

# Summary Form for Electronic Document Submittal

**Form F**

Lead agencies may include 15 hardcopies of this document when submitting electronic copies of Environmental Impact Reports, Negative Declarations, Mitigated Negative Declarations, or Notices of Preparation to the State Clearinghouse (SCH). The SCH also accepts other summaries, such as EIR Executive Summaries prepared pursuant to CEQA Guidelines Section 15123. Please include one copy of the Notice of Completion Form (NOC) with your submission and attach the summary to each electronic copy of the document.

SCH #: 2014121018 and 2016071006

Project Title: Proposed Rule (PR) 1109.1 - Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations, PR 429.1 – Startup and Shutdown Provisions at Petroleum Refineries and Related Operations, Proposed Amended Rule (PAR) 1304 – Exemptions, PAR 2005 – New Source Review for RECLAIM, and Proposed Rescinded Rule 1109 – Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries

Lead Agency: South Coast Air Quality Management District (South Coast AQMD)

Contact Name: Kevin Ni

Email: kni@aqmd.gov Phone Number: 909-396-3982

Project Location: South Coast AQMD Jurisdiction

*City*

*County*

Project Description (Proposed actions, location, and/or consequences).

Please see attached .

Identify the project's significant or potentially significant effects and briefly describe any proposed mitigation measures that would reduce or avoid that effect.

While reducing emissions is an environmental benefit, the analysis in the SEA indicates that significant and unavoidable adverse direct and/or indirect environmental impacts may occur for the following environmental topic areas: 1) air quality during construction and greenhouse gas emission; 2) hazards and hazardous materials due to ammonia; and 3) hydrology (water demand). Mitigation measures were identified in Chapter 4 of the SEA, but significant adverse impacts to these environmental topic areas would remain.

If applicable, describe any of the project's areas of controversy known to the Lead Agency, including issues raised by agencies and the public.

Please see the attached. Also, the areas of controversy can be found in Chapter 1 of the Draft Subsequent Environmental Assessment.

Provide a list of the responsible or trustee agencies for the project.

There are no responsible or trustee agencies for the proposed project.

**Project Title:** Proposed Rule (PR) 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations, PR 429.1 – Startup and Shutdown Provisions at Petroleum Refineries and Related Operations, Proposed Amended Rule (PAR) 1304 – Exemptions, PAR 2005 – New Source Review for RECLAIM, and Proposed Rescinded Rule 1109 – Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries

**Project Location:** The proposed project is located in the South Coast Air Quality Management District (South Coast AQMD) jurisdiction, which includes the four-county South Coast Air Basin (all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portion of the Salton Sea Air Basin and the non-Palo Verde, Riverside County portion of the Mojave Desert Air Basin.

**Description of Nature, Purpose, and Beneficiaries of Project:** PR 1109.1 proposes to establish Best Available Retrofit Control Technology (BARCT) requirements to reduce nitrogen oxide (NO<sub>x</sub>) emissions while not increasing carbon monoxide (CO) emissions from petroleum refineries and facilities with operations related to petroleum refineries which includes asphalt plants, biofuel plants, hydrogen production plants, facilities that operate petroleum coke calciners, sulfuric acid plants, and sulfur recovery plants. The following combustion equipment categories will be applicable to PR 1109.1: 1) boilers; 2) gas turbines; 3) ground level flares; 4) fluidized catalytic cracking units; 5) petroleum coke calciners; 6) process heaters; 7) sulfur recover units/tail gas treating units; 8) steam methane reformer (SMR) heaters; 9) SMR heaters with gas turbine; 10) sulfuric acid furnaces; and 11) vapor incinerators. PR 429.1 proposes new requirements for startup, shutdown, and certain maintenance events, including an exemption from the NO<sub>x</sub> and CO emission limits in PR 1109.1 during these events. PR 429.1 also proposes notification and recordkeeping requirements for units that will be subject to PR 1109.1. To achieve the BARCT NO<sub>x</sub> concentration limits under PR 1109.1, installations or modifications of post-combustion air pollution control equipment, including but not limited to selective catalytic reduction (SCR) and ultralow NO<sub>x</sub> burner (ULNB) technology, is expected to occur, which will reduce NO<sub>x</sub> emissions but may also increase emissions of particulate matter and sulfur oxide (SO<sub>x</sub>), which may trigger Best Available Control Technology (BACT). PAR 1304 and PAR 2005 propose to include a narrow BACT exemption to address these potential emission increases associated with installation of new or the modification of existing post-combustion air pollution control equipment or other equipment modifications to comply with the proposed NO<sub>x</sub> emission limits in PR 1109.1. Because the proposed adoption of PR 1109.1 will make Rule 1109 outdated and no longer necessary, Rule 1109 is proposed to be rescinded. Implementation of the proposed project is estimated to reduce NO<sub>x</sub> emissions by approximately 7 to 8 tons per day (tpd), while not increasing CO emissions. If the minimum 7 tpd of NO<sub>x</sub> emission reductions is achieved, a corresponding regionwide net decrease in annual PM<sub>2.5</sub> concentration of 0.12 micrograms per cubic meter is also expected. The Draft SEA concluded that significant and unavoidable adverse environmental impacts may occur for the following environmental topic areas: 1) air quality during construction and greenhouse gases; 2) hazards and hazardous materials associated with ammonia; and 3) hydrology. Facilities subject to the proposed project may be identified on lists compiled by the California Department of Toxic Substances Control per Government Code Section 65962.5.

If applicable, describe any of the project’s areas of controversy known to the Lead Agency, including issues raised by agencies and the public:

**Areas of Controversy**

	<b>Area of Controversy</b>	<b>Topics Raised by the Public</b>	<b>South Coast AQMD Evaluation</b>
1.	Technical Feasibility and Cost Effectiveness	BARCT levels have not been proven to be technologically feasible and cost effective	<ul style="list-style-type: none"> <li>o Technical feasibility and cost-effectiveness assessments have been conducted for each class and category of equipment subject to PR 1109.1</li> <li>o Details of the assessments were presented during Working Group Meetings and stakeholders were invited to provide input on South Coast AQMD staff’s conclusions</li> <li>o NOx limits are technically feasible through established, proven control technology such as SCR, ULNBs, or a combination of both, LoTOx™ with WGS, and UltraCat™ with DGS</li> <li>o Proposed NOx limits seek the highest level of NOx emission reductions that were demonstrated to be cost-effective</li> <li>o Staff relied on stakeholder feedback (e.g., project cost estimates) and the U.S. EPA SCR spreadsheet modified to reflect refineries at California labor rates to estimate costs</li> </ul>
2.	Averaging Times	Proposed averaging time for heaters and boilers is too long and will allow for higher emissions	Factors considered when establishing averaging times: <ul style="list-style-type: none"> <li>o Equipment stability (e.g., burner control)</li> <li>o Complex control technology requires a balance of operating parameters</li> <li>o Operators must optimize and balance the NOx, ammonia, and CO emissions</li> <li>o Complex operations with multiple pieces of equipment</li> <li>o Varying feedstock and use of refinery fuel gas (as opposed to natural gas)</li> <li>o Adjustments for unit response time</li> <li>o A 2-hour averaging period for units requiring burners replacement and source testing to demonstrate compliance</li> <li>o A 24-hour averaging period for units requiring SCR and CEMS to demonstrate compliance</li> <li>o A daily rolling 365-day averaging period for large process units, e.g., FCCU, petroleum coke calciner, with CEMS to demonstrate compliance</li> <li>o Proposed averaging times supported by third party engineering consultants</li> </ul>
3.	Start-up, Shutdown, and Malfunction (SSM)	SSM provisions will allow excess emissions	Starting up and shutting down equipment are necessary actions as part of operations, and in some cases, unavoidable:

			<ul style="list-style-type: none"> <li>○ Time and temperature are needed for SCR control equipment to achieve NOx reduction and operate effectively</li> <li>○ Equipment without SCR needs time to reach optimal unit operating temperatures</li> <li>○ PR 429.1, a companion rule to PR 1109.1, proposes to establish limits on the duration and number of allowable start-up and shutdown events in order to minimize emissions</li> </ul>
4.	Implementation Schedule in PR 1109.1	Longer time should be provided for each phase of the implementation schedule	<ul style="list-style-type: none"> <li>○ PR 1109.1 establishes various implementation options for facilities to meet emission reduction targets at different deadlines</li> <li>○ Implementation schedule accounts for the variability that could occur during the process (e.g., permitting time)</li> <li>○ Implementation schedule recognizes the time needed to design, engineer, budget, order, deliver, logistics, install, and commission, in order to properly meet a scheduled turnaround</li> <li>○ Staff has provided additional time and flexibility in the schedules for implementing the emission control projects, including provisions for an extension of the schedule</li> </ul>
5.	CEQA process and Type of CEQA document to prepare	<p>Preparing a CEQA document that tiers off of the previous analyses in the December 2015 Final PEA for NOx RECLAIM and the March 2017 Final Program EIR for the 2016 AQMP would be considered piecemealing and inappropriate under CEQA because:</p> <ul style="list-style-type: none"> <li>• The 2016 AQMP and CMB-05 did not contemplate sunseting of the RECLAIM program and the March 2017 Final Program EIR for the 2016 AQMP did not analyze the sunseting of the RECLAIM program.</li> </ul>	<p>When initially considering how to “unwind” the RECLAIM regulation and transition NOx RECLAIM equipment to a command-and-control structure subject to various landing rules in Regulation XI, South Coast AQMD staff previously received similar comments regarding South Coast AQMD’s practice in conducting CEQA analyses for rule projects, including the command-and-control landing rules. CEQA Guidelines Section 15187 requires an environmental analysis to be performed when a public agency proposes to adopt a new rule or regulation requiring the installation of air pollution control equipment or establishing a performance standard, which is the case with the proposed project. This approach does not amount to piecemealing because the documents being tiered off of considered the environmental impacts of the projected emission reductions for all of the sources in RECLAIM, thus considering the environmental effects of all of the rules proposed to implement BARCT requirements on RECLAIM sources (“landing rules”). This SEA considers impacts that may not have been considered in the documents being tiered off of.</p> <p>Each landing rule is a separate and individual project with independent utility. Each landing rule undergoes its own CEQA analysis to address any impacts that were not addressed in one or more prior CEQA documents. All</p>

		<ul style="list-style-type: none"> <li>• The December 2015 amendments to the NOx RECLAIM program and the December 2015 Final PEA for NOx RECLAIM did not analyze what is being contemplated by the proposed project.</li> <li>• The impacts that are associated with the proposed project and other implementation issues (e.g., NSR) were not identified or contemplated at the time the decision was made to replace the NOx RECLAIM program with individual BARCT command-and-control rules.</li> </ul>	<p>South Coast AQMD rules and regulations are related to each other in that they are adopted and/or amended to meet the clean air goals outlined in the 2016 AQMP, but that does not mean they constitute a single project for CEQA purposes. The CEQA document for the 2016 AQMP, the March 2017 Final Program EIR, contains the programmatic analyses of the overall effects of South Coast AQMD’s clean air goals. The decision to transition from NOx RECLAIM into a source-specific command-and-control regulatory structure was approved by the South Coast AQMD Governing Board as Control Measure CMB-05 in the 2016 AQMP. CMB-05 is required by the California Health and Safety Code to implement BARCT in lieu of the RECLAIM program, which will be completed upon each individual rule amendment or the adoption of various landing rules. The California Health and Safety Code also requires other stationary sources to meet BARCT so the landing rules may also apply to non-RECLAIM sources. CMB-05 identifies a series of approaches that can be explored to make the RECLAIM program more effective in ensuring equivalency with command-and-control regulations implementing BARCT and to generate further NOx emissions reductions at RECLAIM facilities, including sunsetting the RECLAIM program. CMB-05 specifically contemplates the unwinding of the RECLAIM program (see Final 2016 AQMP, Appendix IV-A, pp. IV-A-67 to IV-A-71)<sup>9</sup>. The commenter has failed to identify any type of environmental impact that would result from the sunsetting of RECLAIM that was not discussed in the documents being tiered off of.</p> <p>The Revised Draft Program EIR for the 2016 AQMP did contemplate the sunsetting of RECLAIM, since in the Revised Draft 2016 AQMP that was released in October 2016<sup>10</sup>, Control Measure CMB-05 was revised to include the following language: <i>“One approach under serious consideration is a long-term transition to a traditional command-and-control regulatory structure. As many of the program’s original advantages appear to be diminishing and generating increased scrutiny, an orderly sunset of the RECLAIM program may be the best way to create more regulatory certainty and reduce compliance burdens for RECLAIM facilities, while also achieving more actual and SIP creditable emissions reductions.”</i> Thus, the March 2017 Final Program EIR for the 2016 AQMP analyzed Control Measure CMB-05, which contemplated the potential for sunsetting the RECLAIM program, even though the final decision was</p>
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			<p>and 15162]. Moreover, streamlined environmental review pursuant to a Program EIR and tiering is consistent with South Coast AQMD's past practice as it is expressly allowed in CEQA and is not considered piecemealing. [CEQA Guidelines Sections 15152, 15162, 15165, 15168 and 15385]. This point is also explained in South Coast AQMD's response letter to BizFed on April 25, 2018<sup>11</sup>.</p> <p>To date, the following separate rule developments and have been conducted and completed for several RECLAIM Transition landing rules and the type of CEQA documents prepared and certified are subsequent CEQA analyses which tier off of the March 2017 Final Program EIR for the 2016 AQMP:</p> <ul style="list-style-type: none"> <li>• Final SEA for Rules 2001 and 2002 (certified on October 5, 2018)<sup>12</sup></li> <li>• Final Mitigated SEA for Rule 1135 (certified on November 2, 2018)<sup>13</sup></li> <li>• Final SEA for Rules 1146, 1146.1, 1146.2 and 1100 (certified on December 7, 2018)<sup>14</sup></li> <li>• Final SEA for Rule 1134 (certified on April 5, 2019)<sup>15</sup></li> <li>• Final SEA for Rules 1110.2 and 1100 (certified on November 1, 2019)<sup>16</sup></li> </ul> <p>Thus, for the proposed project comprised of PRs 1109.1 and 429.1, PARs 1304 and 2005, and the proposed rescission of Rule 1109, South Coast AQMD has prepared this SEA which also tiers off of the March 2017 Final Program EIR for the 2016 AQMP. In addition, this SEA tiers off of the December 2015 Final Program EA for NOx RECLAIM because the majority of refinery-sector facilities and equipment that were previously analyzed in December 2015 Final Program EA for NOx RECLAIM may be also be affected by the proposed project.</p>
6.	Pollutants allowed to be exempt from BACT under PAR 1304	Extend applicability of the BACT exemption to CO	The proposed narrow BACT exemption is intended to address PM <sub>10</sub> and SOx emissions increases associated with add-on air pollution control equipment required to transition NOx RECLAIM and would trigger refinery fuel gas clean up. CO emissions would not trigger fuel gas clean up.
7.	Facilities qualified to use the limited BACT exemption under PAR 1304	Extend applicability of BACT exemption to non-RECLAIM facilities complying with a NOx BARCT limit for landing rule	The objective of the proposed BACT exemption is to address the co-pollutant PM emissions tied to the installation of controls and the replacement of equipment that is combined with an installation or modification of add-on air pollution control required to transition NOx

			RECLAIM and therefore cannot be extended to non-RECLAIM facilities as it would result in an SB 288 issue.
8.	Projects qualified to use the limited BACT exemption under PAR 1304	The exemption should be expanded to include all related BARCT projects, not only those involving installation of add-on air pollution control equipment	The BACT exemption is limited to projects associated with add-on air pollution control equipment since the exemption is needed to address the co-pollutant PM emissions, which are due to the ammonium sulfate formed from the SCR ammonia slip and the sulfur in the refinery fuel gas. Use of SCR systems is needed to ensure that cost-effective NOx levels can be achieved under PR 1109.1. Without the limited BACT exemption, then higher NOx concentration limits without the use of SCR systems would need to be considered for PR 1109.1. Installations of equipment not associated with add-on air pollution control equipment will be required to meet BACT including possible refinery gas clean up.
9.	Criteria for equipment replacements allowed to use the PAR 1304 BACT exemption	The district should clarify that replacing units within different source categories meets the requirement to “serve the same purpose” for example, a facility may choose to replace a gas turbine with a boiler	The criteria to require that a replacement serve the same purpose as the unit being replaced was developed according to the federal NSR definition for a replacement in 40 CFR 51.165(a)(1)(xxi) and 40 CFR 52.21(b)(33). Under federal NSR, a replacement must be identical to or functionally equivalent <sup>17</sup> to the replaced unit and not alter the basic design parameters. <sup>18</sup> A functionally equivalent unit was previously defined to be a unit that serves the same purpose as the replaced unit. <sup>19</sup> The federal NSR definition for a replacement requires that replacing a unit with a unit from a different source category that serves the same purpose would need to have the same basic design parameters. Units from different source categories, such as a turbine and a boiler, would not have the same basic design parameters. The federal NSR definition for a replacement is used as the replacement criteria for the PAR 1304 BACT exemption, since under federal NSR, for a replacement unit, the baseline emissions are the actual emissions of the existing unit being replaced rather than a zero baseline if considered a new unit.