuts down pursuant to paragraphs (i)(2), (i)(8), or (i)(9) shall have its NO<sub>x</sub> RTC holdings reduced from all future compliance years by an amount equivalent to the difference between:
  - (A) The average of actual NO<sub>x</sub> emissions from equipment that is operated at a level greater than the most stringent applicable BARCT emission factors specified in subparagraph (f)(1)(L) during the highest 2 of the past 5 compliance years for the facility; and
  - (B) The average NO<sub>x</sub> emissions from the same equipment that would have occurred in those same 2 years identified in subparagraph (i)(3)(A) if the equipment was operated at the most stringent applicable BARCT emission factors specified in subparagraph(f)(1)(L).
- (4) Any offsets provided by the SCAQMD pursuant to Rule 1304 that remain as part of the adjusted initial NO<sub>x</sub> allocation shall also be subtracted for each future compliance year.
- (5) If the reduction of NO<sub>x</sub> RTCs calculated pursuant to paragraph (i)(3) and (i)(4) exceeds the adjusted initial NO<sub>x</sub> allocation as specified in paragraph (f)(1) for any future compliance year, the facility shall have its NO<sub>x</sub> holdings reduced by an amount equivalent to the adjusted initial NO<sub>x</sub> allocation for that compliance year.
- (6) If the reduction of NO<sub>x</sub> RTCs calculated pursuant to paragraphs (i)(3) through (i)(5) exceeds the NO<sub>x</sub> RTC holdings, within 180 days of notification by the Executive Officer pursuant to paragraph (i)(11), the owner or operator of the NO<sub>x</sub> RECLAIM facility shall purchase and surrender to

the Executive Officer sufficient RTCs to fulfill the entire reduction requirement.

- (7) In addition to a self-reported facility shutdown, the Executive Officer will notify the owner or operator of a NOx RECLAIM facility that the facility is under review as potentially shutdown if NOx emissions from an APEP report show a substantial decrease in facility-wide emissions compared to the maximum emissions during last five years. Within 60 days of the notification date, the owner or operator shall notify the Executive Officer that the facility is shutdown or submit information to substantiate that the facility is not shutdown based on one the following:
- (A) Permanent emission reductions have been implemented at the facility and can be attributed to implementation of an emissions control strategy such as, but not limited to: implementation of pollution control strategies, efficiency improvements, process changes, material substitution, or fuel changes; or
  - (B) NOx emission reductions are temporary where temporary NOx emission reductions include, but are not limited to: cyclic operations, economic fluctuations, temporary shutdown of equipment due to equipment maintenance, repair, replacement, permitting, compliance, or availability of feedstocks or fuels; or
  - (C) The owner or operator of a NOx RECLAIM facility has an approved Planned Non-Operational Plan pursuant to paragraph (i)(9).
- (8) The Executive Officer will review information submitted under paragraph (i)(7) and notify the owner or operator within 60 days with a determination that the facility has or has not been deemed as shutdown.
- (A) If the Executive Officer determines that the NOx RECLAIM facility is deemed shutdown, the owner or operator of the NOx RECLAIM facility shall be subject to the requirements specified in paragraphs (i)(3) through (i)(6).
  - (B) The Executive Officer will not consider information submitted pursuant to paragraph (i)(7) beyond 60 days of the notification issue date unless such information is subsequently requested by the Executive Officer.
  - (C) The owner or operator of the NOx RECLAIM facility may file an appeal to the Hearing Board for the determination pursuant to paragraph (i)(11).

- (9) The owner or operator of the NO<sub>x</sub> RECLAIM facility may submit a Planned Non-Operational (PNO) Plan, and fees pursuant to Rule 306, to request status for a non-operational time period no longer than 5 years for equipment within the facility. The Executive Officer will:
- (A) Consider the criteria in subparagraph (i)(7)(B) for approving the plan. All of the referenced criteria shall require company records to support the claim that a PNO status of no longer than 5 years is necessary.
  - (B) Approve or disapprove the PNO Plan within 180 days of receiving a complete PNO Plan.
    - (i) If the PNO Plan is approved, the owner or operator of the NO<sub>x</sub> RECLAIM facility may sell current compliance year RTCs for the duration of the approved PNO Plan. Future year NO<sub>x</sub> RTCs shall become non-tradable for the duration of the PNO status.
    - (ii) If the PNO Plan is disapproved and the facility is deemed shutdown by the Executive Officer, the owner or operator of the NO<sub>x</sub> RECLAIM facility shall be subject to the requirements specified in paragraphs (i)(3) through (i)(6).
    - (iii) The owner or operator of a NO<sub>x</sub> RECLAIM facility may appeal the denial of PNO Plan.
- (10) If a NO<sub>x</sub> RECLAIM facility has been deemed shutdown pursuant to paragraphs (i)(2), (i)(8), or (i)(9), the RTC holdings shall be reduced pursuant to paragraphs (i)(3) through (i)(5).
- (11) The Executive Officer will notify the owner or operator of the NO<sub>x</sub> RECLAIM facility of the amount of reduction in NO<sub>x</sub> RTC holdings that was determined pursuant to paragraphs (i)(3) through (i)(5). Reduction of NO<sub>x</sub> RTC holdings shall be applied to RTCs for all future compliance years following this notification. The Executive Officer shall re-issue the facility permit to reflect the reduction of NO<sub>x</sub> RTC holdings. The owner or operator may file an appeal to the Hearing Board for the shutdown determination and for the reduction in NO<sub>x</sub> RTC holdings.
- (12) The owner or operator of a NO<sub>x</sub> RECLAIM facility that has notified the Executive Officer of a facility shutdown pursuant to paragraph (i)(2) or has received notification from the Executive Officer that it is under review as potentially shutdown pursuant to paragraph (i)(7), shall not sell any future compliance year RTCs and may only sell current compliance year RTCs (as

defined in clause (i)(9)(B)(i) until the Executive Officer notifies the owner or operator of the amount of the reduction of NO<sub>x</sub> RTCs pursuant to paragraph (i)(11).

- (13) Any NO<sub>x</sub> RECLAIM facility under the same ownership as of September 22, 2015 shall submit a written declaration within 30 days after [date of adoption] identifying the facilities under the same ownership as of September 22, 2015 and a demonstration of how the facilities identified are under the same ownership. For the purposes of this rule, same ownership is generally defined as facilities and their subsidiaries or facilities that share the same Board of Directors or shares the same parent corporation.
- (A) The Executive Officer shall maintain a listing of those facilities that are determined to be of same ownership as of September 22, 2015. The Executive Officer will only amend its same ownership listing to exclude those facilities that no longer qualify for same ownership through circumstances such as mergers, sales, or other dispositions.
- (B) In the event of a facility reporting a shutdown or is deemed shutdown by the Executive Officer, NO<sub>x</sub> RTCs from that facility may be transferred to another facility under the same ownership as listed in the most current listing of same ownership without reductions as specified under paragraphs (i)(3) through (i)(6). Such transferred NO<sub>x</sub> RTCs shall be designated as non-tradable.

Table 1

RECLAIM NO<sub>x</sub> Emission Factors

| <b>Nitrogen Oxides Basic Equipment</b>            | <b>Fuel</b>                  | <b>"Throughput" Units</b> | <b>Starting Ems Factor *</b> | <b>2000 (Tier I) Ending Ems Factor *</b> |
|---|------------------------------|---------------------------|------------------------------|--|
| Afterburner (Direct Flame and Catalytic)          | Natural Gas                  | mmcf                      | 130.000                      | 39.000                                   |
| Afterburner (Direct Flame and Catalytic)          | LPG, Propane, Butane         | 1000 Gal                  | RV                           | 3.840                                    |
| Afterburner (Direct Flame and Catalytic)          | Diesel                       | 1000 Gal                  | RV                           | 5.700                                    |
| Agr Chem-Nitric Acid                              | Process-Absrbr Tailgas/Nw    | tons pure acid produced   | RV                           | 1.440                                    |
| Agricultural Chem - Ammonia                       | Process                      | tons produced             | RV                           | 1.650                                    |
| Air Ground Turbines                               | Air Ground Turbines          | (unknown process units)   | RV                           | 1.860                                    |
| Ammonia Plant                                     | Neutralizer Fert, Ammon Nit  | tons produced             | RV                           | 2.500                                    |
| Asphalt Heater, Concrete                          | Natural Gas                  | mmcf                      | 130.000                      | 65.000                                   |
| Asphalt Heater, Concrete                          | Fuel Oil                     | 1000 gals                 | RV                           | 9.500                                    |
| Asphalt Heater, Concrete                          | LPG                          | 1000 gals                 | RV                           | 6.400                                    |
| Boiler, Heater R1109 (Petr Refin)                 | Natural Gas                  | mmbtu                     | 0.100                        | 0.030                                    |
| Boiler, Heater R1109 (Petr Refin)                 | Fuel Oil                     | mmbtu                     | 0.100                        | 0.030                                    |
| Boiler, Heater R1146 (Petr Refin)                 | Natural Gas                  | mmbtu                     | 0.045                        | 0.045                                    |
| Boiler, Heater R1146 (Petr Refin)                 | Fuel Oil                     | mmbtu                     | 0.045                        | 0.045                                    |
| Boiler, Heater R1146 (Petr Refin)                 | Refinery Gas                 | mmbtu                     | 0.045                        | 0.045                                    |
| Boilers, Heaters, Steam Gens Rule 1146 and 1146.1 | Natural Gas                  | mmcf                      | 49.180                       | 47.570                                   |
| Boilers, Heaters, Steam Gens Rule 1146 and 1146.1 | LPG, Propane, Butane         | 1000 gals                 | 4.400                        | 4.260                                    |
| Boilers, Heaters, Steam Gens Rule 1146 and 1146.1 | Diesel Light Dist. (0.05% S) | 1000 gals                 | 6.420                        | 6.210                                    |
| Boilers, Heaters, Steam Gens Rule 1146 and 1146.1 | Refinery Gas                 | mmcf                      | 51.520                       | 49.840                                   |
| Boilers, Heaters, Steam Gens                      | Bituminous Coal              | tons burned               | RV                           | 4.800                                    |
| Boiler, Heater, Steam Gen (Rule 1146.1)           | Natural Gas                  | mmcf                      | 130.000                      | 39.460                                   |
| Boiler, Heater, Steam Gen (Rule 1146.1)           | Refinery Gas                 | mmcf                      | RV                           | 41.340                                   |

\* RV = Reported Value

\*\* Does not include ceramic, clay, cement or brick kilns or metal melting, heat treating or glass melting furnaces.

\*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

\*\*\*\* Newly installed or Modified after the year selected for maximum throughput for determining starting allocations pursuant to Rule 2002(c)(1), and meeting BACT limits in effect at the time of installation.

| <b>Nitrogen Oxides Basic Equipment</b>              | <b>Fuel</b>               | <b>"Throughput" Units</b> | <b>Starting Ems Factor *</b> | <b>2000 (Tier I) Ending Ems Factor *</b> |
|---|---------------------------|---------------------------|------------------------------|--|
| Boiler, Heater, Steam Gen (Rule 1146.1)             | LPG, Propane, Butane      | 1000 gallons              | RV                           | 3.530                                    |
| Boiler, Heater, Steam Gen (Rule 1146.1)             | Diesel Light Dist (0.05%) | 1000 gallons              | RV                           | 5.150                                    |
| Boiler, Heater, Steam Gen (Rule 1146)               | Natural Gas               | mmcf                      | 47.750                       | 47.750                                   |
| Boiler, Heater, Steam Gen (Rule 1146)               | Refinery Gas              | mmcf                      | 50.030                       | 50.030                                   |
| Boiler, Heater, Steam Gen (Rule 1146)               | LPG, Propane, Butane      | 1000 gallons              | 4.280                        | 4.280                                    |
| Boiler, Heater, Steam Gen (Rule 1146)               | Diesel Light Dist (0.05%) | 1000 gallons              | 6.230                        | 6.230                                    |
| Boiler, Heater, Steam Gen (R1146, <90,000 Therms)   | Natural Gas               | mmcf                      | RV                           | 47.750                                   |
| Boiler, Heater, Steam Gen (R1146, <90,000 Therms)   | Refinery Gas              | mmcf                      | RV                           | 50.030                                   |
| Boiler, Heater, Steam Gen (R1146, <90,000 Therms)   | LPG, Propane, Butane      | 1000 gallons              | RV                           | 4.280                                    |
| Boiler, Heater, Steam Gen (R1146, <90,000 Therms)   | Diesel Light Dist (0.05%) | 1000 gallons              | RV                           | 6.230                                    |
| Boiler, Heater, Steam Gen (R1146.1, <18,000 Therms) | Natural Gas               | mmcf                      | RV                           | 39.460                                   |
| Boiler, Heater, Steam Gen (R1146.1, <18,000 Therms) | Refinery Gas              | mmcf                      | RV                           | 41.340                                   |
| Boiler, Heater, Steam Gen (R1146.1, <18,000 Therms) | LPG, Propane, Butane      | 1000 gallons              | RV                           | 3.530                                    |
| Boiler, Heater, Steam Gen (R1146.1, <18,000 Therms) | Diesel Light Dist (0.05%) | 1000 gallons              | RV                           | 5.150                                    |
| Boiler, Heater R1109 (Petr Refin)                   | Refinery Gas              | mmbtu                     | 0.100                        | 0.030                                    |
| Boilers, Heaters, Steam Gens, (Petr Refin)          | Natural Gas               | mmcf                      | 105.000                      | 31.500                                   |
| Boilers, Heaters, Steam Gens, (Petr Refin)          | Refinery Gas              | mmcf                      | 110.000                      | 33.000                                   |
| Boilers, Heaters, Steam Gens, Unpermitted           | Natural Gas               | mmcf                      | 130.000                      | 32.500                                   |
| Boilers, Heaters, Steam Gens, Unpermitted           | LPG, Propane, Butane      | 1000 gallons              | RV                           | 3.200                                    |
| Boilers, Heaters, Steam Gens ****                   | Natural Gas               | mmcf                      | 38.460                       | 38.460                                   |

\* RV = Reported Value

\*\* Does not include ceramic, clay, cement or brick kilns or metal melting, heat treating or glass melting furnaces.

\*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

\*\*\*\* Newly installed or Modified after the year selected for maximum throughput for determining starting allocations pursuant to Rule 2002(c)(1), and meeting BACT limits in effect at the time of installation.



| <b>Nitrogen Oxides Basic Equipment</b>               | <b>Fuel</b>                               | <b>"Throughput" Units</b> | <b>Starting Ems Factor *</b> | <b>2000 (Tier I) Ending Ems Factor *</b> |
|--|---|---------------------------|------------------------------|--|
| Boilers, Heaters, Steam Gens ****                    | Refinery Gas                              | mmbtu                     | 0.035                        | 0.035                                    |
| Boilers, Heaters, Steam Gens ****                    | LPG, Propane, Butane                      | 1000 gallons              | 3.55                         | 3.55                                     |
| Boilers, Heaters, Steam Gens ****                    | Diesel Light Dist (0.05%), Fuel Oil No. 2 | mmbtu                     | 0.03847                      | 0.03847                                  |
| Boilers, Heaters, Steam Gens, Unpermitted            | Diesel Light Dist (0.05%)                 | 1000 gallons              | RV                           | 4.750                                    |
| Catalyst Manufacturing                               | Catalyst Mfg                              | tons of catalyst produced | RV                           | 1.660                                    |
| Catalyst Manufacturing                               | Catalyst Mfg                              | tons of catalyst produced | RV                           | 2.090                                    |
| Cement Kilns   | Natural Gas                               | mmcf                      | 130.000                      | 19.500                                   |
| Cement Kilns   | Diesel Light Dist. (0.05% S)              | 1000 gals                 | RV                           | 2.850                                    |
| Cement Kilns   | Kilns-Dry Process                         | tons cement produced      | RV                           | 0.750                                    |
| Cement Kilns   | Bituminous Coal                           | tons burned               | RV                           | 4.800                                    |
| Cement Kilns   | Tons Clinker                              | tons clinker              | RV                           | 2.73***                                  |
| Ceramic and Brick Kilns (Preheated Combustion Air)   | Natural Gas                               | mmcf                      | 213.000                      | 170.400                                  |
| Ceramic and Brick Kilns (Preheated Combustion Air)   | Diesel Light Distillate (.05%)            | 1000 gallons              | RV                           | 24.905                                   |
| Ceramic and Brick Kilns (Preheated Combustion Air)   | LPG                                       | 1000 gallons              | RV                           | 16.778                                   |
| Ceramic Clay Mfg                                     | Drying                                    | tons input to process     | RV                           | 1.114                                    |
| CO Boiler  | Refinery Gas                              | mmbtu                     |                              | 0.030                                    |
| Cogen, Industr                                       | Coke                                      | tons burned               | RV                           | 3.682                                    |
| Electric Generation, Commercial Institutional Boiler | Distillate Oil                            | 1000 gallons              | 6.420                        | 6.210                                    |
| Composite Internal Combustion                        | Waste Fuel Oil                            | 1000 gals burned          | RV                           | 31.340                                   |
| Curing and Drying Ovens                              | Natural Gas                               | mmcf                      | 130.000                      | 32.500                                   |

\* RV = Reported Value  
 \*\* Does not include ceramic, clay, cement or brick kilns or metal melting, heat treating or glass melting furnaces.  
 \*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.  
 \*\*\*\* Newly installed or Modified after the year selected for maximum throughput for determining starting allocations pursuant to Rule 2002(c)(1), and meeting BACT limits in effect at the time of installation.

| <b>Nitrogen Oxides Basic Equipment</b>                    | <b>Fuel</b>          | <b>"Throughput" Units</b>  | <b>Starting Ems Factor *</b>       | <b>2000 (Tier I) Ending Ems Factor *</b> |
|---|----------------------|----------------------------|------------------------------------|--|
| Curing and Drying Ovens                                   | LPG, Propane, Butane | 1000 gals                  | RV                                 | 3.200                                    |
| Delacquering Furnace                                      | Natural Gas          | mmcf                       | 182.2***                           | 182.2***                                 |
| Fiberglass  | Textile-Type Fibr    | tons of material processed | RV                                 | 1.860                                    |
| Fluid Catalytic Cracking Unit                             | Fresh Feed           | 1000 BBLs fresh feed       | RV                                 | RV*0.3 ***                               |
| Fluid Catalytic Cracking Unit with Urea Injection         | Fresh Feed           | 1000 BBLs fresh feed       | RV                                 | (RV*0.3) / (1-control efficiency) ***    |
| Fugitive Emission   | Not Classified       | tons product               | RV                                 | 0.087                                    |
| Furnace Process   | Carbon Black         | tons produced              | RV                                 | 38.850                                   |
| Furnace Suppressor  | Furnace Suppressor   | unknown                    | RV                                 | 0.800                                    |
| Glass Fiber Furnace                                       | Mineral Products     | tons product produced      | RV                                 | 4.000                                    |
| Glass Melting Furnace                                     | Flat Glass           | tons of glass pulled       | RV                                 | 4.000                                    |
| Glass Melting Furnace                                     | Tableware Glass      | tons of glass pulled       | RV                                 | 5.680                                    |
| Glass Melting Furnaces                                    | Container Glass      | tons of glass produced     | 4.000                              | 1.2***                                   |
| ICEs****  | All Fuels            |                            | Equivalent to permitted BACT limit | Equivalent to permitted BACT limit       |
| ICEs, Permitted (Rule 1110.1 and 1110.2)                  | Natural Gas          | mmcf                       | 2192.450                           | 217.360                                  |
| ICEs Permitted (Rule 1110.2)                              | Natural Gas          | mmcf                       | RV                                 | 217.360                                  |
| ICEs, Permitted (Rule 1110.1 and 1110.2)                  | LPG, Propane, Butane | 1000 gals                  | RV                                 | 19.460                                   |
| ICEs, Permitted (Rule 1110.1 and 1110.2)                  | Gasoline             | 1000 gals                  | RV                                 | 20.130                                   |
| ICEs, Permitted (Rule 1110.1 and 1110.2)                  | Diesel Oil           | 1000 gals                  | RV                                 | 31.340                                   |
| ICEs, Exempted per Rule 1110.2                            | All Fuels            |                            | RV                                 | RV                                       |
| ICEs, Exempted per Rule 1110.2 and subject to Rule 1110.1 | All Fuels            |                            | RV                                 | RV                                       |
| ICEs, Unpermitted   | All Fuels            |                            | RV                                 | RV                                       |
| In Process Fuel   | Coke                 | tons burned                | RV                                 | 24.593                                   |
| Incinerators  | Natural Gas          | mmcf                       | 130.000                            | 104.000                                  |
| Industrial  | Propane              | 1000 gallons               | RV                                 | 20.890                                   |
| Industrial  | Gasoline             | 1000 gallons               | RV                                 | 21.620                                   |

\* RV = Reported Value

\*\* Does not include ceramic, clay, cement or brick kilns or metal melting, heat treating or glass melting furnaces.

\*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

\*\*\*\* Newly installed or Modified after the year selected for maximum throughput for determining starting allocations pursuant to Rule 2002(c)(1), and meeting BACT limits in effect at the time of installation.

| <b>Nitrogen Oxides Basic Equipment</b>           | <b>Fuel</b>                    | <b>"Throughput" Units</b> | <b>Starting Ems Factor*</b> | <b>2000 (Tier I) Ending Ems Factor *</b> |
|--|--------------------------------|---------------------------|-----------------------------|--|
| Industrial                                       | Dist.Oil/Diesel                | 1000 gallons              | RV                          | 33.650                                   |
| Inorganic Chemicals, H2SO4 Chamber               | General                        | tons pure acid produced   | RV                          | 0.266                                    |
| Inorganic Chemicals, H2SO4 Contact               | Absrbr 98.0% Conv              | tons 100% H2SO4           | RV                          | 0.376                                    |
| Iron/Steel Foundry                               | Steel Foundry, Elec Arc Furn   | tons metal processed      | RV                          | 0.045                                    |
| Metal Heat Treating Furnace                      | Natural Gas                    | mmcf                      | 130.000                     | 104.000                                  |
| Metal Heat Treating Furnace                      | Diesel Light Distillate (.05%) | 1000 gallons              | RV                          | 15.200                                   |
| Metal Heat Treating Furnace                      | LPG                            | 1000 gallons              | RV                          | 10.240                                   |
| Metal Forging Furnace (Preheated Combustion Air) | Natural Gas                    | mmcf                      | 213.000                     | 170.400                                  |
| Metal Forging Furnace (Preheated Combustion Air) | Diesel Light Distillate (.05%) | 1000 gallons              | RV                          | 24.905                                   |
| Metal Forging Furnace (Preheated Combustion Air) | LPG                            | 1000 gallons              | RV                          | 16.778                                   |
| Metal Melting Furnaces                           | Natural Gas                    | mmcf                      | 130.000                     | 65.000                                   |
| Metal Melting Furnaces                           | LPG, Propane, Butane           | 1000 gals                 | RV                          | 6.400                                    |
| Miscellaneous                                    |                                | bbbls-processed           | RV                          | 1.240                                    |
| Natural Gas Production                           | Not Classified                 | mmcf gas                  | RV                          | 6.320                                    |
| Nonmetallic Mineral                              | Sand/Gravel                    | tons product              | RV                          | 0.030                                    |
| NSPS   | Refinery Gas                   | mmbtu                     | RV                          | 0.030                                    |
| Other BACT Heater (24F-1)                        | Natural Gas                    | mmcf                      | RV                          | RV                                       |
| Other Heater (24F-1)                             | Pressure Swing Absorber Gas    | mmcf                      | RV                          | RV                                       |
| Ovens, Kilns, Calciners, Dryers, Furnaces**      | Natural Gas                    | mmcf                      | 130.000                     | 65.000                                   |
| Ovens, Kilns, Calciners, Dryers, Furnaces**      | Diesel Light Dist. (0.05% S)   | 1000 gals                 | RV                          | 9.500                                    |
| Paint Mfg, Solvent Loss                          | Mixing/Blending                | tons solvent              | RV                          | 45.600                                   |
| Petroleum Refining                               | Asphalt Blowing                | tons of asphalt produced  | RV                          | 45.600                                   |
| Petroleum Refining, Calciner                     | Petroleum Coke                 | Calcined Coke             | RV                          | 0.971***                                 |
| Plastics Prodn                                   | Polyester Resins               | tons product              | RV                          | 106.500                                  |
| Pot Furnace                                      | Lead Battery                   | lbs Niter                 | 0.077***                    | 0.062***                                 |
| Process Specific                                 | ID# 012183                     | (unknown process units)   | RV                          | 240.000                                  |
| Process Specific                                 | SCC 30500311                   | tons produced             | RV                          | 0.140                                    |

\* RV = Reported Value

\*\* Does not include ceramic, clay, cement or brick kilns or metal melting, heat treating or glass melting furnaces.

\*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

\*\*\*\* Newly installed or Modified after the year selected for maximum throughput for determining starting allocations pursuant to Rule 2002(c)(1), and meeting BACT limits in effect at the time of installation.

| <b>Nitrogen Oxides Basic Equipment</b> | <b>Fuel</b>                    | <b>"Throughput" Units</b> | <b>Starting Ems Factor*</b> | <b>2000 (Tier I) Ending Ems Factor *</b> |
|--|--------------------------------|---------------------------|-----------------------------|--|
| Process Specific                       | ID 14944                       | (unknown process units)   | RV                          | 0.512                                    |
| SCC 39090003                           |                                |                           | RV                          | 170.400                                  |
| Sec. Aluminum                          | Sweating Furnace               | tons produced             | RV                          | 0.300                                    |
| Sec. Aluminum                          | Smelting Furnace               | tons metal produced       | RV                          | 0.323                                    |
| Sec. Aluminum                          | Annealing Furnace              | mmcf                      | 130.000                     | 65.000                                   |
| Sec. Aluminum                          | Boring Dryer                   | tons produced             | RV                          | 0.057                                    |
| Sec. Lead                              | Smelting Furnace               | tons metal charged        | RV                          | 0.110                                    |
| Sec. Lead                              | Smelting Furnace               | tons metal charged        | RV                          | 0.060                                    |
| Sodium Silicate Furnace                | Water Glass                    | Tons Glass Pulled         | RV                          | 6.400                                    |
| Steel Hot Plate Furnace                | Natural Gas                    | mmcf                      | 213.000                     | 106.500                                  |
| Steel Hot Plate Furnace                | Diesel Light Distillate (.05%) | 1000 gallons              | 31.131                      | 10.486                                   |
| Steel Hot Plate Furnace                | LPG, Propane, Butane           | 1000 gallons              | 20.970                      | 10.486                                   |
| Surface Coal Mine                      | Haul Road                      | tons coal                 | RV                          | 62.140                                   |
| Tail Gas Unit                          |                                | hours of operation        | RV                          | RV                                       |
| Turbines                               | Butane                         | 1000 Gallons              | RV                          | 5.700                                    |
| Turbines                               | Diesel Oil                     | 1000 gals                 | RV                          | 8.814                                    |
| Turbines                               | Refinery Gas                   | mmcf                      | RV                          | 62.275                                   |
| Turbines                               | Natural Gas                    | mmcf                      | RV                          | 61.450                                   |
| Turbines (micro-)                      | Natural Gas                    | mmcf                      | 54.4                        | 54.4                                     |
| Turbines - Peaking Unit                | Natural Gas                    | mmcf                      | RV                          | RV                                       |
| Turbines - Peaking Unit                | Dist. Oil/Diesel               | 1000 gallons              | RV                          | RV                                       |
| Utility Boiler                         | Digester/Landfill Gas          | mmcf                      | 52.350                      | 10.080                                   |
| Turbine                                | Natural Gas                    | mmcf                      | RV                          | 61.450                                   |
| Turbine                                | Fuel Oil                       | 1000 gallons              | RV                          | 8.810                                    |
| Turbine                                | Dist.Oil/Diesel                | 1000 gallons              | RV                          | 3.000                                    |
| Utility Boiler Burbank                 | Natural Gas                    | mmcf                      | 148.670                     | 17.200                                   |
| Utility Boiler Burbank                 | Residual Oil                   | 1000 gallons              | 20.170                      | 2.330                                    |
| Utility Boiler, Glendale               | Natural Gas                    | mmcf                      | 140.430                     | 16.000                                   |
| Utility Boiler, Glendale               | Residual Oil                   | 1000 gallons              | 20.160                      | 2.290                                    |
| Utility Boiler, LADWP                  | Natural Gas                    | mmcf                      | 86.560                      | 15.830                                   |
| Utility Boiler, LADWP                  | Residual Oil                   | 1000 gallons              | 12.370                      | 2.260                                    |
| Utility Boiler, LADWP                  | Digester Gas                   | mmcf                      | 52.350                      | 10.080                                   |
| Utility Boiler, LADWP                  | Landfill Gas                   | mmcf                      | 37.760                      | 6.910                                    |
| Utility Boiler, Pasadena               | Natural Gas                    | mmcf                      | 195.640                     | 18.500                                   |
| Utility Boiler, Pasadena               | Residual Oil                   | 1000 gallons              | 28.290                      | 2.670                                    |
| Utility Boiler, SCE                    | Natural Gas                    | mmcf                      | 74.860                      | 15.600                                   |
| Utility Boiler, SCE                    | Residual Oil                   | 1000 gallons              | 10.750                      | 2.240                                    |

\* RV = Reported Value

\*\* Does not include ceramic, clay, cement or brick kilns or metal melting, heat treating or glass melting furnaces.

\*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

\*\*\*\* Newly installed or Modified after the year selected for maximum throughput for determining starting allocations pursuant to Rule 2002(c)(1), and meeting BACT limits in effect at the time of installation.

Table 2

RECLAIM SO<sub>x</sub> Emission Factors

| <b>Sulfur Oxides Basic Equipment</b>        | <b>Fuel</b>                           | <b>"Throughput" Units</b> | <b>Starting Emission Factor *</b> | <b>Ending Emission Factor *</b> |
|---|---------------------------------------|---------------------------|-----------------------------------|---------------------------------|
| Air Blown Asphalt                           |                                       | hours of operation        | RV                                | RV                              |
| Asphalt Concrete                            | Cold Ag Handling                      | tons produced             | RV                                | 0.032                           |
| Calciner                                    | Petroleum Coke                        | Calcined Coke             | RV                                | 0.000                           |
| Catalyst Regeneration                       |                                       | hours of operation        | RV                                | RV                              |
| Cement Kiln                                 | Distillate Oil                        | 1000 gallons              | RV                                | RV                              |
| Cement Mfg                                  | Kilns, Dry Process                    | tons produced             | RV                                | RV                              |
| Claus Unit                                  |                                       | pounds                    | RV                                | RV                              |
| Cogen                                       | Coke                                  | pounds per ton            | RV                                | RV                              |
| Non Fuel Use                                |                                       | hours of operation        | RV                                | RV                              |
| External Combustion Equipment / Incinerator | Natural Gas                           | mmcf                      | RV                                | 0.830                           |
| External Combustion Equip/Incinerator       | LPG, Propane, Butane                  | 1000 gallons              | RV                                | 4.600                           |
| External Combustion Equip/Incinerator       | Diesel Light Dist. (0.05% S)          | 1000 gallons              | 7.00                              | 5.600                           |
| External Combustion Equip/Incinerator       | Residual Oil                          | 1000 gallons              | 8.00                              | 6.400                           |
| External Combustion Equip/Incinerator       | Refinery Gas                          | mmcf                      | RV                                | 6.760                           |
| Fiberglass                                  | Recuperative Furn, Textile-Type Fiber | tons produced             | RV                                | 2.145                           |
| Fluid Catalytic Cracking Units              |                                       | 1000 bbls refinery feed   | RV                                | 13.700                          |
| Glass Mfg, Forming/Fin                      | Container Glass                       |                           | RV                                | RV                              |
| Grain Milling                               | Flour Mill                            | tons Grain Processed      | RV                                | RV                              |
| ICEs  | Natural Gas                           | mmcf                      | RV                                | 0.600                           |
| ICEs  | LPG, Propane, Butane                  | 1000 gallons              | RV                                | 0.350                           |
| ICEs  | Gasoline                              | 1000 gallons              | RV                                | 4.240                           |
| ICEs  | Diesel Oil                            | 1000 gallons              | 6.24                              | 4.990                           |
| Industrial                                  | Cogeneration, Bituminous Coal         | tons produced             | RV                                | RV                              |
| Industrial (scc 10200804)                   | Cogeneration, Coke                    | tons produced             | RV                                | RV                              |
| Inorganic Chemcals                          | General, H2SO4 Chamber                | tons produced             | RV                                | RV                              |
| Inorganic Chemcals                          | Absrbr 98.0% Conv, H2SO4 Contact      | tons produced             | RV                                | RV                              |

\* RV = Reported Value

\*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

| <b>Sulfur Oxides Basic Equipment</b> | <b>Fuel</b>                        | <b>"Throughput" Units</b> | <b>Starting Emission Factor *</b> | <b>Ending Emission Factor *</b> |
|--------------------------------------|------------------------------------|---------------------------|-----------------------------------|---------------------------------|
| Inprocess Fuel                       | Cement Kiln/Dryer, Bituminous Coal | tons produced             | RV                                | RV                              |
| Iron/Steel Foundry                   | Cupola, Gray Iron Foundry          | tons produced             | RV                                | 0.720                           |
| Melting Furnace, Container Glass     |                                    | tons produced             | RV                                | RV                              |
| Mericher Alkyd Feed                  |                                    | hours of operation        | RV                                | RV                              |
| Miscellaneous                        | Not Classified                     | tons produced             | RV                                | 0.080                           |
| Miscellaneous                        | Not Classified                     | tons produced             | RV                                | 0.399                           |
| Natural Gas Production               | Not Classified                     | mmcf                      | RV                                | 527.641                         |
| Organic Chemical (scc 30100601)      |                                    | tons produced             | RV                                | RV                              |
| Petroleum Refining (scc30600602)     | Column Condenser                   |                           | RV                                | 1.557                           |
| Petroleum Refining (scc30600603)     | Column Condenser                   |                           | RV                                | 1.176                           |
| Refinery Process Heaters             | LPG fired                          | 1000 gal                  | RV                                | 2.259                           |
| Pot Furnace                          | Lead Battery                       | lbs Sulfur                | 0.133***                          | 0.106***                        |
| Sec. Lead                            | Reverberatory, Smelting Furnace    | tons produced             | RV                                | RV                              |
| Sec. Lead                            | Smelting Furnace, Fugitiv          | tons produced             | RV                                | 0.648                           |
| Sour Water Oxidizer                  |                                    | hours of operation        | RV                                | RV                              |
| Sulfur Loading                       |                                    | 1000 bbls                 | RV                                | RV                              |
| Sour Water Oxidizer                  |                                    | 1000 bbls fresh feed      | RV                                | RV                              |
| Sour Water Coker                     |                                    | 1000 bbls fresh feed      | RV                                | RV                              |
| Sodium Silicate Furnace              |                                    | tons of glass pulled      | RV                                | RV                              |
| Sulfur Plant                         |                                    | hours of operation        | RV                                | RV                              |
| Tail gas unit                        |                                    | hours of operation        | RV                                | RV                              |
| Turbines                             | Refinery Gas                       | mmcf                      | RV                                | 6.760                           |
| Turbines                             | Natural Gas                        | mmcf                      | RV                                | 0.600                           |
| Turbines                             | Diesel Oil                         | 1000 gal                  | 6.24                              | 0.080                           |
| Turbines                             | Residual Oil                       | 1000 gallons              | 8.00                              | 0.090                           |
| Utility Boilers                      | Diesel Light Dist. (0.05% S)       | 1000 gallons              | 7.00                              | 0.080                           |
| Utility Boilers                      | Residual Oil                       | 1000 gallons              | 8.00                              | 0.090                           |
| Other Heater ( 24F-1)                | Pressure Swing Absorber Gas        | mmcf                      | RV                                | RV                              |

\* RV = Reported Value

\*\*\* Applies retroactively to January 1, 1994 for Cycle 1 facilities and July 1, 1994 for Cycle 2 facilities.

Table 3

RECLAIM NO<sub>x</sub> 2011 Ending Emission Factors

| <b>Nitrogen Oxides<br/>Basic Equipment</b>               | <b>BARCT<br/>Emission Factor</b> |
|--|----------------------------------|
| Asphalt Heater, Concrete                                 | 0.036 lb/mmbtu<br>(30 ppm)       |
| Boiler, Heater R1109 (Petr Refin) >110 mmbtu/hr          | 0.006 lb/mmbtu<br>(5 ppm)        |
| Boilers, Heaters, Steam Gens, (Petr Refin) >110 mmbtu/hr | 0.006 lb/mmbtu<br>(5 ppm)        |
| Boiler, Heater, Steam Gen (Rule 1146.1) 2-20 mmbtu/hr    | 0.015 lb/mmbtu<br>(12 ppm)       |
| Boiler, Heater, Steam Gen (Rule 1146) >20 mmbtu/hr       | 0.010 lb/mmbtu<br>(9 ppm)        |
| CO Boiler  | 85% Reduction                    |
| Delacquering Furnace                                     | 0.036 lb/mmbtu<br>(30 ppm)       |
| Fluid Catalytic Cracking Unit                            | 85% Reduction                    |
| Iron/Steel Foundry                                       | 0.055 lb/mmbtu<br>(45 ppm)       |
| Metal Heat Treating Furnace                              | 0.055 lb/mmbtu<br>(45 ppm)       |
| Metal Forging Furnace (Preheated Combustion Air)         | 0.055 lb/mmbtu<br>(45 ppm)       |
| Metal Melting Furnaces                                   | 0.055 lb/mmbtu<br>(45 ppm)       |
| Other Heater (24F-1)                                     | 0.036 lb/mmbtu<br>(30 ppm)       |
| Ovens, Kilns, Calciners, Dryers, Furnaces                | 0.036 lb/mmbtu<br>(30 ppm)       |
| Petroleum Refining, Calciner                             | 0.036 lb/mmbtu<br>(30 ppm)       |
| Sec. Aluminum  | 0.055 lb/mmbtu<br>(45 ppm)       |
| Sec. Lead  | 0.055 lb/mmbtu<br>(45 ppm)       |
| Steel Hot Plate Furnace                                  | 0.055 lb/mmbtu<br>(45 ppm)       |
| Utility Boiler   | 0.008 lb/mmbtu<br>(7 ppm)        |

Table 4  
RECLAIM SO<sub>x</sub> Tier III Emission Standards

| <b>Basic Equipment</b>          | <b>BARCT Emission Standard</b>                |
|---------------------------------|---|
| Calclner, Petroleum Coke        | 10 ppmv (0.11 lbs/ton coke)                   |
| Cement Kiln                     | 5 ppmv (0.04 lbs/ton clinker)                 |
| Coal-Fired Boiler               | 5 ppmv (95% reduction)                        |
| Container Glass Melting Furnace | 5 ppmv (0.03 lbs/ton glass)                   |
| Diesel Combustion               | 15 ppm by weight as required under Rule 431.2 |
| Fluid Catalytic Cracking Unit   | 5 ppmv (3.25 lbs/thousand barrels feed)       |
| Refinery Boiler/Heater          | 40 ppmv (6.76 lbs/mmscf <sup>†</sup> )        |
| Sulfur Recovery Units/Tail Gas  | 5 ppmv for combusted tail gas (5.28 lbs/hour) |
| Sulfuric Acid Manufacturing     | 10 ppmv (0.14 lbs/ton acid produced)          |



Table 5  
List of SO<sub>x</sub> RECLAIM Facilities Referenced in Subparagraphs (f)(1)(M)  
and (f)(1)(O)

| <b>FACILITY PERMIT HOLDER</b>            | <b>AQMD ID NO.</b> |
|--|--------------------|
| AES HUNTINGTON BEACH, LLC*               | 115389             |
| AIR LIQUIDE LARGE INDUSTRIES U.S., LP    | 148236             |
| ANHEUSER-BUSCH INC., (LA BREWERY)        | 16642              |
| CALMAT CO                                | 119104             |
| CENCO REFINING CO                        | 800373             |
| EDGINGTON OIL COMPANY                    | 800264             |
| EQUILON ENTER. LLC, SHELL OIL PROD. US   | 800372             |
| EXIDE TECHNOLOGIES                       | 124838             |
| INEOS POLYPROPYLENE LLC                  | 124808             |
| KIMBERLY-CLARK WORLDWIDE INC.-FULT. MILL | 21887              |
| LUNDAY-THAGARD COMPANY                   | 800080             |
| OWENS CORNING ROOFING AND ASPHALT, LLC   | 35302              |
| PABCO BLDG PRODUCTS LLC,PABCO PAPER, DBA | 45746              |
| PARAMOUNT PETR CORP*                     | 800183             |
| QUEMETCO INC                             | 8547               |
| RIVERSIDE CEMENT CO                      | 800182             |
| TECHALLOY CO., INC.                      | 14944              |
| TESORO REFINING AND MARKETING CO*        | 151798             |
| THE PQ CORP                              | 11435              |
| US GYPSUM CO                             | 12185              |
| WEST NEWPORT OIL CO                      | 42775              |

\* SO<sub>x</sub> RECLAIM facilities that have RTC Holdings larger than initial allocations as of August 29, 2009.

Table 6

RECLAIM NO<sub>x</sub> 2022 Ending Emission Factors

| <b>Nitrogen Oxides<br/>Basic Equipment</b>     | <b>BARCT<br/>Emission Factor</b>                                |
|--|---|
| Boiler, Heater R1109 (Petr Refin) >40 mmbtu/hr | 2 ppm   |
| Cement Kilns                                   | 0.5 lbs per ton clinker   |
| Fluid Catalytic Cracking Unit                  | 2 ppm   |
| Gas Turbines                                   | 2 ppm   |
| Glass Melting Furnaces – Container Glass       | 80% reduction<br>(0.24 lb/ton glass produced)                   |
| ICEs, Permitted (Rule 1110.2) (Non-OCS)        | 11 ppm @ 15% O <sub>2</sub><br>0.041 lb/MMBTU<br>43.05 lb/mmcft |
| Metal Heat Treating Furnace >150 mmbtu/hr      | 0.011 lb/mmbtu (9 ppm)  |
| Petroleum Refining, Calciner                   | 10 ppm  |
| Sodium Silicate Furnace                        | 80% reduction<br>(1.28 lb/ton glass pulled)                     |
| SRU/Tail Gas Unit                              | 95% reduction<br>2ppm   |

Table 7  
List of NOx RECLAIM Facilities Referenced in Subparagraph (f)(1)(B)

| <b>FACILITY PERMIT HOLDER</b>  | <b>AQMD ID NO.</b>                         |
|--|--|
| CHEVRON PRODUCTS CO.   | 800030                                     |
| EXXONMOBIL OIL CORPORATION   | 800089                                     |
| PHILLIPS 66 CO/LA REFINERY WILMINGTON PL   | 171107                                     |
| PHILLIPS 66 COMPANY/LOS ANGELES REFINERY   | 171109                                     |
| TESORO REF & MKTG CO LLC,CALCINER  | 174591                                     |
| TESORO REFINING & MARKETING CO, LLC  | 174655                                     |
| TESORO REFINING AND MARKETING CO, LLC  | 151798                                     |
| TESORO REFINING AND MARKETING CO, LLC  | 800436                                     |
| ULTRAMAR INC<br>NOx RTC holders not designated as Facility Permit<br>Holders as of September 22, 2015, except any NOx<br>RTC holders listed in Table 8 | 800026<br><br><br><br><br><br><br>Multiple |

Table 8  
List of NOx RECLAIM Facilities Referenced in Subparagraph (f)(1)(C)

| <b>FACILITY PERMIT HOLDER</b>              | <b>AQMD ID NO.</b> |
|--|--------------------|
| AES ALAMITOS, LLC                          | 115394             |
| AES HUNTINGTON BEACH, LLC                  | 115389             |
| AES REDONDO BEACH, LLC                     | 115536             |
| BERRY PETROLEUM COMPANY                    | 119907             |
| BETA OFFSHORE                              | 166073             |
| BICENT (CALIFORNIA) MALBURG LLC            | 155474             |
| BORAL ROOFING LLC                          | 1073               |
| BURBANK CITY, BURBANK WATER & POWER        | 25638              |
| BURBANK CITY, BURBANK WATER & POWER, SCPPA | 128243             |
| CALIFORNIA PORTLAND CEMENT CO              | 800181             |
| CALIFORNIA STEEL INDUSTRIES INC            | 46268              |
| CANYON POWER PLANT                         | 153992             |
| CPV SENTINEL LLC                           | 152707             |
| DISNEYLAND RESORT                          | 800189             |
| EDISON MISSION HUNTINGTON BEACH, LLC       | 167432             |
| EL SEGUNDO POWER, LLC                      | 115663             |
| EXIDE TECHNOLOGIES                         | 124838             |
| GENERAL ELECTRIC COMPANY                   | 700126             |
| HARBOR COGENERATION CO, LLC                | 156741             |
| INLAND EMPIRE ENERGY CENTER, LLC           | 129816             |
| LA CITY, DWP HAYNES GENERATING STATION     | 800074             |
| LA CITY, DWP SCATTERGOOD GENERATING STN    | 800075             |
| LA CITY, DWP VALLEY GENERATING STATION     | 800193             |
| LONG BEACH GENERATION, LLC                 | 115314             |
| NEW- INDY ONTARIO, LLC                     | 172005             |
| NRG CALIFORNIA SOUTH LP, ETIWANDA GEN ST   | 115315             |
| OWENS-BROCKWAY GLASS CONTAINER INC         | 7427               |
| OXY USA INC                                | 169754             |
| PACIFIC CLAY PRODUCTS INC                  | 17953              |
| PARAMOUNT PETR CORP                        | 800183             |
| PASADENA CITY, DWP                         | 800168             |
| PQ CORPORATION                             | 11435              |
| QUEMETCO INC                               | 8547               |
| SAN DIEGO GAS & ELECTRIC                   | 4242               |
| SNOW SUMMIT INC                            | 43201              |
| SO CAL EDISON CO                           | 4477               |
| SO CAL GAS CO                              | 800128             |
| SO CAL GAS CO                              | 800127             |
| SO CAL GAS CO                              | 5973               |
| SO CAL GAS CO/PLAYA DEL REY STORAGE FACI   | 8582               |
| SOLVAY USA, INC.                           | 114801             |

| <b>FACILITY PERMIT HOLDER</b>         | <b>AQMD ID NO.</b> |
|---------------------------------------|--------------------|
| SOUTHERN CALIFORNIA EDISON            | 160437             |
| TABC, INC                             | 3968               |
| TAMCO                                 | 18931              |
| US GOVT, NAVY DEPT LB SHIPYARD        | 800153             |
| WALNUT CREEK ENERGY, LLC              | 146536             |
| WHEELABRATOR NORWALK ENERGY CO INC    | 51620              |
| WILDFLOWER ENERGY LP/INDIGO GEN., LLC | 127299             |

Table 9  
List of NOx RECLAIM Facilities for the Regional NSR Holding Account with Balances (in lbs)

| FACILITY PERMIT HOLDER                               | AQMD ID NO.       | 2016     |          | 2017     |          | 2018     |          | 2019     |          | 2020     |          | 2021     |          | 2022     |          | 2023+     |           |
|--|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
|  |                   | Dec 2016 | Jun 2017 | Dec 2017 | Jun 2018 | Dec 2018 | Jun 2019 | Dec 2019 | Jun 2020 | Dec 2020 | Jun 2021 | Dec 2021 | Jun 2022 | Dec 2022 | Jun 2023 | Dec 2023+ | Jun 2023+ |
| BICENT (CALIFORNIA) MALBURG LLC                      | 155474            | 0        | 0        | 1,854    | 1,854    | 1,854    | 1,854    | 2,794    | 2,794    | 3,735    | 3,734    | 5,588    | 5,588    | 7,469    | 7,469    | 11,204    | 11,203    |
| BURBANK CITY, BURBANK WATER & POWER, SCPPA           | 128243            | 0        | 0        | 1,604    | 5,159    | 1,604    | 5,159    | 2,418    | 7,775    | 3,232    | 10,392   | 4,836    | 15,551   | 6,464    | 20,784   | 9,695     | 31,177    |
| CANYON POWER PLANT                                   | 153992            | 0        | 0        | 3,248    | 2,548    | 3,248    | 2,548    | 4,896    | 3,840    | 6,543    | 5,133    | 9,792    | 7,680    | 13,087   | 10,265   | 19,630    | 15,398    |
| CPV CENTINEL LLC                                     | 152707            | 0        | 0        | 9,645    | 6,981    | 9,645    | 6,981    | 14,538   | 10,522   | 19,430   | 14,063   | 29,075   | 21,044   | 38,860   | 28,127   | 58,290    | 42,190    |
| GENERAL ELECTRIC COMPANY/INLAND EMPIRE ENERGY CENTER | 700126/<br>129816 | 0        | 0        | 9,065    | 6,573    | 9,065    | 6,573    | 13,664   | 9,907    | 18,262   | 13,241   | 27,327   | 19,815   | 36,524   | 26,484   | 54,785    | 39,725    |
| LONG BEACH GENERATION, LLC                           | 115314            | 0        | 0        | 0        | 5,962    | 0        | 5,962    | 0        | 8,986    | 0        | 12,010   | 0        | 17,971   | 0        | 24,019   | 0         | 36,029    |
| SOUTHERN CALIFORNIA EDISON                           | 160437            | 0        | 0        | 13,227   | 6,758    | 13,227   | 6,758    | 19,937   | 10,184   | 26,646   | 13,612   | 39,874   | 20,370   | 53,293   | 27,225   | 79,940    | 40,837    |
| WALNUT CREEK ENERGY, LLC                             | 146536            | 0        | 0        | 3,690    | 4,242    | 3,690    | 4,242    | 5,562    | 6,393    | 7,434    | 8,544    | 11,124   | 12,786   | 14,867   | 17,089   | 22,301    | 25,633    |
| WILDFLOWER ENERGY LP/INDIGO GEN., LLC                | 127299            | 0        | 0        | 0        | 3,483    | 0        | 3,483    | 0        | 5,250    | 0        | 7,016    | 0        | 10,499   | 0        | 14,033   | 0         | 21,049    |