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YOLO-SOLANO
AIR QUALITY MANAGEMENT DISTRICT

**EXPEDITED BARCT SCHEDULE
FOR INDUSTRIAL FACILITIES SUBJECT TO CAP AND TRADE**

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I. EXECUTIVE SUMMARY

Assembly Bill 617 (AB 617), which was approved July 26, 2017, amends California Health and Safety Code section 40920.6., and requires each air district that is a nonattainment area for one or more air pollutants to adopt, by January 1, 2019, an expedited schedule for implementation of best available retrofit control technology (BARCT) by the earliest feasible date, but no later than December 31, 2023.

This requirement applies to each industrial source subject to California Greenhouse Gas (GHG) Cap-and-Trade requirements. The Yolo-Solano Air Quality Management District (YSAQMD) is designated nonattainment for multiple pollutants and is therefore required to adopt an expedited BARCT schedule. Within the jurisdiction of YSAQMD, there are three industrial sources subject to the BARCT schedule:

- Campbell Soup Supply Company, LLC,
- Pacific Coast Producers, and
- California Resources Production Corporation

YSAQMD reviewed the permitted emission sources at these facilities and developed a list of potential rule development activities to implement BARCT by the deadline of December 31, 2023.

II. DISCUSSION OF PROPOSED EXPEDITED BARCT SCHEDULE

A. BARCT Evaluation and Identification of Potential Rule Development Projects

Best available retrofit controlled technology (BARCT) is an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source (Health and Safety Code Section 40406). AB 617 requires each district to adopt by January 1, 2019 an expedited BARCT schedule to implement BARCT, which applies to each industrial source subject to the Cap-and-Trade Regulation as of January 1, 2017. This document serves as a high level assessment of the planned rule development activities to implement BARCT through 2023. A more thorough review of emission standards, control technologies, and cost-effectiveness will be conducted as each rule is developed.

The BARCT schedule will identify rules to develop to require BARCT for specific sources by the earliest date feasible, but no later than December 31, 2023. AB 617 states that the schedule must give priority to any sources that have not had emissions limits modified for the greatest period of time. Finally, the schedule does not apply to an emissions unit that has implemented BARCT due to a permit revision or new permit issuance since 2007.

YSAQMD staff conducted a preliminary BARCT review of affected sources to determine which equipment would be suitable for rule development. The review process for potential rule development projects involved:

- Identifying pollutants of concern and affected facilities and sources;
- Screening out sources with limited potential emission reductions and sources not subject to the expedited schedule;
- Identifying and prioritizing potential BARCT rule projects based on existing rules in other air districts.

B. Pollutants

California Health and Safety Code (H&SC) Chapter 10 (District Plans to Attain State Ambient Air Quality Standards), under which can be found the provisions of this requirement, states that districts shall endeavor to achieve and maintain the ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide. Therefore, for purposes of this schedule, only permitted units emitting those pollutants will be considered. The Yolo-Solano Air Quality Management District (YSAQMD) is designated nonattainment for the federal ozone standards (1997 8-hour severe 15, 2008 8-hour severe 15, 2015 8-hour moderate), and the state 8-hour ozone standard. The BARCT review was conducted focusing on nitrogen oxides (NO_x) and volatile organic compounds (VOC), as they are precursors for ozone. The proposed BARCT schedule is focused on reducing these nonattainment precursor pollutants.

The most recent modeling shows that the YSAQMD will reach attainment for the federal ozone standards prior to the year 2024. YSAQMD anticipates that attainment of the state ozone standard will be achieved in approximately the same time period as achieving the federal ozone standards. Therefore, as the BARCT schedule is implemented, YSAQMD will consider the pollutant attainment status and adjust the schedule if attainment is achieved.

C. Permitted and Actual Emissions

The District estimates annual emissions from sources based on permitted equipment use. The following table summarizes the permitted and actual combined annual emissions of NO_x, VOC, and PM_{10/2.5} from the three facilities subject to the BARCT schedule. Implementing the BARCT schedule is intended to achieve reductions in these values.

Table 1. Annual Permitted and Actual Emissions from Industrial Cap and Trade Facilities

| Year | Permitted Emissions (tons per year) | | Actual Emissions (tons per year) | |
|------|-------------------------------------|-----|----------------------------------|-----|
| | NO _x | VOC | NO _x | VOC |
| 2017 | 49 | 25 | 19 | 8 |
| 2016 | 48 | 24 | 23 | 11 |
| 2015 | 49 | 24 | 21 | 9 |

D. Affected Facilities and Type of Permitted Equipment

The BARCT requirement applies to industrial sources subject to Cap and Trade. The ARB identifies five facilities in YSAQMD as covered by Cap and Trade for the year 2015, which is the most recent data available.

- University of California Davis
- Yara West Sacramento Terminal, LLC
- Campbell Soup Supply Company, LLC in Dixon
- Pacific Coast Producers in Woodland
- California Resources Production Corporation, which is a natural gas production facility located in various locations across the District

The University of California, Davis does not meet the definition of an industrial source per H&SC Section 95870 Table 8-1, and will be excluded.

Yara West Sacramento Terminal, LLC was a fertilizer manufacturing operation which ceased manufacturing operations in 2015 and is no longer subject to Cap and Trade.

The remaining three facilities are industrial sources and are subject to the BARCT schedule. The following is a list of the types of equipment permitted at these facilities:

- Boilers/Steam Generators
- Natural Gas Production Processing Equipment
- Internal Combustion Engines (Emergency)
- Internal Combustion Engines (Prime)
- Cooling Towers
- Waste Water Treatment

Based on a review of the annual emissions, typical use, required compliance with state regulations, and whether BARCT has already been implemented on the emission units at

the subject sources, the following equipment was screened out and were not included in the expedited BARCT schedule:

- Natural Gas Production Processing Equipment
- Internal Combustion Engines (Emergency)
- Cooling Towers
- Waste Water Treatment

Natural gas production equipment permitted at California Resource Production Corporation facilities within the YSAQMD include natural gas dehydrators, condensate tanks, injection wells, and associated equipment. District rules associated with this equipment include the leak detection and repair (LDAR) requirements of the District fugitive hydrocarbon rule. Additionally, this equipment are also subject to the requirements of the state regulation for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities, which became effective October 1, 2017 and is considered BARCT for LDAR requirements. Therefore, no additional rulemaking is required for this permitted equipment.

Emergency engines powering a generator or a fire pump are operated at Campbell Soup Supply Company, LLC and Pacific Coast Producers. Each of these engines is limited to 50 hours per year or maintenance and testing. For the diesel-powered engine, it has been shown that additional control measures for NO_x, such as Selective Catalytic Reduction, are not feasible on this type of equipment. The natural gas-powered engine is fitted with a 3-way catalyst for VOC and NO_x control and meets current BARCT-level control requirements. Therefore, no additional rulemaking is required for this permitted equipment.

Cooling towers for process water are operated at Campbell Soup Supply Company, LLC and Pacific Coast Producers, but do not emit VOC or NO_x. Therefore, no additional rulemaking is required for this permitted equipment.

A waste water treatment process is operated at the Campbell Soup Supply Company, LLC. This process has negligible emissions and is under permit for odor control only. Therefore, no additional rulemaking is required for this permitted equipment.

E. BARCT Identification Process

Health and Safety Code Section 40920.6(c)(3) directs air districts to give the highest priority in the BARCT schedule to those permitted units that have not modified emissions-related permit conditions for the greatest period of time. To address this section, the date of permit issuance was reviewed for all permitted units at the three subject facilities. There are a total of eight boiler/steam generators permitted at the subject facilities, of which five were either issued prior to 2007 and/or have not undergone a BARCT analysis since 2007.

There are a total of 4 prime internal combustion engines, all of which were either issued prior to 2007 and/or have not undergone a BARCT analysis since 2007.

F. Proposed BARCT Schedule

YSAQMD is proposing to amend District Rule 2.27 – Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters during calendar year 2019, and to amend District Rule 2.32 – Stationary Internal Combustion Engines during calendar year 2020. Rule 2.27 was given priority in the schedule as the potential benefit from reducing emissions from these source categories is much greater than that of Rule 2.32 both with respect to the permitted sources discussed in this report, and to all permitted sources within the YSAQMD.

III. PUBLIC COMMENTS AND STAFF RESPONSES

Staff held a public meeting on October 1, 2018, pursuant to Health & Safety Code (H&SC) Section 40920.6(d), to discuss the proposed expedited schedule for BARCT. The meeting notice was published in the Vacaville Reporter, Woodland Democrat, and the Davis Enterprise. A copy of the public workshop notice, the draft staff report, and draft rule language, were posted on the District's web page and sent to the District's Cap and Trade sources prior to the public workshop.

The meeting was attended by representatives from the three industrial facilities subject to Cap and Trade. No comment letters were received.