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LATHAM & WATKINS LLP

July 14, 2021

VIA E-MAIL

Hon. Cindy Chavez, Board Chair and
Members of the Board of Directors
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

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Re: Proposed Amendments to Regulation 6, Rule 5: Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units

Dear Chair Chavez and Members of the Board of Directors:

Staff has failed to adequately support the proposed amendments to Regulation 6, Rule 5: Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units (“Proposed Amendments”). The analysis has been rushed, inaccurate, and in many aspects not performed at all. Statutory requirements related to the California Environmental Quality Act (“CEQA”) and cost-effectiveness have not been met, and other analyses are based upon inaccurate data. For at least the following four reasons, the Board should not take action on the flawed Proposed Amendments.

First, District Staff has failed to fulfill its commitment to the Board and the public that additional CEQA analysis would be performed when specific rules covered by the AB 617 Expedited BARCT Schedule came before the Board. Staff told the Board and the public in 2018, when the Environmental Impact Report for the AB 617 Expedited BARCT Schedule (“AB 617 Schedule EIR”) was presented to the Board for approval, that the AB 617 Schedule EIR addressed only the schedule for bringing forward new BARCT rules, and not the impacts of the rules themselves. Staff assured the Board and the public that each rule development project would include a *separate* CEQA analysis. Contrary to these assurances, no additional CEQA analysis has been prepared for the Proposed Amendments. In direct contradiction to its prior commitment, Staff relies exclusively on the AB 617 Schedule EIR to provide the entirety of CEQA analysis for this rulemaking. This is despite the fact the Proposed Amendments had not been developed at the time the AB 617 Schedule EIR was certified, and, therefore, the technology that would be required, and the associated impacts, could not have been known. Proceeding in the absence of additional CEQA analysis not only ignores Staff’s prior commitment, it introduces significant litigation risk to the rulemaking process. The select

excerpts in the following chart clearly demonstrate the contradictions between the assurances Staff made to this Board and the public in 2018 and what it is saying now.¹

AB 617 Expedited BARCT Implementation Schedule (2018)	Proposed Amendments (2021)
<p>December 19, 2018, Board Meeting</p> <p>Q: <u>Director Scott Haggerty</u>: “And what happens then, if the [wet gas scrubber] is the way to go, then where do we go from there [with respect to significant water demand]?”</p> <p>A: <u>Jack Broadbent</u>: “<i>[T]here will be a separate CEQA analysis for each and every single one of [the BARCT rules] as they are brought forward. That’s when we’re going to do the more detailed impacts on water and land and other types of environmental impacts.</i>...I do know that there’s also going to be a more detailed analysis subsequently, if that helps you.” (Emphasis added.)</p> <p>-----</p> <p>Q: <u>Director Karen Mitchoff</u>: Asking for confirmation that the Board is only voting on the EIR schedule and “not the technicalities...of how that implementation will take place.”</p> <p>A: <u>Jack Broadbent</u>: “<i>When we go through and identify explicitly what we’re going to be proposing to [the Board] in those rules, we will have a CEQA analysis associated with it. So you’ll have an opportunity to not only hear all the very detailed, there’ll be a socioeconomic impact analysis in addition to a CEQA analysis. And those are all separate.</i>” (Emphasis added.)</p> <p>-----</p> <p>Q: <u>Director Katie Rice</u>: “So the proposal is, or the projection is, that <i>you’ll be bringing to us the CEQA document to certify and the rule to approve.</i>”</p> <p>A: <u>Jack Broadbent</u>: “<i>That’s correct.</i>” (Emphasis added.)</p>	<p>June 2, 2021, Board Meeting</p> <p><u>Greg Nudd</u>: “<i>[In 2018] [w]e did a complete environmental impacts analysis [in the AB 617 Schedule EIR] for every rule that would come out of that schedule, including this one...So we’re going to continue to rely on that EIR.</i>” (Emphasis added.)</p>

Second, the Staff Report presents the health impacts analysis in a misleading way that inflates the benefits of the Proposed Amendments. The analysis fails to disclose the uncertainty in the model results, and presents the modeled health impacts as if they are a single, definitive value. Staff fails to present the uncertainty estimated by their own modeling. Using the

¹ A more fulsome comparison between representations made by Staff in 2018 and its current position is contained in Attachment 2.

District’s modeling files, our expert consultant extracted this information and demonstrated that the modeling does not show any statistically significant health benefit in adopting the 0.01 gr/dscf emission limit relative to the 0.02 gr/dscf emission limit.² Although Staff does not make any attempt to specifically relate the purported health benefits of the Proposed Amendments to the extraordinary cost of implementing them (see point three below), the implication is that the health benefits justify the costs. Such a finding cannot be made without an accurate assessment of the health benefits.

Third, the Staff has failed to adequately consider both the total cost-effectiveness and incremental cost-effectiveness of the Proposed Amendments, as required by law. The Staff Report provides a mere table of numbers without supporting calculations or any explanation of why these unprecedentedly high levels of cost-effectiveness are justified. When it proposed the AB 617 Expedited BARCT Schedule in 2018, Staff eliminated certain control technologies, emission limits, and source categories from consideration for BARCT rule development because Staff concluded the proposed rules would not comply with BARCT cost-effectiveness requirements. Clearly, some standard for cost-effectiveness exists—some threshold above which a proposed rule is not “cost-effective.” Staff has provided no discussion of that threshold nor how the cost-effectiveness of the Proposed Amendments compares to it.

Fourth, as recently as May 2020, Staff confirmed that a “total PM₁₀ limit of 0.020 gr/dscf represents an achievable level of control that has been demonstrated to be feasible at multiple facilities.”³ Staff has made very clear that this Board has full discretion “to determine what meets the definition of best available retrofit control technology.”⁴ However, the Stationary Source Committee’s vote on March 15, 2021, which was not properly agendaized per the Brown Act, resulted in only the 0.010 gr/dscf emission limit, which does not have any statistically significant health benefits relative to the 0.020 gr/dscf limit, being brought to the full Board for consideration.⁵ The Board maintains the authority to conclude the 0.020 gr/dscf emission limit, which was at one point Staff’s preferred emission limit, constitutes BARCT. Yet, the flawed rulemaking process has improperly limited the discretion of the Board to reach that conclusion.

² The uncertainty ranges in the health impacts modeling that Staff failed to present are provided in Section II of Attachment 1.

³ Initial Staff Report, Draft Amendments to Rule 6-5 (May 2020) at p. 15.

⁴ Mr. Greg Nudd, June 2, 2021, BAAQMD Board meeting.

⁵ We note that this “straw poll” was in reality a vote, on an agenda item that was put forth for information only. This was likely a violation of the Brown Act.

LATHAM & WATKINS^{LLP}

We appreciate your attention to these issues. If you have any questions, please do not hesitate to call me at (714) 755-8105 or email me at michael.carroll@lw.com.

Very truly yours,



Michael J. Carroll
of LATHAM & WATKINS LLP

Attachments:

- 1: Detailed Comments on Proposed Amendments
- 2: Comparison of Statements Made in 2018 Related to AB 617 Expedited BARCT Schedule and Statements Made in Rule 6-5 Rulemaking

ATTACHMENT 1

ATTACHMENT 1

Detailed Comments on Proposed Amendments

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Exhibit 1: Transcript of December 19, 2018 Board Meeting

Exhibit 2: Water Technical Report – A Review Of The Water Issues Related To The Proposed BAAQMD Regulation 6 Rule 5, prepared by Ramboll, dated July 14, 2021 (“Ramboll Water Report”)

Exhibit 3: Letter from Florence Wedington, EBMUD, to Shawn Lee, Chevron, dated June 7, 2021

I. BAAQMD STAFF TOLD THE BOARD AND THE PUBLIC THAT STAFF WOULD FURTHER ANALYZE ENVIRONMENTAL IMPACTS OF THE PROPOSED AMENDMENTS, BUT HAS FAILED TO DO SO

As discussed in our April 30, 2021 and May 26, 2021, comment letters, the District has not conducted any CEQA analysis for the Proposed Amendments. Instead, the District continues to rely on the Environmental Impact Report (“EIR”) prepared for the AB 617 Expedited Best Available Retrofit Control Technology (BARCT) Implementation Schedule project (the “AB 617 Schedule EIR”). The Staff Report states: “The proposed amendments to Rule 6-5 do not present substantial changes in the project or circumstances or new information that would require a new analysis.”¹

But this position is the exact opposite of what Staff told District Board members at the December 19, 2018 Board meeting, at which the Board certified the AB 617 Schedule EIR.² At that time, Staff indicated that the AB 617 Schedule EIR was *not* meant to analyze the environmental impacts of each rule contemplated in the Expedited BARCT Implementation Schedule project, but only the schedule itself. After a series of questions from former Director Scott Haggerty raising concerns about water usage associated with wet gas scrubbers, Mr. Jack Broadbent, Chief Executive Officer/Air Pollution Control Officer of BAAQMD, replied:

*“You can think of this as a programmatic EIR for all the potential rules are going to be put forth for your consideration that we are calling BARCT. **But there will be a separate CEQA analysis for each and every single one of them as they are brought forward. That’s when we’re going to do the more detailed impacts on water and land and other types of environmental impacts. And so, ... I do know that there’s also going to be a more detailed analysis subsequently, if that helps you.**”³*

Two additional Board members proceeded to ask questions seeking confirmation that further environmental analysis would be performed for the individual rulemakings, and that the December 19, 2018 vote to certify the AB 617 Schedule EIR was not the full scope of CEQA review for all BARCT rules.

Director Karen Mitchoff: “I just have one question, just to make it as clear as possible. One of the recommendations here is to certify the CEQA Final Environmental Impact Report. That’s on the [BARCT implementation] schedule. Because you mentioned earlier that there’s going to be a CEQA on each one of those rules. So, what we’re voting on is just the EIR of the schedule, not the technicalities, if you will, of how that implementation will take place.”

¹ Staff Report at p. 45.

² The full transcript of this Board meeting is attached as **Exhibit 1**.

³ December 19, 2018, Board Meeting at 1:51:28 (emphasis added).

*Jack Broadbent: “That’s correct, Director Mitchoff. I want you to be assured that the Staff, when we go through and identify explicitly what we’re going to be proposing to you in those rules, we will have a CEQA analysis associated with it. So you’ll have an opportunity to not only hear all the very detailed, there’ll be a socioeconomic impact analysis in addition to a CEQA analysis. And those are all separate.”*⁴

Director Katie Rice: [referring to slide 12 of Staff presentation with schedule of BARCT implementation] “Just so I’m crystal clear, looking at the chart on slide 12...by the time we get to the end of the [timeline], it actually includes the CEQA process. So the proposal is, or the projection is, that you’ll be bringing to us the CEQA document to certify and the rule to approve by the time you get through [the timeline].”

*Jack Broadbent: “That’s correct.”*⁵

And yet, on June 2, 2021, when District Staff presented the Rule 6-5 Proposed Amendments to the Board for consideration, Staff told the Board that they will **not** be presenting a CEQA analysis for the Proposed Amendments:

*Greg Nudd: “As David [Joe] discussed, when we asked the Board to consider the Expedited BARCT Schedule, that work was required under AB 617. We did a complete environmental impacts analysis for every rule that would come out of that schedule, including this one...We’ve looked very carefully at that old CEQA analysis, and there’s nothing new that we’re presenting here that wasn’t considered in that analysis. So we’re going to continue to rely on that EIR, pursuant to CEQA Section 21166.”*⁶

No one, including District Staff, believed in December 2018 that the AB 617 Schedule EIR was sufficient to analyze the potential environmental impacts of each individual BARCT rule. Not one of those proposed rules had been articulated with any specificity,⁷ and as such, potentially significant impacts of the rules (as opposed to the schedule) could not be identified, let alone adequately studied and mitigated. District Staff assured Board members that they would engage in further environmental review of each proposed rule, particularly related to water demand of wet gas scrubbers, in order to secure Board members’ approval of the AB 617 Schedule EIR. And now, with a definite and specific set of Proposed Amendments to Rule 6-5,

⁴ *Id.* at 2:16:45 (emphasis added).

⁵ *Id.* at 2:19:20 (emphasis added).

⁶ June 2, 2021, Board Meeting at 1:26:25 (emphasis added).

⁷ The uncertainty around what exactly would be proposed in the BARCT rule development was clearly demonstrated during Staff’s responses to questions at the December 19, 2018, Board meeting: “We don’t know that the end result of this rulemaking is going to be that we require wet scrubbers. There are other ways to address these emissions. And as we continue with the rulemaking process and redo that more detailed environmental review based on the findings of the rulemaking, we’ll look at the issue of reusable water in that context at that time.” (Mr. Greg Nudd, December 19, 2018, Board Meeting at 1:39:10 (emphasis added).)

Staff has engaged in no further analysis of any kind related to water demand or any other potentially significant environmental impacts, insisting that all such impacts were previously studied and no new information is available. Staff is completely ignoring its prior commitment to the District Board and the public that additional CEQA review would be undertaken once the proposed rules were better defined. This is an abuse of the process and utterly fails to comply with CEQA.

The select excerpts in the following chart clearly demonstrate the contradictions between the assurances Staff made to this Board and the public in 2018 and what it is saying now.⁸

AB 617 Expedited BARCT Implementation Schedule (2018)	Proposed Amendments (2021)
Scope of CEQA Analysis	
<p>Dec. 19, 2018, Board Meeting</p> <p>Q: <u>Director Scott Haggerty</u>: “And what happens then, if the [wet gas scrubber] is the way to go, then where do we go from there [with respect to significant water demand]?”</p> <p>A: <u>Jack Broadbent</u>: “<i>[T]here will be a separate CEQA analysis for each and every single one of [the BARCT rules] as they are brought forward. That’s when we’re going to do the more detailed impacts on water and land and other types of environmental impacts...</i>I do know that there’s also going to be a more detailed analysis subsequently, if that helps you.” (Emphasis added.)</p> <p>-----</p> <p>Q: <u>Director Karen Mitchoff</u>: Asking for confirmation that the Board is only voting on the EIR schedule and “not the technicalities...of how that implementation will take place.”</p> <p>A: <u>Jack Broadbent</u>: “<i>When we go through and identify explicitly what we’re going to be proposing</i> to [the Board] in those rules, <i>we will have a CEQA analysis</i> associated with it. So you’ll have an opportunity to not only hear all the very detailed, there’ll be a socioeconomic impact analysis in addition to a CEQA analysis. And those are all separate.” (Emphasis added.)</p> <p>-----</p> <p>Q: <u>Director Katie Rice</u>: “So the proposal is, or the projection is, that <i>you’ll be bringing to us the CEQA document to certify and the rule to approve.</i>”</p>	<p>June 2, 2021, Board Meeting</p> <p><u>Greg Nudd</u>: “<i>[In 2018] [w]e did a complete environmental impacts analysis</i> [in the AB 617 Schedule EIR] for every rule that would come out of that schedule, including this one...<i>So we’re going to continue to rely on that EIR.</i>” (Emphasis added.)</p>

⁸ A more fulsome comparison between representations made by Staff in 2018 and its current position is contained in Attachment 2.

AB 617 Expedited BARCT Implementation Schedule (2018)	Proposed Amendments (2021)
A: <u>Jack Broadbent</u> : “ <i>That’s correct.</i> ” (Emphasis added.)	
Analysis of Water Demand	
<p><u>Staff Report</u>: “<i>Potential controls involving wet gas scrubbing would also need to be evaluated for other potential environmental impacts, as wet gas scrubbers may require substantial water usage.</i>” (Final Staff Report, Attachment A, pdf p. 18; emphasis added.)</p>	<p><u>Staff Report</u>: “[W]ater demand impacts from the operation of [WGS] are not anticipated to be substantially different than the impacts described in the [AB 617 Schedule] EIR. <i>No subsequent or supplemental EIR is required</i> as there have not been substantial changes in the proposed project that would require major revisions to the EIR...” (Final Staff Report at p. 45.)</p>
Use of Recycled versus Fresh Water	
<p>Dec. 19, 2018 Board Meeting</p> <p><u>Q: Director Scott Haggerty</u>: “Do we look at, when we do this type of technology, that we use purple pipe water? Do we require, could they use recycled water?”</p> <p><u>A: Jack Broadbent</u>: “[A]s we get deeper into looking at this process and understanding what the available technologies are, it’s possible that that might be a solution. It’s also possible it won’t be because of the chemistry in the various streams. [...] <i>That’s exactly the kind of thing that goes into the further development of the rule.</i>” (emphasis added)</p> <p>-----</p> <p><u>Q: Director Karen Mitchoff</u>: “Can nonpotable water be used for the cleaning ... ? What I’m trying to do is look at not utilizing fresh water resources unless we absolutely have to, and how that all comes together.”</p> <p><u>A: Greg Nudd</u>: “It’s unclear at this point whether we’d be able to use re-used water...<i>As we continue with the rulemaking process and redo that more detailed environmental review</i> based on the findings of the rulemaking, <i>we’ll look at the issue of reusable water in that context at that time.</i>” (Emphasis added.)</p>	<p>No new, substantive analysis was presented in the Proposed Amendments.</p>

Contrary to Staff's current assertions, the Proposed Amendments will have potentially significant impacts that were not, and could not have been, analyzed in the AB 617 Schedule EIR, including those discussed below.

A. The Proposed Amendments' Impact On Water Availability

As noted in our April 30, 2021 and May 26, 2020, comment letters, the amount of water required to run just one wet gas scrubber is tremendous—approximately 432,000 gallons per day, as estimated by the District. This amount of water could serve over *twelve thousand* Bay Area residents each day.⁹ As explained in the Ramboll Water Report incorporated herein as Exhibit 2, the feasibility of meeting this increased demand for water and the potential environmental impacts that would result from the Proposed Amendments have not been adequately evaluated.¹⁰

Recognizing the significant impacts on water demand, at the time the AB 617 Expedited BARCT Implementation Schedule was adopted, former Director Scott Haggerty expressed concern to Staff that local water districts were not being adequately consulted in the rule development process:

Director Scott Haggerty: "I think that we would be better off also engaging local water districts that are responsible for the aquifer, because they would probably want to be more involved, to be very honest. They would be like a local elected official down in it, as opposed to the state kind of looking at the more broader view, so I would just suggest that we look at those water districts that are responsible for aquifers."

*Mr. Jack Broadbent: "Director Haggerty, we'll just make sure for the Board's sake, we'll take this as direction as we move forward on the rulemaking for each of these."*¹¹

Despite this direction to Staff, neither EBMUD nor any other local water utility was engaged in the Rule 6-5 Proposed Amendments rulemaking. Further, EBMUD has provided Chevron a letter confirming that there is no availability of additional recycled water beyond what Chevron already receives.¹² Therefore, any additional water demand at Chevron will need to be

⁹ See Bay Area Water Supply & Conservation Agency, *Per Capita Water Use*, available at: <https://bawsca.org/water/use/percapita>.

¹⁰ Exhibit 2, Water Technical Report – A Review Of The Water Issues Related To The Proposed BAAQMD Regulation 6 Rule 5, prepared by Ramboll, dated July 14, 2021 (“Ramboll Water Report”).

¹¹ December 19, 2018, Board Meeting at 1:54:05 (emphasis added).

¹² Exhibit 3, Letter from Florence Wedington, EBMUD, to Shawn Lee, Chevron, dated June 7, 2021.

met with *fresh, potable* water—an outcome that multiple Board members stated they wished to avoid during the December 2018 Board meeting.¹³

The AB 617 Schedule EIR identified significant and unmitigated impacts to water usage. In approving the EIR, the Board Resolution included certain findings as “Statements of Overriding Considerations” indicating that it found certain reasons why the significant and unmitigated impacts were justified. As to the significant impact on water demand, an increase of 1.74 million gallons of water per day resulting from the BARCT Implementation Schedule, the Board evaluated this impact “in light of...the fact that the recent drought that has made water supply issues an especially acute concern over the past few years is now over.”¹⁴

While the drought may have abated by December 2018, drought conditions have returned to California, and are hitting the Bay Area especially hard. The U.S. Drought Monitor, a collaboration between the National Drought Mitigation Center, U.S. Department of Agriculture, and the National Oceanic and Atmospheric Administration classifies the current Bay Area drought intensity as “Exceptional Drought.”¹⁵

Despite this, the draft Board Resolution for the Proposed Amendments states that the Board “continues to rely on...the December 19, 2018, Statement of Overriding Considerations in support of adoption of the Proposed Amendments.”¹⁶ If adopted, the Board would be making a finding that the Proposed Amendments’ significant water demand is acceptable, at least in part because “the recent drought that has made water supply issues an especially acute concern over the past few years is now over.” This reasoning behind the 2018 Statement of Overriding Considerations is, frankly, absurd given the current state of drought in California, and inadequate to support a finding that significant impacts to water demand are justified.

The Ramboll Water Report summarizes the additional water demand required by the Proposed Amendments and the availability of long-term potable/non-potable (recycled) water to meet this demand. The report concludes that the BAAQMD Staff analyses supporting the Proposed Amendments do not adequately address the significant impacts related to the additional water demand of 1,296,000 gallons per day from WGS. The key findings of the report are:

- The water supply for the region comes from separate water districts with variable water availability. The Bay Area water supply is highly dependent on the allocation of surface water supply to the area. Surface water is allocated by the State Water Resources Control

¹³ See, e.g., December 19, 2018, Board Meeting at 1:39:10 (Director Karen Mitchoff: “What I’m trying to do is look at not utilizing fresh water resources unless we absolutely have to, and how that all comes together.”).

¹⁴ BAAQMD Board Resolution No. 2018-08 at p. 8.

¹⁵ U.S. Drought Monitor, data valid June 22, 2021, available at: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA>.

¹⁶ BAAQMD, “A Resolution of the Board of Directors of the Bay Area Air Quality Management District Amending District Regulation 6, Rule 5: Particulate Emissions from Refinery Fluidized Catalytic Cracking Units” at p. 3 (May 20, 2021).

Board's Division of Drinking Water (Water Board), based on, among other factors, the drought situation and state-wide water demand. Also, the Department of Water Resources (DWR) manages distribution of water supply via aqueduct and also regulates groundwater usage. Thus, it is important to work with relevant water resource agencies and engage with local water districts as part of the Proposed Amendments rulemaking to better evaluate and disclose the impact on water supply due to air emissions control equipment.

- In light of the past and ongoing droughts in California, a thorough evaluation of the availability of potable water supply is necessary and has not been performed. The supply of potable water may become more variable and subject to growing demand for water in the area caused by increasing population. It is an important regulatory decision to either fulfill the need of additional water to the refineries for WGS or to meet the basic water demands of individual households in the Bay Area.
- The Staff analyses do not include evaluation of the availability of recycled water. Persistent drought conditions, including the most recent (2020-21) dry conditions, prompted the need for mandatory reduction of water usage in different Bay Area water districts. The reduction in water usage results in less wastewater supply for the reclamation units, particularly in dry months. Thus, a more substantive evaluation of the availability of recycled water is necessary.
- Even if the potable/recycled water is available, bringing it to the refineries would require additional infrastructure given the volume required to support WGS units. The environmental impacts of this additional development, as well as the costs associated with necessary infrastructure improvements, have not been accounted for in the staff analyses.
- For each gallon of additional water usage, there will be a commensurate increase in wastewater, that will likely require treatment before disposal. The large volume of water and the particular characteristics of the new wastewater from a WGS will likely require infrastructure improvements and changes. This has not been evaluated.
- The potential increase in wastewater generation may require that facilities modify their National Pollution Prevention Discharge Elimination System (NPDES) permit, which varies from facility to facility.

B. The Proposed Amendments' Impact on Water Quality

An additional concern related to water, beyond the significant water demand of wet gas scrubbers, is impacts to water quality. In the December 19, 2018, Board meeting, Director Mark Ross asked Staff to explain how wastewater from wet scrubbers would be handled:

Director Mark Ross: "First, on the scrubbers, the wastewater that comes from a wet scrubber. How difficult is that to treat, and how energy intensive is the treatment of that water. I know you're going to have different scrubbers and there could be different answers."

Gregg Nudd: "It depends on a lot of things. Depends on the waste stream, depends on the scrubber design, it depends on the existing capacity of the

*facility's wastewater treatment system. A lot of the refineries already have wastewater treatment systems. There's some controversy, as we work through this process about the extent to which those existing wastewater treatment systems can be used to address the scrubber water at the refineries. The cement plant is a little bit of a different problem in terms of their wastewater treatment system. **That will be something we will have to address in the context of the rulemaking.** But our assessment is that there wasn't a significant impact on wastewater for the purposes of the EIR."*¹⁷

Not only has Staff failed to consider this issue in the context of the Proposed Amendments as promised, it is now clear that the limited assessment of wastewater in the AB 617 Schedule EIR was deeply flawed. The analysis of wastewater and water quality was extremely limited, and internally inconsistent:

AB 617 Schedule EIR: "Most air pollution control equipment does not use water or generate wastewater. However, **additional water demand and wastewater generation impacts are expected to result from the operation of wet gas scrubbers** and/or wet ESPs, which may be used to control refinery FCCUs and coke calciners, and water to make the lime slurry to control emissions from the cement kiln. [...] Water quality impacts from installing **most types of air pollution control equipment** that use water as part of the control process would not exceed applicable water quality significance thresholds and, therefore, are concluded to be less than significant."¹⁸

The AB 617 Schedule EIR concluded there would be no significant impacts on water quality because *most* air pollution control equipment does not generate wastewater. In that same section, the AB 617 Schedule EIR acknowledges that wet gas scrubbers *do* have the potential for wastewater generation impacts. The Proposed Amendments wouldn't require the refineries to install "most types of air pollution control equipment"—they would require wet gas scrubbers. The Rule 6-5 Staff Report contains *no mention* whatsoever of wastewater generation or water quality impacts. Such impacts were not analyzed in either the AB 617 Schedule EIR nor the Rule 6-5 Staff Report. This potential environmental impact, acknowledged but not analyzed in the AB 617 Schedule EIR, must be studied.

C. Impacts Caused By A Refinery Shutdown As A Result Of The Proposed Amendments.

As explained in our May 26, 2021 comment letter, the stringency of the Proposed Amendments is extreme enough to cause a foreseeable closure of one or more Bay Area refineries. We detailed how individual or cumulative shutdowns of refineries will "trigger a series of events that ultimately cause urban decay."¹⁹ Loss of jobs, increased gas prices, and

¹⁷ December 19, 2018, Board Meeting at 1:47:45 (emphasis added).

¹⁸ Section 1.4.3.2, p. 1-11 of DEIR (emphasis added).

¹⁹ *Bakersfield Citizens for Local Control, supra*, 124 Cal.App.4th at p. 1208 [EIR failed to comply with CEQA's information disclosure provisions where it omitted any meaningful consideration of whether the proposed project would cause urban decay].

reliance on other fuel sources outside of the area could all trigger events causing urban decay. For example, if one or more Bay Area refineries were to shut down, fuel would have to be brought in from other areas in order to meet Bay Area demand. BAAQMD has presented no analysis of potentially significant environmental impacts from importing fuel via marine vessel, tanker truck, or pipeline. Potentially significant impacts to air quality, GHG emissions, hazards, and water quality could foreseeably result from such a scenario. If pipelines must be constructed, additional potentially significant impacts to public health, noise, biological resources, cultural resources, and aesthetic impacts would need to be evaluated. Further, if jet fuel availability is impacted, Bay Area travelers may need to drive to other airports, increasing vehicle miles traveled and associated environmental impacts.

In response to our May 26 comments, Staff stated that they had previously responded to similar comments in the Summary of Comments and Responses (dated May 24, 2021) at page 24.²⁰ The cited response states that Staff did not evaluate a scenario where a refinery ceases operation due to the Proposed Amendments because (a) standard practice is to assume compliance with applicable laws and regulations, and (b) the prediction that a refinery would close due to the Proposed Amendments requires, “layers of speculation that put the scenario beyond the scope of reasonable likelihood that informs the breadth of CEQA review.”²¹ As to the former point, we are not suggesting a scenario where a regulated entity operates in non-compliance with applicable laws and regulations—we are pointing out the very realistic scenario where a regulated entity *cannot* comply with applicable laws and regulations and, therefore, ceases operation, rather than operate in non-compliance.

As to the latter point regarding speculation, a refinery shutdown is a reasonably foreseeable consequence of the implementation of the Proposed Amendments.²² As explained in Martinez Refining Company’s May 18, 2021 letter to BAAQMD, this would be the costliest rulemaking in the District’s history, and the cost of a wet gas scrubber at its refinery is at least \$800 million.²³ This would force the Martinez Refinery to shut down and may cause other refineries to shut down, as well.²⁴ One Bay Area refinery that might have been impacted by the Proposed Amendments – the Marathon Martinez Refinery has already been idled. This is a clear illustration that refineries are not impervious to external factors that affect their economic viability. Certainly costs of the magnitude contemplated here are among those factors.

Because the AB 617 Schedule EIR does not consider refinery shutdowns as a reasonably foreseeable consequence of the Proposed Amendments, BAAQMD must evaluate this potentially significant impact. The CEQA evaluation should compare the shutdown potential between the 0.010 gr/dscf and 0.020 gr/dscf limits. The relative environmental impacts are necessary to

²⁰ Supplemental RTC at p. 7.

²¹ RTC at p. 25.

²² See May 26, 2021, comment letter, Attachment C (considering impacts of refinery closures).

²³ See MRC Letter, pp. 1, 2.

²⁴ *Id.* at p. 1.

inform the public and decision makers about the serious environmental consequences of the Proposed Amendments.

D. Staff Improperly Limited the BARCT Options for Board Consideration

As recently as May 2020, Staff confirmed that a “total PM₁₀ limit of 0.020 gr/dscf represents an achievable level of control that has been demonstrated to be feasible at multiple facilities.”²⁵ Staff has made very clear that this Board has full discretion “to determine what meets the definition of best available retrofit control technology.”²⁶ However, the Stationary Source Committee’s vote on March 15, 2021 resulted in only the 0.010 gr/dscf emission limit being brought to the full Board for consideration.

The March 15 Committee agenda stated that “[t]he Committee will receive an update on Rule 6-5, Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units.” The meeting was an update only. The agenda for the meeting did not say any vote or action would be taken. District Staff presented three different options to amend Rule 6-5: Scenario A (0.02 gr/dscf emission limit), Scenario B (0.01 gr/dscf emission limit), and a stair-step phased approach. At the meeting, the Committee members conducted a “straw poll” to determine the preferred approach. Committee Co-Chair John Bauters explained that the purpose of the straw poll was to “narrow the discussion of path before us . . . [and] give staff the direction they need today in order to move forward.” Based on that vote—taken in violation of the Brown Act—only Scenario B, the 0.01 gr/dscf emission limit, was presented to the District’s Board of Directors at its meeting on June 2, 2021. Based on that unlawful action, the District’s Board and the public were deprived of the opportunity to consider the other options.

While the meeting minutes report that the result of this agenda item was “Committee Action: None; receive and file,” the result, in fact, was that the Board is now only able to act on the 0.01 gr/dscf emission limit. However, the Board maintains the authority to conclude the 0.02 gr/dscf emission limit, which was at one point Staff’s preferred emission limit, constitutes BARCT. Yet, the flawed rulemaking process has improperly limited the discretion of the Board to reach that conclusion.

II. BAAQMD STAFF CONTINUES TO FAIL TO INFORM THE PUBLIC REGARDING UNCERTAINTY IN THE HEALTH IMPACTS ANALYSIS

In our May 26, 2021 comment letter, we provided comments on the District’s health impacts analysis, based on Ramboll’s review of the District’s BenMAP modeling files. In those comments, we pointed out the ranges of uncertainty in the modeled health benefits for Control Scenario A (0.020 gr/dscf total PM₁₀ limit) and Control Scenario B (0.010 gr/dscf total PM₁₀ limit). Staff responded: “The commenter’s statement misinterprets the meaning of the health

²⁵ Initial Staff Report, Draft Amendments to Rule 6-5 (May 2020) at p. 15.

²⁶ Mr. Greg Nudd, June 2, 2021, BAAQMD Board meeting.

benefit ranges for Scenario A and Scenario B, and compares the data in an inconsistent manner to draw an improper conclusion.”²⁷

We understand that the range of mortality estimates presented in Appendix A.2, Table ES-1, represent estimates based on a range of epidemiological studies, with two of the studies bracketing the results, specifically Krewski *et al.* and Lepeule *et al.* These estimates are *means* for each study, however, and do not represent the range of potential estimates when uncertainty in the model results is quantified.

As part of BenMAP, the model conducts a Monte Carlo-based uncertainty analysis that provides a distribution of possible impacts based on the statistical uncertainty in the health impact function from the underlying epidemiological study. From this distribution, uncertainty bounds can be derived (e.g., representing the 2.5 and 97.5 percentiles of the distribution).²⁸ It is important to note that this uncertainty is conservative, as it only includes the statistical uncertainty associated with the health function from the epidemiological study and no other sources of uncertainty (e.g., from emissions estimates and air quality modeling).

Figure 4 in our May 26, 2021 comment letter presented lower and upper bounds for the modeled health benefits for each Control Scenario, incorporating both the Krewski *et al.* and Lepeule *et al.* studies. We obtained these uncertainty bounds from the results of the BenMAP analysis that were provided by BAAQMD. **Figure 1** shows the range of possible health benefits for Control Scenario A and Control Scenario B, considering both the Krewski and Lepeule studies. Given that the District has not articulated a reason why one of these studies is preferable or more reliable than the other, and both are being used to estimate health benefits of the Proposed Amendments, it is perfectly reasonable to show the full range of possible health benefits (including both studies) from the BenMAP modeling for each Control Scenario as shown in Figure 1.

²⁷ Supplemental RTC at p. 9.

²⁸ See Environmental Benefits Mapping and Analysis Program – Community Edition User’s Manual at p. 3-7 (April 2021), available at: https://www.epa.gov/sites/production/files/2015-04/documents/benmap-ce_user_manual_march_2015.pdf

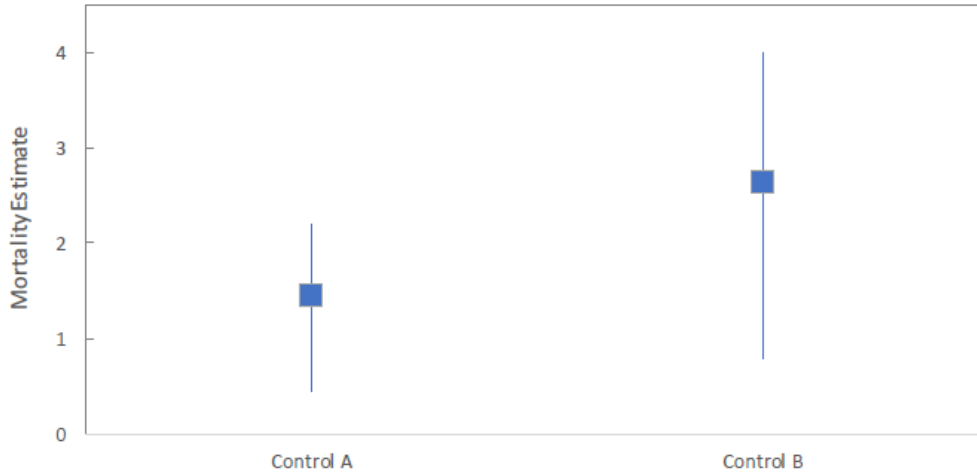


Figure 1. Previously submitted in Chevron’s May 26, 2021, comment letter as Figure 3, this figure shows mean mortality estimates with uncertainty bounds for Control Scenarios A and B, with each scenario including results based on the Krewski, *et al.* and Lepeule, *et al.* studies. The range of uncertainty shown by the vertical bars represents the 2.5 and 97.5 percentile estimates of the health impact, as modeled by the District using BenMAP.

To dispel any notion that the overlapping ranges of uncertainty are based on comparing data “in an inconsistent manner,” in **Figure 2** we show the results separately for each study, noting that (1) the estimated reductions in mortality are very small for both Control Scenarios (especially for impacts derived from the Krewski *et al.* study), and (2) there is still overlap in the estimates for Control Scenario A and Control Scenario B for both studies, and more so for the higher estimates derived from the Lepeule *et al.* study. When one looks at the mean estimates of reductions in mortality from each study and considers the uncertainty associated with the health effects evaluation (as shown by the vertical bars), these reductions could be considered to be in the same range for each Control Scenario. That is, this BenMAP analysis does not demonstrate a significant added health benefit from the 0.010 gr/dscf emission limit compared to the 0.020 gr/dscf emission limit. The same analysis applies to other health outcomes that were evaluated, although, as noted by the Staff, other health outcomes account for a much smaller percentage of the overall benefits. These health outcomes were, nevertheless, presented to the public by the District and the public deserves to understand the inherent uncertainty in the BenMAP modeling, regardless of the valuation of those outcomes.

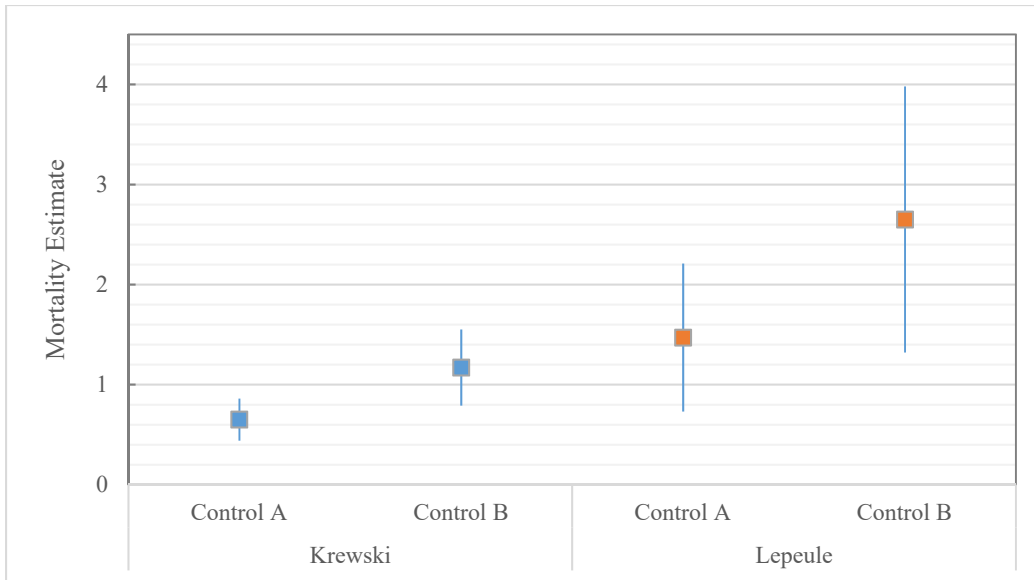


Figure 2. Mean mortality estimates with uncertainty bounds for Control Scenarios A and B, and both the Krewski, *et al.* and Lepeule, *et al.* epidemiological studies. The range of uncertainty shown by the vertical bars represents the 2.5 and 97.5 percentile estimates of the health impact, as modeled by BAAQMD using BenMAP.

Even when the data are cut differently, with the Krewski, *et al.* and Lepeule, *et al.* studies separated out within each Control Scenario, the result is the same—the uncertainty ranges of modeled health benefits overlap (as shown in Figure 1), and there is no statistically distinguishable difference in health benefits between Control Scenarios.

III. BAAQMD STAFF HAS NOT ADEQUATELY CONSIDERED OR JUSTIFIED THE COST-EFFECTIVENESS OF THE PROPOSED AMENDMENTS

In adopting a regulation, the District must consider and make available to the public its findings related to the cost-effectiveness of a control measure determined pursuant to Health and Safety Code section 40922 “as well as the basis for the findings and the considerations involved.”²⁹ First, the Board must affirmatively make a finding regarding the Proposed Amendments’ cost-effectiveness and its failure to do so would render the Proposed Amendments in violation of law. However, the Staff Report has provided no basis for such findings. Second, the Staff Report did not include any discussion of the “considerations involved” in the cost-effectiveness determination.

The Staff’s Responses to Comments states that: “The Staff Report explains why, although the cost-effectiveness and incremental cost-effectiveness values of the proposed amendments are higher than previously adopted Air District rules, adoption of the proposed amendments is nevertheless justified.”³⁰ The Staff Report does no such thing. Sections V.A and V.B of the Staff Report are titled “Cost-effectiveness” and “Incremental Cost-effectiveness,”

²⁹ California Health and Safety Code § 40703.

³⁰ RTC at p. 8.

respectively.³¹ These sections contain tables presenting the cost-effectiveness and incremental cost-effectiveness estimates for the Proposed Amendments,³² but quite literally no text providing any explanation of why these unprecedentedly high estimates of cost-effectiveness and incremental cost-effectiveness are justified. These sections contain mere tables of the estimates, followed by descriptions of how the *cost* estimates were developed³³—but without any discussion of the associated emission reductions, this is not the same as *cost-effectiveness*. Cost-effectiveness is a relative analysis, and the raw calculation of costs does nothing to explain why such *cost-effectiveness* estimates are justified in this rulemaking.

As we previously explained, the District’s estimated costs for installation of a wet gas scrubber at the Chevron Refinery are significantly understated, while the District’s estimate of emissions reductions that the Proposed Amendments might achieve are grossly overstated. Both of these inaccuracies reduce the cost-effectiveness value (lower costs in the numerator and higher emission reductions in the denominator) and make the Proposed Amendments appear more cost-effective than they would actually be. The District’s estimated cost-effectiveness value at the Chevron Refinery is \$242,700 per ton, which is already approximately \$200,000 per ton higher than any other District PM regulation.

The *incremental* cost-effectiveness—the cost per ton of emissions reduced by the 0.010 gr/dscf emission limit beyond what would be controlled by the 0.020 gr/dscf emission limit—is even more astronomical: \$430,200 per ton of PM₁₀. Nowhere in the Staff Report does the District Staff explain or justify why this incremental cost-effectiveness of nearly a half million dollars per ton of PM₁₀ reduced is warranted.

In 2017 and 2018 when the District Staff was identifying potential BARCT rule development projects pursuant to AB 617, part of the decision on whether to pursue a given rule was whether or not the rule would achieve cost effective PM reductions. Staff undertook an analysis to estimate the cost-effectiveness of potential rules, and “any controls and emission limits with a cost-effectiveness *within reasonable bounds, consistent with recent BARCT determinations*, were considered for potential rule development projects.”³⁴ Staff explained that certain identified source categories were not included in the BARCT rule development process because, “[m]any control options identified may not meet BARCT cost-effectiveness requirements.”³⁵

³¹ See Staff Report at pp. 21-30.

³² See Staff Report, Tables 3 and 6.

³³ The subsection following the cost-effectiveness estimates in Table 3 is titled, “Development of Compliance *Cost Estimates* for Proposed Amendments,” and the subsection following the incremental cost-effectiveness estimates in Table 6 is titled, “Development of Compliance *Cost Estimates* for Less Stringent Control Option.” (emphasis added)

³⁴ AB 617 Final Staff Report (December 2018) at p. 12, available at: https://www.baaqmd.gov/~media/files/ab617-community-health/barct/20181214_fsr_ab617_barct-pdf.pdf?la=en (emphasis added).

³⁵ *Id.* at p. 13.

Clearly, in 2018, Staff had some range of cost-effectiveness that was considered within “reasonable bounds,” and within which they felt a rulemaking could be pursued consistent with BARCT. Presumably, today, Staff could explain what those criteria are and how the cost-effectiveness and incremental cost-effectiveness of the Proposed Amendments compare. But no such comparison or any details of such an analysis have been publicly provided. We have requested, but not yet received, documents related to the cost-effectiveness criteria used to narrow the sources targeted for BARCT rule development.³⁶

Just three years ago, when adopting a new Rule 6-6, the Staff determined that applying a more stringent rule would result in an incremental cost-effectiveness of \$48,400 per ton of PM₁₀ reduced and, therefore, recommended that the more stringent rule *not* be adopted.³⁷ In other words, the Staff recommended not achieving an additional 62 tons per year reduction of PM₁₀ at a total cost of about \$3 million per year. Staff has not explained its rationale for giving up the opportunity to achieve these reductions of PM₁₀ at a cost five times lower than the cost associated with reducing PM₁₀ from the Proposed Amendments. This arbitrary approach to rulemaking is contrary to law.

In addition to not applying cost-effectiveness thresholds consistently across rulemakings, the District’s own guidance indicates an appropriate cost-effectiveness threshold for PM_{2.5} is \$5,300/ton.³⁸

³⁶ PRA Request submitted June 22, 2021.

³⁷ See Staff Report, Proposed Rule 6-6 (June 2018), at p. 9, available at: https://www.baaqmd.gov/~media/dotgov/files/rules/archive-2018-regulation-6/bundled-documents/20180801_91_fsr_0606-pdf.pdf?la=en.

³⁸ Complex Permitting Handbook for BAAQMD New Source Review Permitting (September 2016), at p. 60, available at: https://www.baaqmd.gov/~media/files/permits/permitting-manuals/nsr-guidance/complex-nsr-permitting-handbook_sept-2016-pdf.pdf?la=en. While this guidance is directed at BACT, the District has neither provided a similar threshold for a BARCT rule nor rationale for why the cost-effectiveness threshold for BARCT should be so much higher than BACT.

Table 3-1: BAAQMD BACT Cost-Effectiveness Thresholds	
Pollutant	Threshold
POC and NPOC*	\$17,500/ton
NOx	\$17,500/ton
SO ₂	\$18,300/ton
PM _{2.5}	\$5,300/ton
*except for specified spray booth sources as discussed below	

The District notes that when determining BACT under federal standards, an alternative can be eliminated “if it is not cost-effective, meaning that it will cost substantially more to achieve a given level of emission reduction than the costs that other permittees have been required to bear in similar situations.”³⁹ As noted, the costs associated with the Proposed Amendments will be substantially higher than any other rule in District history aimed at reducing PM emissions. Thus, under both District thresholds and federal standards, the Proposed Amendments are not cost effective.

³⁹ *Id.* at 114.

EXHIBIT 1

CHAIRPERSON DAVID HUDSON: Are we ready, Marcie? Okay, all right. Let's call to order the last meeting of December, special meeting for the Board of Directors. Roll call, please?

CLERK MARCIE HARITZKA: On the roll for the special Board of Directors meeting of December 19th, 2018. Director Abe-Koga? Director Barrett?

DIRECTOR TERESA BARRETT: Here.

CLERK MARCIE HARITZKA: Director [PH] Blitzen?

DIRECTOR JOHN BAUTERS: Yep.

CHAIRPERSON DAVID HUDSON: Oh.

CLERK MARCIE HARITZKA: AKA [INDISCERNIBLE].

CHAIRPERSON DAVID HUDSON: Don't encourage him.

CLERK MARCIE HARITZKA: Director Canepa? Director Chavez?

CHAIRPERSON DAVID HUDSON: She's here.

CLERK MARCIE HARITZKA: Okay. Director Cutter? Director Gioia?

DIRECTOR JOHN GIOIA: Here.

CLERK MARCIE HARITZKA: Director Groom?

DIRECTOR CAROLE GROOM: Present.

CLERK MARCIE HARITZKA: Director Haggerty?

DIRECTOR SCOTT HAGGERTY: Here.

CLERK MARCIE HARITZKA: Director Jue? Director Kim? Director Kniss? Director Mandelman? Director Miley? Director Mitchoff? Director Ronen? Director Ross? Director Sanchez? Director Spering?

DIRECTOR JIM SPERING: [INDISCERNIBLE]

CLERK MARCIE HARITZKA: Director Wagenknecht?

DIRECTOR BRAD WAGENKNECHT: Yes.

CLERK MARCIE HARITZKA: Director Zane? Secretary Sinks?

SECRETARY ROD SINKS: Here.

CLERK MARCIE HARITZKA: Vice-Chair Rice?

VICE CHAIR KATIE RICE: Here.

CLERK MARCIE HARITZKA: Chair Hudson?

CHAIRPERSON DAVID HUDSON: Here.

CLERK MARCIE HARITZKA: We do not have a quorum.

CHAIRPERSON DAVID HUDSON: Yeah, we're close enough for a pledge. Please join me in the Pledge of Allegiance.

ALL: "I pledge allegiance to the flag of the United States of America and to the republic for which it stands, one nation under God, indivisible with liberty and justice for all."

CHAIRPERSON DAVID HUDSON: Okay, thank you for joining us on my last meeting before new Chair Rice takes over, but there's no relief. There's no -- anyway, moving right along, the Commendation Proclamation we have for Pete Sanchez. I would like to take the opportunity to recognize Pete Sanchez for his dedicated service as a member of the Board of Directors. Director Sanchez has served as a member of the Board from 2016 through 2018. While at the District, Director Sanchez served as Vice Chair of the Stationary Source Committee and a member of the ad-hoc Refinery Oversight Committee. Thank you for your service, Pete. You will be missed. Next item is closed session. We will move to confer with legal counsel on existing litigation pursuant to government code Section 54.9 - 56.9A, A Need to Meet in Closed Session with Legal Counsel to Consider the Following Cases: Western States Petroleum Association, Valero Refining Company, California, Tesoro Refining and Marketing Company LLC and Phillips 66 Company versus Bay Area Air Quality Management District in the Contra Costa County Superior Court case number N16-0963. We getting closer to that quorum, Marcie? No? And Valero Refining Company, California, Tesoro Refining and Marketing Company LLC and Phillips 66 Company versus Bay Area Air Quality Management District and that is in the Contra Costa County Superior Court case number N16-0095. There's our last person. Karen Mitchoff's here. We will convene to close session. Thank you.

[MEETING IN CLOSED SESSION 00:03:19 TO 00:37:42]

CHAIRPERSON DAVID HUDSON: Okay, let's get everybody back in the seats. We'll convene from closed session. We met on two cases, on case number N16-0963. Informational only, no action taken on case. On case 16-0095 information only, no action taken. Does our District Counsel want to add anything to it?

COUNSEL BRIAN BUNGER: No, sir.

CHAIRPERSON DAVID HUDSON: Okay, we're on to public comment. Public comment is open. Now's the time for anyone in the audience who wants to address us on any item not on today's agenda. Do we have any cards, Marcie?

CLERK MARCIE HARITZKA: I have eight.

CHAIRPERSON DAVID HUDSON: I'm disappointed. Only eight on my last meeting? Can you call the eight, please? We'll take two minutes.

CLERK MARCIE HARITZKA: Oh, okay. Jed Holtzman, [PH] Hai Lee Wong, [PH] Kat Chin, [PH] Ling Kow, [PH] Domenico Tanzarella, [PH] Jan Warren, [PH] Pete Welty, [PH] Bob Brown.

CHAIRPERSON DAVID HUDSON: Thank you. Start us off, Jed.

JED HOLTZMAN: Thank you, Chair Hudson and Directors. Last meeting of the year. Thank you for your service, Chair Hudson, and sorry to see Mr. Sanchez going. Our comment is just a procedural one. At many of the other Boards and Commissions that we work on they also have closed sessions, usually because of legal issues. One thing that they often do to prevent having all of our community stakeholders having to sit through the closed session though, is to provide a time-certain that the meeting will start. For example, the meeting will start at 9:00, there will be a Pledge of Allegiance, Pete Sanchez Commendation and then a closed session. Item number four will begin no earlier than 9:45. For example, that sort of thing happens at most of the Boards and Commissions that we work on so, I think we've made this kind of comment before but it would be great probably for all of these folks taking off of work if we knew what time the meeting was going to start, and I think that the staff could easily put that together, so, we would suggest that going forward. Thank you very much.

CHAIRPERSON DAVID HUDSON: Thank you, Jed. Next speaker, please?

HAI LEE WONG: Good morning ladies and gentlemen.

[00:40:00]

My name is Hai Wong. I'm one of the concerned parents from the Stratford School in Fremont. Tri-City Rock is a rock factory in Fremont, and in these two minutes I would like to expose Tri-City Rock particle emission is about 300 times higher than reported, which is a significant health risk to the nearby schools. Tri-City Rock has three nearby schools and it has about a thousand students, and Stratford School is our choice, and also affecting the Grimmer Elementary School which is our public-school assignment. We have no choice of getting out of the environs of Tri-City Rock. And from the application in the last three years in Bay Area Air Quality Management, Tri-City Rock claims to have 12-months of average throughput of about 9800 tons of cement silo loading in 12 months, and an average throughput of 229 tons of concrete. So, cement and concrete should be close to 1:7 ratio and we are surprised to find out Tri-City Rock application has concrete average throughput is 229 tons, which is 14 times more than what the

input of cement on. And as you know, PM 2.5 is the calculated value based on the EPA calculation with a throughput of 229 tons of concrete, PM 2.5 emission is 0.042 microgram per cubic meter. In comparison, Fremont's combined source threshold is 0.8 microgram per cubic meter. So, Tri-City Rock is about 19 times better than the city of Fremont and let that sink in for a minute. Would you calculate the math? If you believe Tri-City Rock is a rock factory that is 19 times better than the city of Fremont. So, in the end I just want to demand to stop renewal of the Tri-City Rock permit in 2019 and revoke the Tri-City Rock permit as soon as possible.

CHAIRPERSON DAVID HUDSON: Okay, next speaker please? We're beeping. We're good. Thank you.

KAT CHIN: Good morning, my name is Kat Chin. Two of my children attend Stratford School as Fremont [INDISCERNIBLE] campus. A few parents have come speak about our concerns the last two Board meetings. Now our concerns have become worries and outrages. We are outraged that the Agency do its due diligence to ensure that Tri-City Rock reports their two annual concrete [PH] batching levels. Now there's 300 times mistake on the PM 2.5 emission level that are impacting our schools. Stratford School, our school campus, was approved by the City of Fremont based on this error. Now three schools in the nearby area including one public school, Grimmer Elementary, over 1000 students and at least 100 staff members are affected by this understated air pollution. Please understand the severity of this situation. Through many morning drop-offs and afternoon pick-ups we can smell diesel in the air, the dust. There have been multiple incidents of heavy clouds and odd smells coming from Tri-City Rock site over to the playground reported by students and staff members. They had to be rushed back into indoors for their safety. Many of you here are parents or grandparents. If you're in our situation, what would you do? One thing we will do is we will not stop until our children are safe in their school. We're here to ask the Board to urge the responsible parties to take action immediately, first to show their investigation results on this error, 300 times error. Second to hold Tri-City Rock at least to their 200-ton concrete patching level as they stated in their permit renewal for the past eight years. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker please?

LING KOW: Thank you, ladies and gentlemen for your time. I am coming to you this morning as a very concerned parent. On behalf of my son and on behalf of all the parents at both the Stratford and Grimmer public elementary school. My son is currently kept indoor and has been since the beginning of school, while at school, because of the air pollution coming from Tri-City Rock facility. I am here to ask you to uphold your mission statement which is, "Air District aims to create a healthy breathing

[00:45:00]

environment for every Bay Area resident while protecting and improving the public health air quality and global climate." Since the Town Hall meeting with Air Quality District on November 19th where parents presented alarming data showing discrepancy of 200- to 300-fold difference between published levels of pollution by Tri-City Rock and what is likely the actual

pollution level, we are left feeling very appalled by the breach of duties by Tri-City Rock, Air Quality District, Fremont City and the school. Tri-City Rock neglected their duty to accurately report their concrete output when applying renewing their permit. The local Air Quality District failed in their duty to question the accuracy of the information given by Tri-City resulting in erroneous calculation of pollution level, so low that once published led the city to approve for the school site. The short- and long-term health of not one but three schools are impacted by this breach of duty. We are asking for, we are waiting for communication from the Air Quality Management District. Tri-City Rock is requesting to have their output permit increased from 80,000-ton to 120,000-ton per year. We are asking that the correct pollution level be published based on accurate, actual concrete output by Tri-City.

CHAIRPERSON DAVID HUDSON: Thank you.

LING KOW: If the actual level is above what is published, we ask if the Air Quality please revoke the Tri-City's permit and the city relocate Tri-City Rock.

CHAIRPERSON DAVID HUDSON: Thank you, ma'am. Next speaker please.

LING KOW: We ask the Air Quality District to do the right thing.

CHAIRPERSON DAVID HUDSON: Next speaker, please. Thank you. Most people are aware we cannot act on public comment items at this meeting. Go ahead.

DOMENICO TANZARELLA: Okay, I'm good?

CHAIRPERSON DAVID HUDSON: You're on.

DOMENICO TANZARELLA: Hello? Okay. Hi, my name is Domenico and I am one of the concerned parents here today and want to share my thoughts on pollution issue on Osgood Road in Fremont, where Tri-City Rock and three schools are located. Based on the previous findings, it appears that Bay Area Quality Management District has either made a mistake or willingly omit the real amount of pollution generated by Tri-City Rock separation, triggering a chain of events that ultimately allowed schools to operate close to this facility. The immediate consequence of this is that kids in the nearby schools, one of them is a public school, are at risk of respiratory disease and cancer in the long-term and Bay Area Air Quality Management District is doing absolutely nothing to protect our kids from what I call a cancer factory, literally. And being a federal agency, your duty is to protect the health of people living in the Bay Area, not to cover up shady businesses that have a history on not complying with regulations and is on record. They got fined many times. So, I ask you a few things. First of all, not allow Tri-City Rock to increase their operations. There is a request to increase operation. Please stop that. Deny that request. I also ask you to finally publish the real level of pollution. You can calculate that. It's easy. And last, I ask you to be brave and do the right thing. Limit the operation of this cancer factory in the Osgood Road location. Failure to act will cause short- and long-term harm to students of the schools located nearby Tri-City Rock. We will continue to express our

concern to this agency through mail and in-person statement. We will continue coming here and you will listen to us and we also engage media [INDISCERNIBLE] --

CHAIRPERSON DAVID HUDSON: Did she turn your microphone off?

FEMALE 1: Marcie did.

MALE 1: He's over time.

CHAIRPERSON DAVID HUDSON: Oh, okay. Thank you. Next speaker, please?

JAN WARREN: Good morning. Jan Warren, Interfaith Climate Action Network. Two minutes. I was unable to attend the November meeting due to two weeks of unhealthy air, so, I couldn't stand outside and wait for a bus and I was already in the orange zone myself. Thanks for the ability to hear the discussion, however, online. This is not moving.

[00:50:00]

Last year I spoke on Spare-The-Air topic and received a bag, some information and some goodies, and I'm again concerned that many people hear the Spare-The-Air Day info as simply don't burn. No burning, no burning. And I fear kids and others think they're okay because they have inhalers. I would encourage more education around the orange-sensitive group. As an aside I heard that Oakland Mask group raised \$80,000 and handed out \$30,000 masks to help you all get through that bad Camp Fire. In addition, today, I'm pleased that the Antioch and Pittsburg school districts recently received Carl Moyer funds to replace several diesel school buses with electric. I'd be interested in knowing a way to find out how many school buses run in Contra Costa County and of those, how many are scheduled to be replaced by electric buses and how we might encourage and enable a faster adoption. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker?

DIRECTOR JOHN GIOIA: Can I just make one comment about the masks?

CHAIRPERSON DAVID HUDSON: You're going to.

DIRECTOR JOHN GIOIA: I think it's important to note the Air District did get out thousands and thousands of masks around the Bay Area and just wanted to acknowledge that, and I know our office distributed about 1500 in a couple of days. So, just want to acknowledge the work of getting all of that out, Jack.

DIRECTOR SCOTT HAGGERTY: Yeah, I would agree with that. I worked with the staff at the Air District. We gave out almost 6,000 masks in Alameda County, Oakland and Tri-Valley area. So, I want to thank the Air District, too.

CHAIRPERSON DAVID HUDSON: Thank you. Mr. Brown?

BOB BROWN: Good morning, Chair Hudson and Members. Happy holidays. Bob Brown with the Western States Petroleum Association, and I have a question that perhaps can be addressed later in the agenda pertaining to Rule 1215. But we, our members, have a question about the community monitoring fees that they've been paying the last three years, averaging, depending on the size of the refinery, about \$200,000 a year in fees to the Air District. So, we are wondering if we could get a sense of the timeline for installation on those community fees for 2019. We understand that many of the refineries are advancing their own fence-line monitoring. There was going to be monitoring as it pertains to AB617, so, I leave that question with the district. Thank you very much.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker please? And I'm sure we'll have a much better Chair in 2019. She'll get it for you.

RICHARD GRAY: This is Richard Gray. I'm with 350 Bay Area, and I just want to make a general comment about what we're up against since we now have an IPCC report that says we've got 12 years. After years of climate denial and obfuscation, the fossil fuel industry, which are the perpetrators of climate chaos we are now experiencing, continue to spend vast amounts of money to prevent any limitations on their growth or rise in costs. As an example, they spent \$30 million to defeat Initiative 1631 in Washington State, a carbon fee to speed the transition to clean energy. In California they spent over \$19 million to buy and elect sympathetic candidates. Locally they spent \$30,000 in the last election to try and knock out at least one of you Directors, who they believed did not fully support their business interests. This is not a kinder, gentler industry. They have a death grip on our national politics thanks to a climate-denying President. At the state level, they have successfully limited, made cap in trade the only CO2 control with all its allowances and offsets. They have successfully limited Air District the authority to control CO2 and here at the regional level they are also using their vast wealth to threaten your ability to control PM as well. Someone somewhere has to challenge their power. They're not going to give it up willingly, and with it, the exercise of this power, they're going to bring down our society and the rest of the world with them. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker, please?

PETE WELTY: Hello.

CHAIRPERSON DAVID HUDSON: That was quick. Go ahead.

PETE WELTY: That was short. It felt short. My name is [PH] Peter Welty. I'm with Climate Action [INDISCERNIBLE], and international network of technologists pushing for bold and necessary action on climate.

[00:55:00]

First, thank you for all you've done and what you have not yet done but surely will. You in this room share a job of great difficulty and importance, standing up for the health of millions who may never even step foot here due to day jobs, long hours and even second shifts. Yet they

depend on you even when they may not know it. You carry a great burden for an often-thankless job, so again, thank you. Second, with the new year approaching, many of us will make resolutions to carry out in our coming journey once more around the sun. I ask only of you to include in your contemplations a deep and thoughtful consideration of what you, whether together or alone, might do to advance the good work you've already begun for this Board and this organization on which you serve. To fulfill its mission and further its goals of protecting health and climate for the sake of the people of these Bay Area cities and counties who so greatly depend upon you. Your individual determination and tenacity when combined with that of those around you set into motion through collective action has the ability to shape the future and inspire a nation, and all you need do is heed the opportunities of which you, and you alone, are afforded in the present moment. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Any further cards, Marcie? Seeing nonpublic comment is closed for the first session. You'll get another opportunity at 15 if you change your mind. Next item is Consent Calendar Items 5-9. Do we have any cards to pull any items? Anyone from the Board wish to pull an item or make a motion?

DIRECTOR CAROLE GROOM: Make a motion to approve the Consent Calendar.

CHAIRPERSON DAVID HUDSON: Okay, motion Groom, second Bauters. All those in favor say aye. Opposed? Seeing none. Any abstentions? That's always good. Next item is the Committee Reports. Mobile Source Committee, Mr. Haggerty.

DIRECTOR SCOTT HAGGERTY: Thank you, Mr. Chair. Before I say that, I'm just wondering, Wayne, did you want to say, inform the Board any of the -- I'm sorry, Mr. Chair, I'm not trying to hijack your meeting -- but it just seemed to me that maybe it would be appropriate that you kind of, that you let the Board know about the public meeting that we had on November 19th, since it was stated that we had that meeting. And also, I'd like to point out that also in that meeting was Mayor Mei of Fremont whose been very involved in this issue. Would you mind, Mr. Chair?

CHAIRPERSON DAVID HUDSON: No, go ahead.

DIRECTOR SCOTT HAGGERTY: Okay.

JACK BROADBENT: Well, I'll start us off if you don't mind, Mr. Chairman. We did hold a community meeting on the 19th of November down in Fremont. It was well-attended. Director Haggerty started us off, would you say, maybe a couple hundred people in attendance?

DIRECTOR SCOTT HAGGERTY: Sure.

JACK BROADBENT: Quite a few parents obviously and you've heard a number of them here today raising concerns about the Tri-City Rock facility right next door to their school. The Tri-City facility dates back to I want to say probably the 40s or 50s, actually? It's been there for a very long time, and it's a material processing facility, so, you can just imagine there's a lot of

materials and rock crushing and things like that for aggregate processing. A lot of diesel trucks. And there is a school that Fremont approved to be built and it was built and completed only in the last few years, just right next door. Stafford school? Stratford school? And so, the community, we held a meeting what, I want to say about three hours? We heard a lot of concerns about the information that was not only in the application initially for the facility but the fact that this facility has requested to increase its throughput. We went back and forth in terms of trying to explain where we are, but essentially what we're trying to do now is still take all that information in, trying to move forward with regard to understanding and addressing the particulate that is generated by the facility into the school. Of course, you can just imagine all of us want to make sure that the kids are protected. You all have heard about this and raised concerns about how did the city of Fremont allow for a school to be built right next to this facility. We understand that concern. We do the best job we can in providing the information to cities and counties in their land-use decisions, but nevertheless here we are faced with a situation where a school is now right next door to this facility. So, we think our next steps are to try to figure out what more can be done in terms of mitigating the PM and so far, I believe the school and the facility both are coming to the table with different ideas and it's going to take us some time I think to work through that process. But I think the District can be in the best place to facilitate those conversations and really get to a point where we do mitigate to the extent possible the PM

[01:00:00]

that is experienced in that school. Wayne, do you want to?

WAYNE KINO: Sure. And I just want to add that due to the parents complaints we have been investigating somewhat the particulates that's coming out of that, especially when they drop off the kids and we've presented that to Tri-City. They've made some improvements to their facility. They've gotten a new sweeper truck, a more high efficiency sweeper. They've moved some of the bins where they store some material. So, we have some cooperation there. The parents are bringing forward problems and we're trying to solve them as we get to them. But there's an overall issue that we're still working on and we're meeting with both the school and Tri-City to try and solve those problems.

CHAIRPERSON DAVID HUDSON: Okay, thank you.

DIRECTOR SCOTT HAGGERTY: Thank you, Mr. Chair. I'd just say that it was a well-attended meeting. I want to thank Air District staff and everybody who was involved because they really did a good job in trying to control the meeting, although I think it got a little hijacked. But you did the best you could to try to control the agenda that was before us that night. And also, when I was talking about the Air Districts, I was remiss in reporting that we also gave air masks out in Fremont. Mayor Mei came out and helped with that also, so, just wanted to say that the Air District did a really good job getting air masks out. So, in reference to my report, the Committee met on Monday, December 17th, 2018, and approved the minutes of October 25th, 2018. The Committee reviewed and discussed staff presentation projects and contracts with proposed grant awards over \$100,000 and the Committee recommends that the Board approve

the recommended projects with the proposed grant awards over \$100,000 and authorize the Executive Director, or the Executive Officer, Air Pollution Control Officer to enter into all necessary agreements with applications for the recommended projects. The Committee then reviewed and discussed the staff presentation fiscal year ending 2017 Transportation Fund for Clean Air Audit report. Finally, the Committee reviewed and discussed the Staff Presentation report on the Transportation Fund for Clean Air Projects and Expenditure, effectiveness for fiscal year ending 2018. The next meeting of the Mobile Source Committee will be held on Thursday, January 24th at 9:30 here in this office at 375 Beale Street, San Francisco, California. I move that the Board approve our committee report. This will conclude my report.

CHAIRPERSON DAVID HUDSON: Okay, motion Haggerty, second Wagenknecht. To receive the report all those in favor say aye. Opposed? I did have one other item on Mobile Source that I wanted to point out to anybody that would like to go back and see what we did talk about, and that is we constantly get told that we're not doing anything here. There's no results. At that meeting it was pointed out that the lifetime criteria of pollutants reduced is 173.28 tons. 55.27 tons of reactive organic gasses, 48.94 tons of nitrogen oxides, and 69.07 tons of particulate matter. The lifetime greenhouse gas emissions reduced is 105,000 tons. So, for not doing anything the results were pretty good. I'm stalling to see if Margaret or Doug Kim get here. They didn't, so, our --

FEMALE 1: [INDISCERNIBLE]

CHAIRPERSON DAVID HUDSON: No, I was going to give it to Tyrone, but I'll do it. The Legislative Committee met on Monday, December 17, 2018, and approved the minutes of March 22nd, 2018. The Committee then discussed the 2018 legislative year. The Committee then reviewed and discussed at length a potential 2019 Legislative Agenda and recommends that the Board of Directors consider a Legislative Agenda for 2019. This includes seeking an author for a bill that appropriates money from the state Greenhouse Gas Reduction Fund for clean air centers in the Bay Area and potentially at a statewide level during wildfire activities. Securing state budget funding to cover the ongoing costs of work that the Air District has been assigned under Assembly Bill 617 and opposing changes to the composition of the Air District's governing body that do not originate with ourselves. The next meeting of the Legislative Committee will be held at the Call of the Chair. I move that the Board approve the Committee's recommendation. This concludes the Chair's report of the Legislative Committee. Motion Hudson, second Mitchoff. All those in favor -- oh, did somebody have a --?

DIRECTOR SHIRLEE ZANE: Can I comment? I wanted to comment, please.

CHAIRPERSON DAVID HUDSON: Go ahead.

DIRECTOR SHIRLEE ZANE: Okay, thank you. I just wanted to say that we had a really good discussion about how to approach legislation as we move forward and really the importance of being more proactive rather than reactive on bills and timing is everything in the proposing of bills.

[01:05:00]

And I also sent some items to Jack after working with some members of my staff in terms of other things we might want to put into that bill when we have the red and purple zone air days that are impacting so many people's health. We probably should expect these to continue and maybe even to get worse and so, getting some state funding for clean air shelters as well as maybe some upgrades for some of the old schools that sometimes our poorest children attend that do not have facilities that they can provide clean air in rather than cancelling schools. And just a whole variety of things. I don't think there is just one thing, but I think it needs to be mentioned that this whole Board, that this is an important piece of legislation if we can get it forward. And as an Air District, the health of our constituents is going to become more and more important as we move forward. It's part of our mission and I think now there's a whole other awareness, so, it's a good time to do this especially with the Butte fire and how it impacted literally millions of people throughout the Bay Area. So, that's it.

CHAIRPERSON DAVID HUDSON: Thank you. Director Haggerty?

DIRECTOR SCOTT HAGGERTY: No, just one thing. I wasn't going to say anything, but one thing. You said that Stratford's been open for a couple of years. It's only been open since August.

JACK BROADBENT: Excuse me. You're right. Less than a year.

CHAIRPERSON DAVID HUDSON: Okay. Just a reflection. We did take a vote, correct?

DIRECTOR SCOTT HAGGERTY: Yes.

CHAIRPERSON DAVID HUDSON: To receive the report? Did we have any cards for either one of those reports? Seeing none? Okay, we'll move on to Item 12 which is a public hearing.

JACK BROADBENT: So, Mr. Chairman? I just thought because there was a pretty rigorous conversation at the Legislative Committee and it will affect everyone, I just wanted to take just a moment, if you don't mind, to explain to the Board really the wildfire response program we did discuss.

CHAIRPERSON DAVID HUDSON: Before you do, I was actually going to ask Director Zane if she did get an opportunity to meet with hers also, if she wants to prepare for after you comments. Go ahead.

DIRECTOR SHIRLEE ZANE: You know what? I just sent, I sent a bunch of items to Jack so he could report --

JACK BROADBENT: Yeah, she did.

CHAIRPERSON DAVID HUDSON: Okay.

JACK BROADBENT: Right, so, we've incorporated those comments actually. And so, if you don't mind, it will be very brief.

CHAIRPERSON DAVID HUDSON: Go for it.

JACK BROADBENT: Because it's worth explaining really what we're talking about here. Given the fact that we did experience these wildfires, they were some of the highest PM levels the Bay Area has ever experienced we think it's important to essentially put together a wildfire response program which is lessons learned and what steps we're going to be taking as we move into the future. So, we just had three slides. We wanted to mention this to you.

CHAIRPERSON DAVID HUDSON: Oh, good.

JACK BROADBENT: We're in the process of developing a comprehensive wildfire response program, and the legislation that Director Zane mentioned is a part of this and it is one part, but we think we're going to need to take every tool in the toolbox to be able to really have a comprehensive program. And just the short description of the legislative effort really is as I mentioned, we're going to be seeking an author -- do you want to go to the next slide -- we're going to be seeking an author to really create a bill that will allow us to either use existing money and/or new money would be ideal so that we can work with cities and counties to put in place clean air centers. The concept is one in which almost everybody that we described this to, everybody endorses it and goes that's a great idea. This is something we should be doing. Go forth, let me be the first to sign up for it. The issue in all of our conversations to date, however, start to become very complex when you start talking about actually making this happen. Because it is unbelievably complex when you start to take a look for example at a high school or a community center and being able to retrofit it with high efficiency particulate filters. How do you, how do you make that happen? How do you then pay for the ongoing costs because there is an additional cost to maintain these things? And so, you're going to hear more and more about this at the retreat but there is, we think, an important legislative initiative for this Board to undertake and that is to make this happen. Already though in our conversations with legislative staff there is a sense that if we do this the rest of the state's going to want to do this, not just the Bay Area. So, I want to mention this to you that this is the kind of headwind we're hearing already in our conversations with legislative staff. Wayne, do you want to add to my remarks? I didn't mean to steal your thunder.

WAYNE KINO: No, no. No.

JACK BROADBENT: We did talk a lot about this at the Leg Committee and I wanted to make sure that you all knew that there is a lot of behind-the-scenes work going on both here at the staff but also with our legislative counterparts. And while ideally, we would already have a legislative proposal in front of you

[01:10:00]

and we would have an author identified and we'd be talking with these folks to start to introduce these bills, we're not there and so we're doing very quick catchup. I still believe though just given the response we've heard already from legislative staff and legislators that I don't think we're going to have a problem finding an author. Director Zane has made some really good suggestions on who we're talking to, and so, there's going to be a lot more to come on this. And so, we're going to be having a Leg Committee probably the first couple weeks in January so, we can pin all this down and lay all this out and then there's going to be a much more comprehensive conversation at the retreat of the Board in January over at, on the 16th up in Marin. So, did you want to go back to the other slide?

WAYNE KINO: Just this, just this one, I think. I just wanted to emphasize it's part of the whole wildfire program. It's one element, an important element, but just trying to meld all these various components together is going to be tricky for us. The complexity, as Jack had mentioned, is tremendous. If you look at, there's other parts to this, too. Not only are there government centers that we could do that but private industry kind of things can also step up and they have stepped up. And I think at the Retreat you'll hear about a private industry that stepped up during the actual Sonoma/Napa fires that no one really knew about, they just did it. And I think that's a prime example of where we can partner with businesses and everybody because people tend to get together when there's a disaster, unfortunately, but everyone comes up and provides support. Your counties have during the Napa fires. You provided the mutual aid support with fire and police and I think that's the kind of cooperation we want to promote here during this to develop this strategy.

JACK BROADBENT: I do believe, by the way, Mr. Chair, last comment, will be this is one in which I believe it's going to be necessary for the Board to be engaged in. It's not going to be staff-driven here. It's need to a Board/staff effort, meaning that we're going to need to go into Sacramento together. There's a number of you on this Board I think that have much more broader contacts and relationships that we're going to build on. And so, I'll just say so, for Director Rice, we're going to suggest to the Board that the Leg Committee play an important role in having us be up in Sacramento as part of a delegation to essentially provide and make this happen with regard to the funds and resources and it may be though that the rest of the state of California picks it up and says this would be a great statewide effort, and so, that is what we're already hearing.

CHAIRPERSON DAVID HUDSON: Director Groom?

DIRECTOR CAROLE GROOM: Thank you, Mr. Chair. I serve on the Executive Committee of the California State Association of Counties and this is obviously their number one priority for 2019 as well, and they are planning on introducing a package of bills and I would suggest that strength in numbers. That we might be able to find some accord with that Association and work together.

CHAIRPERSON DAVID HUDSON: Sounds like good ideas. And that is the last thing I would -- go ahead, Mr. Spering.

DIRECTOR JIM SPERING: Has there been any discussion about changing the word center to shelter? Clean air shelters? The reason why I say that is that everybody is looking for that shelter and the experience we had with the bad air, they not only were looking for clean air, but they were looking for water, communications, a whole series of things and I think if we say shelter it's going to imply a partnership with the cities and counties because that's what we're providing. And so, I know that's maybe not a big deal, but I think it really sends a different message if we say we're trying to promote clean air shelters.

JACK BROADBENT: That's a great idea. I did want to make sure I give a shout out to the City of San Francisco, too. They're already going down this path working to identify kind of a strategy and implement a strategy next year for when this occurs again, so, we have already got a built-in partner with the City and County of San Francisco and I believe, Director Jue, this is something very important to the mayor.

DIRECTOR TYRONE JUE: It's very important to the mayor and also our fellow Directors, Director Ronen and Director Mandelman also that we need to better address how we're going to prepare for these events in the future. I think everyone is on the same page as that and I think there needs to be a lot of work even as you'd think, through the legislation, as we talked about, Jack. About the definition of a clean air shelter or center. Like, what does that, what does that mean? And are there other kind of resiliency efforts needed at those facilities as well? So, do they need to not be clean air centers but as Director Zane was talking about two meetings ago, do they need to be cooling centers also because these are going to be the same places that people might want to go to. So, just thinking through those issues so we have a good piece of legislation that we're putting forward and getting the funding we need is something we're really looking forward to working with you on.

CHAIRPERSON DAVID HUDSON: Go ahead, Director Zane.

DIRECTOR SHIRLEE ZANE: Yeah, I agree with you also, Director Spring.

[01:15:00]

It should say shelters. I think, I think we, if we could work with, if there's any possibility of working with our southern California counterparts, I think it makes it a stronger bill, personally. So, I think reaching out to them is definitely important. Again, they're facing bad air with the wildfires down there as well. And my view of legislation, since things get whittled down as they go through the committees in the process is to ask for more rather than less. So, I don't think we should be shy about what we're asking for. That can really mitigate some of the bad air and remembering that if our goal is to protect our citizens and keep them safe from this bad air, what is it exactly that we need? And I would also argue that I think I'd like to see us beef up our enforcement in terms of burning wood during these days. We know people continue to do it and we've really got to come down hard. We've been talking about this for 10 years now. This is an opportunity to get some funding to beef up that enforcement, so, thanks.

CHAIRPERSON DAVID HUDSON: Director Ronen?

DIRECTOR HILLARY RONEN: Yes, I'm sorry that I have missed a few meetings between when the Camp Fire started and today, so, I haven't been part of this discussion here. But in San Francisco the school district closed down the schools on the day that the air quality level, or that we were in purple, and when I had talked to a few parents who had purchased those really expensive filters and the direction coming from our Department of Emergency Management was shelter-in-place to the extent that you can. And when they turned on the filter with the reading in their home, the air quality inside was almost as bad as outside. So, you had the kids staying home from school, parents hustling to stay home from work; some not being able to. And then if they sheltered in place may not have been breathing any better air than had they been in the classroom. And so, I was wondering, I think this is great and would be really supportive, but if we could also look at potentially using some of our grant programs to improve the air filtration systems in schools throughout the Bay Area because then we could even use the classrooms and the school facilities as clean air places for communities. That way we wouldn't have to shut down school in these disasters and make sure that kids who are oftentimes more vulnerable than adults and don't like to wear the air masks, even if you can find ones that fit them would at least be breathing clean air during a portion of the day. So, I don't know if we've looked at that at all but it's something I'm really interested in looking at.

CHAIRPERSON DAVID HUDSON: Go ahead, Director Kniss.

DIRECTOR LIZ KNISS: Just piggybacking exactly on that. I felt like we were in the gas shortage days because there weren't enough masks and there were long lines around the few stores that actually had the N95 available. So, they became a really valuable asset and I think they marked the price way up on them additionally, which they certainly are entitled to do that during a shortage. But I thought that was one of the most obvious things and how we would -- I realize it's difficult to store stuff like that and keep it on hand -- but if some kind of mechanism could be developed so that people are not forming long lines around stores that sell the masks and no question that they were really needed. As Jack said, that was some of the worst air we've ever seen in the Bay Area. Thanks.

CHAIRPERSON DAVID HUDSON: Director Ross? [INDISCERNIBLE] Ross?

DIRECTOR MARK ROSS: Thank you, Mr. Chair. Just to build on Director Ronen's concept and everybody else's concept of clean air rooms, but maybe the Community Resource Teams could actually work with some of these schools that are willing. We could use grant money to actually get some cleaner, some air monitoring stations at some of these schools. Not the high-end but maybe something, working with the science teachers. So, at each school get the kids interested in seeing what's in the air and what the levels are. Getting them indoctrinated into being cognizant of air quality and what those components really mean, from greenhouse gases which they all seem to get enough information on. It's never enough, but they get to see that. But introducing them to PM and to ozone

[01:20:00]

and find the schools that are willing to engage in that through their science departments. Give them some grants and maybe they can figure out that the air at home is the same as the air at school, and kind of build that knowledge.

CHAIRPERSON DAVID HUDSON: Okay. Director Rice?

VICE CHAIR KATIE RICE: Yeah, three comments. First of all, Director Ronen, thanks for bringing up the schools and I think it makes sense that we're not just looking at schools but we're looking at how do we help facilitate clean air where we know people are congregating already and schools are obvious. I'm also thinking about senior centers, places like that. Anyway, so, the Leg Committee is going to be meeting again in early January to sort of flesh this out and that's a good thing. I would suggest, I know the Leg Committee meets at the Call of the Chair, but I think just more broadly on leg matters it seems like there is probably a likely much earlier fall leg meeting that should be on the regular calendar. I'm not even sure when in terms of leg development cycle, so, I would propose for the year ahead potentially scheduling two regular meetings at some points during the year that make sense for leg development and then allow for the Call of the Chair as well. And then I don't think I'll be telling any tales out of school here. I'm going to be proposing an establishment of a new, sort of a merger of committees actually. Sort of a Public Health/Public Engagement Committee for the year ahead, and I suspect this would be the kind of topic that would flow through that committee. So, as well as wood burning smoke, the wood burning stuff but all sorts of things. We are in the business of public health. There's going to be a lot of work on this 617 side in terms of community engagement and it is also about public health, so, just heads up to the Board.

CHAIRPERSON DAVID HUDSON: Director Mitchoff then Blitzen?

DIRECTOR KAREN MITCHOFF: Thank you and following up on Director Rice we did have a conversation about having to meet more frequently especially in the spring as the bills are moving forward and how we want to do that. So, we are looking, as Mr. Broadbent said at an early January meeting because we recognize the schedule and getting either taking a spot bill or putting our own in and Mr. Bauters, I'm sure can more eloquently give you information given his day job. But I felt for a long time that the Leg Committee needs to meet more frequently, and what I might suggest is whoever the new incoming Chair is would get those on the schedule. We can always cancel a meeting. It's harder to put a meeting together so, maybe in addition to the two regular meetings that maybe through at least May we have a monthly meeting scheduled and then we can always cancel it.

CHAIRPERSON DAVID HUDSON: And Director Bauters?

JACK BROADBENT: Thank you, Mr. Chair. Yeah, I would just like to follow on what Director Mitchoff said and the suggestion that our incoming Chair is making related to Committee meetings is a great one. I agree that when we're in session we should be meeting monthly as legislation moves through policy and fiscal committees and to floor votes, especially if we're going to be actively involved, and I think one of the things that I would recommend that the Committee do in the coming year is establish a calendar for meetings. Most policy-based

organizations I lobby full-time in the Capitol as my job, the budget is signed in June and the Department of Finance begins consideration of the next year budget in July, and so, that's really the time to have that high-level conversation about what was accomplished and what needs to be done and then use the fall to materially develop what substantively we want to accomplish as a legislative practice and then find champions for that in the fall leading up to the introduction of bills. So, happy to assist the current and future Chair and anyone else here in making sure that we are heard in Capitol.

CHAIRPERSON DAVID HUDSON: Thank you. And as there's no further lights, I would like to add one thing and piggyback on Director Zane's comment about southern California. I think immediately as soon as you formulate any kind of plan that we look to the north, even throughout the entire outside of the state. The Western States Climate Initiative people. After seeing what I saw up north if they follow our suite, if we do it the right way and they like what they see, maybe we could actually come together on how to stop some of these fires or put them out a little bit sooner. Because it was, if this is going to happen every year you can't just say it's going to happen every year, you've got to come up with a suggestion or a plan to stop it. Okay, that's it for Leg. We have voted on it. Open Public Hearing for Item 12 to consider adoption of proposed Assembly Bill AB 617, Expedited Best Available

[01:25:00]

Retrofit Control Technology (BARCT) implementation schedule and the certification of a final environmental impact report pursuant to government [INDISCERNIBLE]. Go ahead, Jack. You're up.

GREGORY NUDD: Chair and Members of the Board, I'm pleased to introduce David Joe, who's going to give you the background on where we're going with this particular portion of AB 617. It's a little bit of a different thing than we normally do. It's kind of like a mini-clean air plan, almost. And so, David Joe will walk you through kind of the engineering process we went to get here and what the next steps are.

DAVID JOE: Thanks, Greg. Good morning, Chair Hudson, Members of the Board. I'm here this morning to provide a presentation on the proposed AB 617 schedule for Expedited Implementation of Best Available Retrofit Control Technologies, or BARCT, at Industrial Cap-and-Trade Sources. So, in this presentation I'll provide a brief overview of the AB 617 requirements for the Expedited BARCT Implementation Schedule, then I'll describe the staff's approach and the work we've done to develop that schedule. Also go through the proposed BARCT Schedule and the potential rule development projects that are included and discuss the CEQA analysis conducted to evaluate the potential environmental impacts associated with implementation of the schedule. And then I'll go over the staff recommendations. So, some brief background on the BARCT Requirements included in AB 617. Assembly Bill 617 was signed into law in July 2017, and the Bill requires air districts to develop and adopt an expedited schedule for implementation of BARCT at affected Industrial Cap-and-Trade facilities. And I'll discuss that applicability in the next slide. The schedule must be adopted by January 1st, 2019, unless we implement by the earliest feasible date, no later than the end of 2023. The AB 617

BARCT Schedule Requirements apply to sources at industrial facilities subject to California's greenhouse gas Cap-and-Trade program. So, under Cap-and-Trade facilities that are in certain industrial sectors may be eligible for industrial assistance in the form of free allowance allocations. So, those are the facilities that are subject to these AB 617 BARCT Requirements. The term Best Available Retrofit Control Technologies is defined in the California Health and Safety Code as an emission limitation that's based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source. So, I'll discuss how we kind of parse through that definition and how we actually evaluated BARCT for the different sources. AB 617 also stipulates that the Schedule Requirements do not apply to sources that have implemented BARCT since 2007, as those sources are considered to already meet current BARCT standards and schedule should also prioritize sources that have not had emission limits modified for the longest period of time. It should also be noted that the BARCT Schedule Requirements do not expand or limit the Air District's ability to adopt or amend the rules, but they do place a priority for rulemaking efforts to implement BARCT at these Industrial Cap-and-Trade sources. So, staff's approach to developing the BARCT Schedule was similar to the approach that we take to develop stationary source control measures for the Clean Air Plan. So, staff conducts preliminary evaluations and then identifies the sources and source categories where further BARCT controls may achieve potential emission reductions. So, the schedule then lays out the anticipated timelines for these efforts and further work and the potential rule development processes. The schedule itself does not contain any proposed regulatory language or new rules for adoption at this time, but just lays out the timeframes and the priorities for conducting those further assessments and developing those rules as appropriate. So, I'll go through the process that was used to develop the BARCT Schedule under that approach. The first step was to identify what sources and pollutants needed to be evaluated. Since the Bay Area is non-attainment with ambient air quality standards for ozone or particulate matter including both PM 10 and PM 2.5, we focused on ozone precursors including NOx and Reactive Organic Gases or ROG,

[01:30:00]

and particulate matter, and we're also including sulfur dioxide or SO₂ in this project as a component of particulate matter. As mentioned previously, the BARCT Requirements apply to Industrial Cap-and-Trade facilities and there are 19 of those facilities in the Bay Area that encompass almost 1900 sources in 50 different source categories. Because of this large number of sources and pollutants and categories we conducted some preliminary screening to help focus the list to do further BARCT evaluation. So, first we screened out small sources emitting less than 10 pounds per day of any of the pollutants and for those sources staff determined that potential emission reductions would likely be small, and as a result any additional retrofit controls were not likely to be cost effective, and therefore wouldn't meet the cost effectiveness criteria to be considered BARCT. In addition, we also screened out sources that are currently achieving BARCT, where applicable Air District regulations have been adopted or updated since 2007, consistent with the AB 617 requirements. So, after conducting these screenings for the BARCT evaluation was performed for the remaining sources and source categories, most of this work follows the same preliminary steps that we take in the early stages of the rule development process. So, the first step was to review and identify achievable emission limits and potential

controls for the sources. So, staff reviewed determinations and guidelines from the EPA, CARB and other Air Districts on information regarding Best Available Control Technologies or BACT, Reasonably Available Control Technologies or RACT, and Lowest Achievable Emission Rates or LAER. We then reviewed the current controls, emissions and existing emission limits at the affected sources, and then estimated the potential emission reductions that could be achieved with additional BARCT controls. We then developed preliminary estimates of the costs associated with those retrofits and the estimated cost effectiveness. Then through this process we identified what source categories and rule development projects could achieve potential emission reductions that were going to be cost effective and could be included in the BARCT Schedule. So, after identifying those potential rule development projects, the projects were prioritized using the following criteria. The potential for local clean air and public health benefits, including toxic emission reduction co-benefits. The potential for substantial emission reductions, with the focus on PM reductions for reducing localized health impacts. A focus on source categories where BARCT controls have not been recently addressed and a focus on cost effectiveness emission reduction measures. These are consistent with the considerations that must be taken into account during the development per AB 617. We also solicited public input throughout the development process and received comments on these priorities and the timelines and the drafts of the schedules. We received comments from some of the community and environmental groups to prioritize rule development projects that address emissions from refinery sources and we also received comments from affected facilities and industries to recognize the time and effort that's needed to fully conduct the technical assessments and the evaluation of sources and controls in the rule development process. The CARB Board also adopted a resolution in September 2018 supporting the prioritization of refinery rule development projects in the BARCT Schedule, so, all of this input was considered when developing the schedule that's being proposed here today. So, here are the six rule development projects that were identified and being recommended for inclusion in the schedule. The list includes projects addressing ROG emissions from organic liquid storage tanks and petroleum wastewater treating. We also expect that these ROG reductions would also reduce some of the associated toxic emissions. We're also looking at addressing PM and SO₂ emissions from Portland Cement Manufacturing and from refinery fluid catalytic cracking units and CO gas boilers.

[01:35:00]

The other projects are for addressing ROG emissions from refinery heavy liquid leaks and NO_x emissions from petroleum coke calcining operations. So, here's the anticipated rule development timeline for each of these efforts. In developing the timelines, we considered the amount of time for our typical rule development process as well as any additional time that might be needed for a specific full development effort for additional source testing or control research or feasibility studies, or cost estimation. And we also considered the capacity and availability of Air District resources as well as other rule development efforts that might be going on at the same time and might require resources and staff. As mentioned, staff also considered the input received throughout the public comments and stakeholder outreach process, and these timelines for the development of the refinery rules are consistent with the timelines that were supported in the CARB resolution. So, as shown, the work to support the rule development efforts would be

completed by the end of 2021, which would be ahead of the AB 617 deadline of 2023. Staff also evaluated the potential environmental impacts associated with the BARCT Schedule pursuant to the California Environmental Quality Act or CEQA. Staff decided to prepare an Environmental Impact Report or EIR for the project due to the potential environmental impacts associated with installation and operation of air pollution control equipment. A CEQA initial study for the project was posted in August for public review and comment and a public scoping meeting was held here at the district offices to receive comments on those documents. Staff then published the draft EIR in October for public review and comment and then prepared the final EIR that's proposed for certification today. It should also be noted that as the rule development projects themselves progress, the Air District intends to further evaluate the environmental impacts for those individual projects as appropriate. So, the EIR for the BARCT Schedule concluded that implementation of the schedule would result in potentially significant environmental impacts for air quality and water demand. So, for air quality there might be a large number of construction projects occurring simultaneously to install any retrofit air pollution control devices and the impact from these construction emissions occurring simultaneously were found to be potentially significant and cumulatively considerable after mitigation. For water resources the operation of certain types of control equipment including white gas scrubbers may have a large water demand, so the impacts from this would also be potentially significant and cumulatively considerable after mitigation. As mentioned, we intend to further conduct environmental review as, for the individual rule development projects as those efforts progress and the draft rules and amendments and limits are better defined. So, staff recommends the following. The adoption of the AB 617 Expedited BARCT Implementation Schedule and the certification of the associated CEQA final EIR. And I'll be glad to try to answer any questions that you might have. Thanks.

CHAIRPERSON DAVID HUDSON: Sorry, before we get the questions, as this concludes the staff report, do we have any cards for the Public Hearing yet?

CLERK MARCIE HARITZKA: I have six.

CHAIRPERSON DAVID HUDSON: Okay. Go ahead, Ms. Mitchoff.

DIRECTOR KAREN MITCHOFF: Thank you. Just back to the previous slide, I think it was, on water resources. Can non-potable water be used for the cleaning and/or does it become non-potable after the cleaning and is there -- what I'm trying to do is look at not utilizing fresh-water resources unless we absolutely have to and how that all comes together.

GREGORY NUDD: We have looked at the potential for using treated water rather than potable water in the wet scrubbers. There's some potential issues with the chemical reaction, so, it's unclear at this point whether we'd be able to use reused water.

DIRECTOR KAREN MITCHOFF: When will it become clear?

GREGORY NUDD: Well, as David pointed out, we don't know that

[01:40:00]

the end result of this rulemaking is going to be that we require wet scrubbers. There are other ways to address

DIRECTOR KAREN MITCHOFF: Oh, okay, great.

GREGORY NUDD: these emissions, and as we continue with the rulemaking process and we redo that more detailed environmental review based on the findings of the rulemaking we'll look at the issue of reusable water in that context at that time.

DIRECTOR KAREN MITCHOFF: Thank you, and if you just make sure you put a star by it, that's one of my number one issues that I'd like to be highlighted in staff reports. Thank you.

GREGORY NUDD: We'll do that.

CHAIRPERSON DAVID HUDSON: Director Kniss, Cutter then Sinks.

DIRECTOR LIZ KNISS: So, thinking back to a year and a half ago, I'm looking at Jack. One of our major concerns at that time was what the cost of this would be and would the state reimburse us the cost and how could we continue to put pressure on the state to do that. Any comments?

JACK BROADBENT: Mm hmm. Good question.

GREGORY NUDD: Yeah, I don't know --.

JACK BROADBENT: You go ahead, Greg.

DIRECTOR LIZ KNISS: Apparently there's not a quick and clear answer.

GREGORY NUDD: Well, so, there's a couple of issues with cost here, right. There's obviously the cost of implementing the air pollution control, right, which will fall to the industrial sources themselves. Then there's the cost to us for doing the rulemaking and the engineering work and that sort of thing, so.

DIRECTOR LIZ KNISS: And extensive oversight?

GREGORY NUDD: Indeed. And so, we were able to secure for two years the funding to do this work. It gets back to our longstanding issue of that we do not have a continuing source of funding for AB 617 work. So, we're covered for the first couple of years but after that we're not sure.

JACK BROADBENT: If I, yeah, if I can, Director Kniss. So, this was talked about at the Leg Committee. So, when they adopted AB 617 the Governor appropriated \$50 million to the districts and we got \$12 million of that, if I recall, and I think our estimates are indicating that

we're spending upwards of \$15, \$16 million already to implement 617. That includes the Committee meeting, the monitoring work. I think the thinking is, is that this is, and I think the legislature is thinking that because this is BARCT, this is rulemaking on stationary sources that you will cover this cost. This will come out of our own fee structure. So, we'll impose this back to those that have to comply. And I think that's how we're going to proceed.

DIRECTOR LIZ KNISS: Oh, good planning for the first couple of years.

JACK BROADBENT: Right. Right.

DIRECTOR LIZ KNISS: It always gets forgotten along the way what promises were made at the beginning that somehow seem to get substantially diluted as the years go along. And I don't want us to forget how this, how this all transpired and that we need to continue to lobby for funding in order to adequately put this into place.

JACK BROADBENT: That's a great point, Director Kniss. The Leg Committee, we had actually talked about three big issues, the clean air centers, Board composition and then we need to figure out a sustained funding mechanism for AB 617. All the Air Districts are in the same place and CARB does know this. It's just a matter of we need to continue to meet and figure out how do we approach the legislature to get that funding.

DIRECTOR LIZ KNISS: Thanks, and I hope we have a continuous item when we're meeting, when Leg is meeting to say let's keep track of this and who's on CARB and sort of who's really making those influential votes that will make a difference. Thanks.

CHAIRPERSON DAVID HUDSON: Okay, Directors Cutter, Sinks then Ross.

DIRECTOR PAULINE CUTTER: Thank you. So, looking at this, the stationary sources and so forth, and I'm trying to come up with how the airport, which has a lot of pollutants and I know it's probably mostly mobile source because it's the jets and so forth. But how that will figure into this because I think that that's something that we kind of always circled around and it's one of the things in my area that is really affecting some of my neighborhoods, so, if you can address that eventually.

JACK BROADBENT: No, it's a good point, Director Cutter. So, it'll be, certainly the mobile source impacts on communities will be figured out through the AB 617 process. So, as the communities identify it, and I know east Oakland is one in which we're kind of looking at right now with a greater degree of effort on our part, but what we will do is through our air monitoring, through our own emissions inventory work, we'll understand the relative contribution of mobile sources and stationary sources and that will go into the emission reduction plan that we will

[01:45:00]

develop alongside the community groups. So, in fact we've got a lot of great work going on in west Oakland right now where the community itself is identifying really good strategies to

mitigate their exposure. So, I don't know if you want to talk about that. That's kind of a model of what I anticipate to be done in places like east Oakland, like San Leandro, like other communities.

DIRECTOR PAULINE CUTTER: Thank you. I just wanted to get you in that habit of linking San Leandro in there with the east Oakland part, so.

JACK BROADBENT: Yeah, or maybe even separately. I'm not, we think, because there are some unique, right.

CHAIRPERSON DAVID HUDSON: Okay. Secretary Sinks?

SECRETARY ROD SINKS: Thank you very much. If I look at slide 11, the rulemaking. Yeah, so, for numbers three and four here are both of these efforts, let's see, and I go to slide 11, the prior one. Thank you. Both of these focused on reducing particulate matter. Are these primarily targeting condensable PM by wet scrubbing or dry scrubbing?

DAVID JOE: Yes, but --

SECRETARY ROD SINKS: Are there other things in the, are there other techniques in these rules that you're imagining?

DAVID JOE: For both of those they are addressing condensable PM because of lot of the filterable PM when we did that review, it looked like for those there was already a lot of BARCT level controls on these things, but it's that condensable portion.

SECRETARY ROD SINKS: So, it's that opaque plume that we see separated from the top of the stack when, as things are condensing in the atmosphere the molecules combine and form PM that can't be filtered as it leaves the stack? It has to be taken out by scrubbing.

DAVID JOE: Right, and that's what we're looking to address with these rules, because as we mentioned, we were looking at what BARCT evaluations has done previously and a lot of them were not for condensable PM, since it is kind of an emerging measurement technique in science. So, there are different strategies that we would be looking at and we identified some of them in the staff report but scrubbing, wet or dry is certainly one of them. There are other things about trying to reduce different types of injection or optimize that as well.

SECRETARY ROD SINKS: All right, I have to say I'm impressed with all the work we're doing in parallel here. It's a tremendous effort and thank you for great staff work.

CHAIRPERSON DAVID HUDSON: Director Ross then Gioia.

DIRECTOR MARK ROSS: Thank you, Mr. Chair. Two questions first on the scrubbers. The wastewater that comes from a wet scrubber, how difficult is that to treat, and how energy

intensive is the treatment of that water? I know you're going to have different scrubbers and there could be different answers.

GREGORY NUDD: Yeah, it depends on a lot of things. It depends on the waste stream, it depends on the scrubber design, it depends on the existing capacity of the facility's wastewater treatment system. A lot of refineries already have wastewater treatment systems. There is some controversy as we work through this process about the extent to which those existing wastewater treatment systems can be used to address the scrubber water at the refineries. The cement plant is a little bit of a different problem in terms of their wastewater treatment systems. So, that will be something that we have to address in the context of the rulemaking. But our assessment is that there wasn't a significant impact on wastewater for the purposes of EIR. And nobody brought out, we didn't receive any comments that provided evidence to the contrary. And that's it.

CHAIRPERSON DAVID HUDSON: Director Gioia then Haggerty.

DIRECTOR JOHN GIOIA: Thanks. I just wanted to address and make a distinction on this funding issue. So, we all are advocating including the California Resources Board for the legislature and the Governor to allocate to more money to Air Districts to Implement AB 617. I do think it's important to note and I want to make this distinction, that this requirement in AB 617 was to expedite an implementation schedule for BARCT rules. We already consider BARCT rules. In fact, that's part of our regulatory authority. All AB 617 did here was to say do it faster. So, I just wanted to distinguish the cost to do that is very different than the cost to implement all the other parts of AB 617, which is working with west Oakland and Richmond on the monitoring and admissions reduction. Those are costs that we all want to recover, right? This was again, AB 617 is not telling

[01:50:00]

Air Districts to do something they already weren't going to do except do it faster. So, I want to make that distinction. I think that's an important distinction, because actually, Jack, I know you had talked about doing these rules for years before AB 617. We're just doing it faster because of AB 617.

CHAIRPERSON DAVID HUDSON: Okay. Director Haggerty?

DIRECTOR SCOTT HAGGERTY: So, I'm a bit concerned and let me ask this. When we develop these rules, do we work with the regional Water Quality Control Board? Do we get -- I realize this was an EIR, so, I'm sure. Did they comment on this? And the reason why is we have a rule coming into effect I think in June of next year in relationship to dust that requires more water usage and now if somebody uses the fluidized catalytic cracking unit there's a good chance there's going to be a significant increase in water usage. Director Ross just touched on the wastewater issue. Water in California is almost more valuable than oil and I'm just curious when we look at these, are we taking in the fact that this may not be the best way to go?

JACK BROADBENT: Well --

DIRECTOR SCOTT HAGGERTY: And what happens then if I guess, if it is, if the fluidized catalytic cracking unit is the way to go, then where do we go from there?

JACK BROADBENT: Director Haggerty, so, this is a, you can think of this as a programmatic EIR for all the potential rules that are going to be put forth for your consideration that we're calling BARCT, but there'll be a separate CEQA analysis for each and every single one of them as they're brought forward. That's when we're going to do the more detailed impacts on water and land and other types of environmental impacts. And so, I do know that we reached out to water quality agencies and that's just part of this normal process, but I do know that there's also going to be a more detailed analysis subsequently, if that helps you. But to your point, yes, the document goes through the state and the regional level and we didn't get a specific comment on it.

DIRECTOR SCOTT HAGGERTY: I guess I would say are they understaffed? Are they too busy worrying about OTWS? I mean, are they busy doing other things? That maybe we should actually have them at the table? And then I guess a follow-up question I would ask. It just dawned on me while Jack was talking. Do we look at, when we do this type of technology that we use purple pipe water? Do we require, could they use recycled water?

COUNSEL BRIAN BUNGER: That was the point that Mr. Joe was making before, is as we get deeper into looking at this process and understanding what the available technologies are, it's possible that, that might be a solution. It's also possible it won't be because of the chemistry in the various streams. But we will look at that, yeah. That's exactly the kind of thing that goes into the further development of the rule.

DIRECTOR SCOTT HAGGERTY: Yeah, I guess the devils will be in the details. I just think that this Agency, as a regulatory air agency should also worry about the regulatory water, too. And we should be mindful of that.

CHAIRPERSON DAVID HUDSON: Victor Douglas?

VICTOR DOUGLAS: Director Haggerty, we often work with these agencies, especially when we know there may be water impacts similar to the [INDISCERNIBLE] rules. We work closely with the water regional, the regional Water Quality Control Board and the State Water Quality Control Board and the Department of Toxic Substances Control to ensure that the regulations that we were developing were aligned with their concerns and to ensure that we didn't transfer pollutants from one sector to another.

CHAIRPERSON DAVID HUDSON: That's good. Director Ross? Oh, go ahead.

DIRECTOR SCOTT HAGGERTY: I will accept that, but -- and this is my last portion of the debate -- I think that we would be better off also engaging local water districts that are responsible for the aquifer because they would probably want to be more involved, to be very

honest. They would be like a local elected official, down in it as opposed to the state kind of looking at the more broader view. So, I would just suggest that we look at those water districts that are responsible for aquifers. Just a thought, and I'm done, Mr. Chair. Thank you.

CHAIRPERSON DAVID HUDSON: No, you're good. Director Ross?

JACK BROADBENT: Oh, that's a good point. Thanks. Director Haggerty, we'll just make sure for the Board's sake we'll take this as direction as we move forward on the rulemaking for each of these.

DIRECTOR CAROLE GROOM: That was my statement at the very beginning and thank you.

JACK BROADBENT: It's a good point.

CHAIRPERSON DAVID HUDSON: Okay. Director Ross?

DIRECTOR MARK ROSS: Yeah, so, I guess I will ask the other question I was going to ask. So, on the fee, would this be a fee applicable to, raising fees down the road? Is that category M?

[01:55:00]

COUNSEL BRIAN BUNGER: So, as Mr. Broadbent pointed out earlier and I think we've had that discussion and Director Gioia also pointed out, BARCT during rule development is part of core functions for which we do recover fees, and it is baked into our cost-recovery program and our fee settings. So, what this does expedites things a little bit. It's also put some pressure on our rural development resources and so of course we will look at that and see if we need to increment our fees to make sure we're recovering the costs of these programs. But in general, rulemaking for regulated sources is fee recoverable. That's a fundamental part of the work we do as an agency.

DIRECTOR MARK ROSS: So, we almost have to get on that pretty much right now if we only have --

COUNSEL BRIAN BUNGER: Well, we've already been on it because these programs have been underway for more than a year now. So, we already are looking at the numbers and how that's playing out. And we are in the process of developing the fee proposal for next year.

DIRECTOR MARK ROSS: Okay, thank you.

CHAIRPERSON DAVID HUDSON: Okay, the public hearing is -- oh.

MALE 1: Oh, good.

CHAIRPERSON DAVID HUDSON: Oh, good. Public hearing is open. We have what, six cards still? Would you call up the six speakers? Please take a couple minutes and give us your thoughts.

CLERK MARCIE HARITZKA: I have Claire Broome, [PH] David Gassman, [PH] Steven Rosenblum, [PH] Gary Hughes, Jed Holtzman and [PH] Willene Ellen Sweet.

CHAIRPERSON DAVID HUDSON: Thank you. Okay, lead us off. Two.

CLAIRE BROOME: Good morning. Okay. Good morning. I'm Clair Broom, I'm a professor of public health and a member of 350 Bay Area. I've spoken to the Board a number of times in the past so, I think this time is a very important time for the Board. We've all experienced the horrible impact of poor air quality as you mentioned with the fires. It impacts everyone. But I think it's also worth remembering that the refineries are putting out metric tons of these toxic substances every year. It's not quite as visible as the fires, but that's I hope what you all are here to address. In terms of Rule 6-5, what I would like to argue is that expedited means finishing in 2019 the BARCT technology to control refinery particulates. The Bay Area is non-attainment on particulates. One of the refineries, Valero, has already implemented wet scrubbing with a 90 percent decrease in particulates. This is imminently feasible and it's clearly cost effective for Valero. Apparently, what I've heard is that the staff analysis is not recommending wet scrubbing as part of BARCT for the refineries, and I think the Board needs to be very clear if that is in fact the case, and I think the Board might want to prioritize this expedited within 2019 control of condensable particulates as Supervisor Gioia indicated. The priorities are being set based on multiple factors and you've heard from staff and several Board members that water use and [INDISCERNIBLE] industry are apparently very prominent in their minds.

CHAIRPERSON DAVID HUDSON: Okay, thank you, Claire.

CLAIRE BROOME: [INDISCERNIBLE]

CHAIRPERSON DAVID HUDSON: Thank you for --

CLAIRE BROOME: AB 617 is [INDISCERNIBLE]. Thank you very much.

CHAIRPERSON DAVID HUDSON: You got a comment, Director?

DIRECTOR JOHN GIOIA: Yeah, let me provide everyone with some really important context here. So, at the California Air Resources Board meeting when the Air Resources Board approved the 10 monitoring and emission reduction communities, we had discussion on expediting further, and I recommended this and the Air Board approved it, making a recommendation which Jack agreed to, which was this expedited schedule is even more expedited than what was originally proposed. And I met with a number of people from the California Environmental Justice Alliance, CEJA, and advocates who were all at the CARB meeting who considered this this expedited schedule a positive thing. A win. And the discussion we had

[02:00:00]

was that good rulemaking need to be done thoughtfully and not fast, and that, so, we pushed up starting this rule to early 2019 with the idea understanding the process of CEQA and the environmental process that it would be done by the end of 2020. The CEJA representatives expressed to me and publicly were supportive of this move-up. So, I just want to be realistic. I want to be clear that this is a faster schedule than what the District was originally going to. It came out of the discussion at the Air Resources Board meeting and the environmentalists that were at that meeting considered this a positive thing. And I think we all understand that it takes a while to do the rule properly. And I agree. As someone who lives in Richmond, is affected by a refinery in Richmond, I want to see this done as quickly as possible. I think the Air District is on a very aggressive schedule to get this done as quickly as possible.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker?

JACK BROADBENT: If I can, Mr. Chairman? Also, I just have to make sure the record is absolutely correct here. The staff is not closing the door with wet scrubbers with regard to FCCUs. That's not something we are recommending. Indeed, the CEQA document is pointing out water impacts as a result of the fact that we have to sit there and think that this is actually a possible strategy that's going to be a part of amendments to 6-5 in the future. So, I don't want there to be any thinking here on behalf of the Board or the public that the staff is, has closed the door on that idea. In fact, we're going to give it some serious consideration as part of the rulemaking for 6-5, to require web scrubbers on FCCUs. So, thank you.

CHAIRPERSON DAVID HUDSON: Okay. Next speaker please. Try it again.

STEVE ROSENBLUM: Hi, my name is Steve Rosenblum. I've come up here from Palo Alto as a private citizen to plead with you to expeditiously engage in negotiating a strong and effective Rule 6-5, to limit refinery emissions of small particles. We all know how injurious they are to health and as people pointed out, the health of the residents of the Bay Area is more important than the price of gasoline. We all know that adding scrubbing technology to existing refinery processing is going to increase the price of gasoline and it's absolutely certain that the refineries are going to pass this cost on to us as consumers, so, it won't hurt their bottom line at all. And the only reason for resisting this is inertia and unwillingness to possibly reduce their market size by a small amount because of rising gasoline prices. I've heard a lot of talk here about web scrubbing and having been in the semiconductor industry for 20 years, we have always recycled our wet scrubber water. It's never been discharged because it's actually toxic. So, the water is treated and then recycled into the scrubber again, and there's no reason beyond cost that the refineries couldn't do this also. And also, tertiary treated water is drinking water. There's no reason that refineries couldn't use that for wet scrubbing. So, I think the district really needs to have some experts on hand that they can consult about water treatment before they make any decisions about the economic viability of wet scrubbing. Finally, if the refinery sues as a result of a strong Rule 6-5, I would be willing to contribute to a Go-Fund me campaign to support the lawsuit. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker, please?

GARY HUGHES: Okay, Chair, Directors of the Board. My name is Gary Hughes and I'm an East Bay resident and I would like to appreciate the Directors for the discussion for the discussion you had after the staff presentation. I think you were raising a lot of important questions, and a conclusion to my statement is I really support as strong as possible and rapidly implemented as possible Rule 6-5 and other pollution controls, but I wanted to really touch very quickly on how controlling pollution from fossil fuels is really just a desperate plan B. And you spoke briefly about wildfires and what the state still doesn't want to really discuss at the state level with CalFire or the Natural Resources Agency or with the Air Resources Board is that our burning of fossil fuels is the primary cause of climate change. And if fire regimes in our forests, in California's forest are fire evolved -- fire is natural in our forests -- if fire regimes are changing it's because of our dirty energy system. So, we need to get off of fossil fuels and the fact that we're here talking about pollution controls in the light of the most recent report from the IPCC is really terrifying, okay? It's time for us to start transitioning off of fossil fuels and we need to make sure that everyone

[02:05:00]

we've talked about this many, many times here -- is taking care of in doing so, but we need to get off of fossil fuels, and that's actually the topic you need to be discussing. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker, please?

WILLENE ELLEN SWEET: Hello. My name is Willene Ellen Sweet. I'm representing 350 Marin and the citizens of west Marin. West Marin standing together. I'm only here to reiterate what previous speakers have said, that we believe that two more years in the BARCT schedule, two more years of no control of refinery fine particulate emissions is too long and we request that emission reductions from the FCCUs begin immediately under adopted Rule 6-5 and not be delayed for another two years under the AB 617 BARCT Implementation Schedule. It's our hope that the Bay Area Board members will firmly sound on the side of protecting public health first and welfare from uncontrolled fine particulate pollution impacts. Thank you very much.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker?

DAVID GASSMAN: Good morning. My name is David Gassman. I obviously have some involvement with No Coal in Oakland. I'm also a member of the Sunflower Alliance and I'm here to support my colleagues and my comrades in the refinery corridor. I'm eager not to repeat, I'm eager not to tell you things that you already know and have heard many times. I also don't want to repeat things that people have already said. I'm sorry, but I have a hearing problem. I not only have not been able to hear clearly what you have said among yourselves but what some of the speakers just said. But basically, what I'm, as someone who is trying to support the folks in the refinery corridor, we know PM 2.5 is terrible, is devastating to our air, to our lungs. It's apparently the case that a web scrubber is a very effective method of preventing 2.5. I gather there's this concern about water. I'm sure you're obviously looking into it and consider it, but

there is an urgency here. I gather it's been expressed before. You're all aware of it and I, if what is shown is an expedited timeline, I certainly hope you can find a way to expedite it even further. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker, please?

JED HOLTZMAN: Thank you, Chair Hudson and Directors. Jed Holtzman from 350 Bay Area. I do want to thank Mr. Hughes for his comments, bringing the urgency of the climate crisis into the room. Certainly, you know that we share that and the newest reports from both the international community and our federal government show that the pace of action being taken here is woefully inadequate, even though we're moving faster than most other places, and that dynamic of you moving faster than others but still being insufficient is something that we need to keep in the room. But I do want to thank staff for all of their work on this and appreciate the changes to the rule development calendar. If you could go to slide 12 for me? Do appreciate the changes to the schedule. This has been moved up, which is great because we can't wait. We heard that from Director Gioia. Director Gioia also mentioned that 617 isn't really causing us to do things that we weren't already going to do but just to do them faster. I want to point out that the 2017 Clean Air Plan that you folks adopted in April of 2017 actually has Phase 2 of Rule 6-5 and Rule 9-13 on the regulatory calendar for 2018, and you are now being asked to approve them starting in 2019, and I just want to point out a bunch of this work is already promised. So, this is not new action, not additional work that is going to be done to protect communities but just work that was already going to be done put into a new chart. In fact, rule number three and four were promised to you in December 2015, three years ago when you passed the Refinery Emissions Reduction Strategy, as Phase 2 of the Strategy. Again, originally meant to be implemented in 2018, now being approved for 2019.

[02:10:00]

So, this has already been delayed a year. This is why you keep hearing about this from community groups. Moving this up does not remove that, it just makes it less egregious. So, I just want to point out the context there and actually in the next item you're being asked to vote to weaken Phase 1 of the Strategy. So, this is why you're continuing to hear discouragement and displeasure despite getting a bone thrown. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you, Jed. Next speaker, please?

CHARLES DAVIDSON: Charles Davidson. I live in Hercules. Good morning. All refineries burn petroleum coke and emit petcoke fly-ash which is high in toxic vanadium and is more toxic than most other PMs. Significantly more so. In addition to Phillips 66 carbon plant petcoke calcine on Highway 4, there are four other petcoke kilns at the other refineries which are FCC regenerators, which burn off the petroleum coke accumulated on the catalyst in order to refresh the catalyst before its reentry into the liquid crude. Because the FCC regenerator operates at over 800 degrees hotter than any temperature which the crude ever comes into contact with and because those high temperatures are for the combustion of the petcock adhered to the catalyst, the FCC regenerator should be classified as kilns. The FCC regenerator is not simply a

petroleum process unit, and the currently minimally effective ESP as PM control should be banned and wet scrubbers should be required or similarly effective PM control devices. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker, please?

RICHARD GRAY: Richard Gray with 350 Bay Area. I don't want to repeat what Jed Holtzman just said, but just to remind you that we are behind schedule on dealing with PM and it's very encouraging that we're starting to move forward now. It's also a little frustrating that it's going to take two years, but if CEJA is satisfied that this is being dealt with in an adequate time period than I think we are, too. I just want to note also that it's very frustrating to have to evaluate economic feasibility of regulations as if there was no tomorrow. We're looking at the likelihood of social and economic collapse if we don't stop burning fossil fuels in the next 12 years. So, our society is really at risk and we're taking on the cost of all the risk, so, what's the feasibility of our society taking on these enormous risks? The health costs to our society should be included in the equation when evaluating economic feasibility. That may require a legislative fix, I'm not so sure, but there is going to be a huge cost to our society. So, I'm really encouraging you to move forward with this. Hopefully it doesn't take a full two years. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Are there any other speaker cards? Anyone else wishing to speak? Public hearing is closed. The matter is before Mr. Gioia.

DIRECTOR JOHN GIOIA: I do want to make a comment. I think it's important to note the comments of one of the speakers. That these rules were on our rulemaking schedule for some prior years and I guess for staffing or other purposes we didn't get around to them. So, I think that's an important point to recognize is that these have been sort of in the works for a while. Saying that, the original expedited schedule that the district established was to complete these I think by 2021 or something like that. So, they've been basically moved up about a year to get them done quicker. So, acknowledging that some of these, maybe not all of them, but some of them were on -- Jack, you can talk about this -- were on some rulemaking calendars or anticipated in prior years, and you can address why they weren't done at that time. But acknowledging that, this is an expedited schedule from what the staff had originally proposed under AB 617 by probably a year.

CHAIRPERSON DAVID HUDSON: As you're addressing that can you put up the staff recommendation also, on the slide?

JACK BROADBENT: So, Mr. Chairman, I think what, just to clarify the point that Director Gioia is making is when we brought our

[02:15:00]

community identifications to the CARB Board meeting, I think it was September, we had a big hearing about that. A lot of community advocates were arguing that we need to expedite some of

these rulemakings. We think they should be brought in sooner. And indeed, it was the CARB Board's resolution that said we're encouraging the District Board to expedite these BARCT rulemakings. So, that's why we're calling this the Expedited BARCT Implementation Schedule. And staff, we went back and looked at essentially what is it going to take to bring this rule in, and I'm talking about 6-5. That's the one that governs PM from FCCUs, fluidic catalytic cracking units. It's a very complex rulemaking. I don't want you to think that it's as straightforward as slapping a water scrubber on an FCCU. There's a lot of work that's going to have to go in, including a lot of testing. And it's also one in which there's a considerable amount of cost involved as well. So, we want to do this right. We want to make sure it works and it withstands of course the legal challenge that we would anticipate. So, what you have here today is our best thinking about how to bring that into you for your consideration as fast as possible and if I can for the incoming Chair, we will schedule a Stationary Source Committee in the future to go through the details of this so, the Board can appreciate and understand all the detail work that's going to go into this rulemaking and has gone in so far.

CHAIRPERSON DAVID HUDSON: I can tell you the current Chair appreciates you putting all those blue boxes in 2019. We have Member Mitchoff and then Wagenknecht.

DIRECTOR KAREN MITCHOFF: I just have one question, just to make it clear as possible. One of the recommendations here is to certify the CEQA final environmental impact report. That's on the schedule. Because you mentioned earlier that there's going to be a CEQA on each one of those rules, so --

JACK BROADBENT: Right.

DIRECTOR KAREN MITCHOFF: -- what we're voting on is just the EIR of the schedule, not the technicalities if you will of how that implementation will take place?

JACK BROADBENT: That's correct, Director Mitchoff.

DIRECTOR KAREN MITCHOFF: Thank you.

JACK BROADBENT: I want to be, I want you to be assured that the staff when we go through and identify explicitly what we're going to be proposing to you in those rules, we will have a CEQA analysis associated with it. So, you'll have an opportunity to not only hear all the very detailed, there will be a socioeconomic impact analysis in addition to a CEQA analysis, and those are all separate.

CHAIRPERSON DAVID HUDSON: Okay. Wagenknecht, Sperring and then Haggerty.

DIRECTOR BRAD WAGENKNECHT: And just to reinforce, you heard the concern, the water concern and that will be considered in this.

DIRECTOR JIM SPERING: Jim, Jack, can staff explain -- and I should know the answer to this -- what is meant by cost effective and how do you measure that?

JACK BROADBENT: I'll have Mr. Nudd -- there's, yeah. There's a standard set of practices we deploy.

GREGORY NUDD: That's correct. Under the Health and Safety Code we have to evaluate both the cost effectiveness of the controls and the incremental cost effectiveness of controls. And the way the Health and Safety Code has structured that, it's calculated as the annual emissions reduced divided by the annualized cost of controls. So, we take the capital costs and the operating costs and consider that in that analysis. So, that's the statutorily required analysis that we have to do. Yeah, it's a dollars per ton.

CHAIRPERSON DAVID HUDSON: Okay. Director Haggerty then Rice.

DIRECTOR SCOTT HAGGERTY: Thank you, Mr. Chairman. I just want to state that it's not that I'm against wet scrubbers and their effectiveness. What I am against is one regulatory agency becoming another regulatory agency's problem, and so, that's why I asked the line of questioning I did, to find out if we were working with them and if we are working with locals that are protecting aquifers. So, I just want to be clear. I understand the technology is effective, but I don't think we should create another problem for another regulatory agency.

JACK BROADBENT: And Director Haggerty, we'll take that back as direction to staff as we work through these rules for you.

CHAIRPERSON DAVID HUDSON: Okay. Director Rice?

VICE CHAIR KATIE RICE: Yes, so, just so I'm crystal clear. Looking at the chart on slide 12, those purple boxes, by the time we get to the end of the purple box, it actually includes the CEQA process. So, the proposal is or the projection is that you'll be bringing to us the CEQA document to certify and the rule to approve by the time you get through those purple boxes?

JACK BROADBENT: That's correct.

VICE CHAIR KATIE RICE: Okay, and then a second question is, and I'm assuming since you've given this a lot of thought, you feel we have the, we have the capacity

[02:20:00]

to actually fulfill on this schedule?

JACK BROADBENT: We do. We have given this a considerable amount of thought and had to back additionally after the CARB Board meeting and then said okay, what can we move around to expedite this? And so, what you have here today is our best thinking about how we can bring these in as soon as possible.

VICE CHAIR KATIE RICE: Thanks.

CHAIRPERSON DAVID HUDSON: Okay, again, you have staff recommendation on slide 15. Any further comments or motions?

DIRECTOR BRAD WAGENKNECHT: I'll move the item.

VICE CHAIR KATIE RICE: Second.

CHAIRPERSON DAVID HUDSON: Holy cow. I heard a motion from Wagenknecht, kind of, lightly, and then second from Director Rice. It has to be a roll call vote, so, any last comment before we vote? Seeing none. Miss Hiratzka?

CLERK MARCIE HARITZKA: All righty. Director Spering?

DIRECTOR JIM SPERING: Yes.

CLERK MARCIE HARITZKA: Director Abe-Koga is not present. Director Ronen?

DIRECTOR HILLARY RONEN: Yes.

CLERK MARCIE HARITZKA: Director Cutter?

DIRECTOR PAULINE CUTTER: Aye.

CLERK MARCIE HARITZKA: Director Sanchez not present. Director Kim's not present. Director Mitchoff?

DIRECTOR KAREN MITCHOFF: Yes.

CLERK MARCIE HARITZKA: Director Jue?

DIRECTOR TYRONE JUE: Yes.

CLERK MARCIE HARITZKA: Director Zane?

DIRECTOR SHIRLEE ZANE: Yes.

CLERK MARCIE HARITZKA: Director Kniss?

DIRECTOR LIZ KNISS: Yes.

CLERK MARCIE HARITZKA: Director Gioia?

DIRECTOR JOHN GIOIA: Yes.

CLERK MARCIE HARITZKA: Director Sinks?

SECRETARY ROD SINKS: Aye.

CLERK MARCIE HARITZKA: Secretary, sorry. Chair Hudson?

CHAIRPERSON DAVID HUDSON: Yes.

CLERK MARCIE HARITZKA: Vice Chair Rice?

VICE CHAIR KATIE RICE: Yes.

CLERK MARCIE HARITZKA: Director Groom?

DIRECTOR CAROLE GROOM: Yes.

CLERK MARCIE HARITZKA: Director Miley?

DIRECTOR NATE MILEY: Yes.

CLERK MARCIE HARITZKA: Director Haggerty?

DIRECTOR SCOTT HAGGERTY: Aye, aye, aye.

CLERK MARCIE HARITZKA: Director Wagenknecht?

DIRECTOR BRAD WAGENKNECHT: Yes.

CLERK MARCIE HARITZKA: Director Ross?

DIRECTOR MARK ROSS: Yes.

CLERK MARCIE HARITZKA: Director Barrett?

DIRECTOR TERESA BARRETT: Yes.

CLERK MARCIE HARITZKA: Director Chavez?

DIRECTOR CINDY CHAVEZ: Yes.

CLERK MARCIE HARITZKA: Director Canepa is not present. Director Bauters?

JACK BROADBENT: Aye.

CLERK MARCIE HARITZKA: Director Mandelman?

DIRECTOR RAFAEL MANDELMAN: Yes.

CLERK MARCIE HARITZKA: The ayes have it. Motion carries.

CHAIRPERSON DAVID HUDSON: Okay, thank you. Our next Item 13 is a public hearing to consider adoption of proposed amendments to Regulation 6.5. I won't read the whole thing. It's Regulation 11 Rule 10, Regulation 12 Rule 15, and who am I missing here? Reg 6 Rule 5. Is this going to be yours? You going to start it off, Jack, or are we going to give this straight to Victor Douglas?

JACK BROADBENT: I will introduce Mr. Douglas, who is the Manager of our rulemaking that will walk you through the staff presentation on Item 13.

VICTOR DOUGLAS: Good morning, Chair Hudson and Members of the Board. Seasons greetings. Just want to say that. I'm Victor Douglas and I'm Manager of the Rural Development section. In this presentation, I'll cover the proposed amendments to three refinery rules that stem from settlement agreements from two lawsuits. Rule 6-5, Particulate Matter from Fluidized Catalytic Cracking Units. Rule 11-10, Cooling Tower Hydrocarbon Emissions. Rule 12-15, Petroleum Refinery Emission Tracking. I'll also cover the CEQA Environmental Analysis conducted for this Rural Development effort and I'll conclude the presentation with staff recommendations. The proposed amendments to Rule 6-5, Particulate Matter from Fluidized Catalytic Cracking Units or FCCUs, are minor in nature. They clarify that permitted FCCUs controlled with the web scrubber deemed best available control technology is exempt from the requirements of Rule 6-5. The amendments also remove emission limits placeholders located in the standard sections for condensable PM and sulfur dioxide. I want to make it clear that none of these rules, these changes will reduce the stringency of this rule nor change its associated emissions. Nor would they preclude the development of further emission limits for this source category. The proposed amendments to Rule 11-10, Cooling Towers, do several things. They clarify that cooling towers not in refinery service such as hydrogen production plants or carbon dioxide recovery facilities are excluded from the total hydrocarbon emission requirements of this rule. They changed the monitoring frequency from daily or continuously to weekly. They aligned the leak action requirements for, with federal standard and they removed the best modern practices requirements that could duplicate or conflict with process safety management requirements implemented by Cal/OSHA and this specific requirement does not directly relate to or effect emissions. Further, the monitoring frequency changes from continuous or daily to weekly could result in the potential for foregone emission reductions. Although the rule was never implemented with daily or continuous monitoring, we thought it prudent to analyze the theoretical emission differences and examine those differences through the lens of a CEQA environmental analysis.

[02:25:00]

Note that the leaks, note that leaks are rare occurrences and variable in nature. Daily monitoring was demonstrated not to be cost effective when compared to weekly monitoring and weekly

monitoring is still more stringent than comparable federal standards. Thus, Rule 11-10 remains the most stringent rule on cooling tower leaks. Proposed amendments to Rule 12-15 clarify definitions of crude oil and crude slate and their applicability. It removes cargo carriers -- ships and trains -- from emission reporting requirements. They clarify and modify reporting requirements for small quantities of feedstocks, setting a threshold below which non-crude feedstocks need not be reported. They clarify review and approval processes for emissions inventory, guidelines and fence-line monitoring plans. Modify monthly crude slate reporting requirements and clarify that the requirements for the handling of confidential business information to ensure that business information data remain onsite during inspection, audit and review, to ensure that they are protected appropriately and are not inadvertently released. These changes to Rule 12-15 would not result in or affect emissions because this rule has no emission standards or provisions that could directly impact emissions. As mentioned earlier, staff had a CEQA Environmental Impact Analysis conducted for the potential for a theoretical foregone emission reduction. In the CEQA process, a CEQA Initial Study was prepared and a Scoping Meeting was held in August of this year. The Draft Environmental Impact Report was released in October of this year, and the Final Environmental Impact Report will become, the Environmental Impact Report will become final upon your certification at this hearing if you choose to do so. The environmental analysis indicated that there would be potential for significant air quality impacts associated with Rule 11-10 only. Potential foregone emission reductions range from one ton to 16 tons per year. Mitigation and alternatives deemed not economically feasible and socioeconomic impacts were previously analyzed and no additional analyses were necessary because there were no additional costs. In fact, there were actually cost savings. So, staff recommends that you adopt amendments to Regulation 6, Rule 5; adopt the amendments to Regulation 11, Rule 10. Adopt the proposed amendments to Regulation 12, Rule 15 and certify the Final Environmental Impact Report. This concludes the staff's presentation and I'll be happy to respond to any questions that you may have. Thank you.

CHAIRPERSON DAVID HUDSON: Okay, thank you. The public hearing is open. I was asked to, Director Haggerty has to leave, and he would like to make a comment before he leaves, and then we'll go to your -- go ahead.

DIRECTOR SCOTT HAGGERTY: Thank you, Mr. Chair. I just wanted to -- and I probably should have done this when we were talking about the wildfires -- and I apologize. I have to leave, as well as Director Spering because we have to go work on a new Executive Director for MDC, but I did want to just let people know that the [PH] Dasage Family Car Group in my district, which is in Fremont and also in the Tri-Valley is putting \$100,000 towards the Camp Fire Relief Fund and they're asking that if anybody wants to match it, they're certainly happy to receive any kind of donations to go with that. So, I just wanted to say that. I just thing it's great when communities from all over the state, all over the Bay Area come together to help a county out and I had spent a lot of time talking about that the other night when we honored the firefighters. Supervisor Miley and myself that helped out in the fires up there, and also the Woolsey fire. But it is great when all this partisanship that goes on, actually when it hits the fan, we all just come together as one. Here, anyways, but I did want to note that I'm very happy that [INDISCERNIBLE] Dasage and his family, [PH] Jessie and [PH] Val are great community partners and want to help.

CHAIRPERSON DAVID HUDSON: Okay, thank you, Supervisor Haggerty. Director Mitchoff?

DIRECTOR KAREN MITCHOFF: Back to slide three, I just want to clarify. Because it says clarifies exemption for FCCU abated by wet scrubber. We just talked about that in the previous issue.

[02:30:00]

This is for FCCUs that fall under those that have been implementing BARCT already? I mean, we've got to be really clear here, folks.

VICTOR DOUGLAS: Exactly. There's one FCCU that's controlled with the wet scrubber right now and this clarifies that because it's controlled with the best available control technology that it should not have to be subject to the emission limits that are less than its permitted limits.

DIRECTOR KAREN MITCHOFF: Right, it's sort of like there's a baseline of a date and there's only one you're saying that already uses a wet scrubber, so, the concerns we raise, they've already been analyzed I would assume, but now that we're moving forward and you're going to be looking at other facilities with these types of equipment, they will come under a new EIR and review.

GREGORY NUDD: Yeah.

DIRECTOR KAREN MITCHOFF: Because hopefully there's additional new technology.

GREGORY NUDD: Sorry, Director, if I could make a quick point. Yeah, Valero already has a wet scrubber --

DIRECTOR KAREN MITCHOFF: Right, we heard.

GREGORY NUDD: -- that they were required to install under a consent decree with the EPA, and so, they wanted clarification in this rule that the ammonia testing and those requirements didn't apply to them. Which makes sense because they already had the Best Available Retrofit Control Technology.

DIRECTOR KAREN MITCHOFF: And that's fine, but they're using a wet scrubber, so, it will be interesting, and I heard one of our public speakers say, I thought I heard them say that they're recycling it but, again, thank you for the clarification.

CHAIRPERSON DAVID HUDSON: Thank you. Director Ross, but first, how many cards do we have on this one?

CLERK MARCIE HARITZKA: Five.

CHAIRPERSON DAVID HUDSON: Okay. Go ahead, Director Ross.

DIRECTOR MARK ROSS: Thank you, Mr. Chair. In the, in the text there I saw they're allowing the modified El Paso method on the cooling tower testing, but there are two other methods to measure TAC and it was unclear in that paragraph whether all three will be required or whether they have an option of using one of the three? Or a combination?

VICTOR DOUGLAS: They would have the option. They would have the option. As long as they meet, the monitoring methodology that they use met the criteria associated with the rule.

DIRECTOR MARK ROSS: Okay, thanks.

CHAIRPERSON DAVID HUDSON: Okay, thank you. I believe that's an old light, so, we'll leave that on. Let's call up our five speakers.

CLERK MARCIE HARITZKA: Jed Holtzman, Jan Warren, Richard Gray, Gary Hughes and Willene Ellen Sweet.

JED HOLTZMAN: Thank you one last time, Chair Hudson.

CHAIRPERSON DAVID HUDSON: There's public comment afterwards.

JED HOLTZMAN: You're going to miss this.

CHAIRPERSON DAVID HUDSON: Yeah, right.

JED HOLTZMAN: Jed Holtzman, 350 Bay Area. I'm sorry to kind of make procedural statement after procedural statement but that's kind of what's coming up today. But I do think that this one is actually critically important to everything that you do. It could be argued about 6-5 I guess, but 11-10 and 12-15 are substantively weakened by these amendments which were required by legal settlements that you entered into. And so, I just want to kind of talk a little bit about what that looks like from the outside for a minute and 20 seconds. You have an extremely intensive and long public process for rulemaking with many steps that I've seen presented to both you and the public mandated by both law and regulation, and at the end of that very long process, which requires many hours on your part and even more by staff, you come up with a finished product that your Chief Counsel says is legally defensible versus what the community often asks for, which is declared not legally defensible and so, we need to come up with a middle position. We passed that. WSPA sues the next day, which we all knew was going to happen. You go to court and your Counsel does not defend the rule that was declared eminently legally defensible but says oops, actually there are these things. We see what you're saying, we need to come into some kind of settlement. So, then you enter a room where your Counsel and WSPA's Counsel essentially negotiates the new rules, which a Judge approves and then it comes to you for de facto stamping. So, at that point what you have, and I'm not declaring any kind of purposeful malfeasance of any kind but just with this process what you end up with as an outcome is doing an end run around this very long public process with all of your work and

staff's work and our work to just have a new rule that essentially would be decided by your Counsel, their Counsel and a Judge. That can't be the way that we go going forward. If your Counsel says the end of your rulemaking process is legally defensible, we need to defend that in court and stand up for that. And not weaken any of these rules. Appreciate your time.

CHAIRPERSON DAVID HUDSON: Thank you, Jed. Thank you. Next speaker please?

[02:35:00]

JAN WARREN: Hi, Jan Warren again. I want to thank Chair Hudson and his excellent managing of us all year long. On December 13 I listened to the CARB meeting that was held in Sacramento as CARB voted to extend the caps through 2030 and not recommend any change in the banking of credits. Chair Nichols said that they were sending a signal not to use Cap-and-Trade as a principal tool to reduce GHG emissions. She voiced we needed to have a whole lot more reduction by 2030 and we need to think more broadly. The request, I mean the recent 2018 report from the IPCC highlights the dangers of our rapidly warming earth. The implementation of BARCT on the fluidized catalytic cracking units would reduce PM 2.5 particulate emissions by greater than 90 percent at the source, and this reduction has proved effective at the Valero refinery. The current proposed of Rule 5, the control of particulate emissions for refinery -- whatever I just a minute ago -- now removes condensable particulate matter PM 2.5 and smaller and sulfur dioxide from the list of pollutants intended for future control under this rule. I request that all the amendments be kept as strong as possible. Thank you.

CHAIRPERSON DAVID HUDSON: Thank you, Jan. Next speaker?

RICHARD GRAY: Richard Gray with 350 Bay Area. I want to make the case that the District should stop backing down in the face of oil industry lawsuits. We work together with the District in the public process to implement these three regulations to lower emissions. The staff and presumably your staff attorney recommended moving forward with these rules. Then, as usual, WSPA and several oil companies filed suit to reverse the portions of the regulations they don't like. You may have known about the settlement your attorney made to back off these regulations in March but the public did not until it was revealed by a Freedom of Information request months later. The District agreed to this settlement without public scrutiny or accountability until now. I don't feel that I have enough information to feel assured that these changes are minor. I know the District does not have an unlimited budget to fight lawsuits but you must understand, to us in the public this settlement has the appearance of a backroom deal, and an end run around the public process. That just doesn't look good. Decisions like this erode our confidence that the District is faithfully working to achieve its mission. For the protection of our future, sooner or later, all of our government agencies are going to have to stand up to this industry. Thanks.

CHAIRPERSON DAVID HUDSON: Thank you, Richard. Next speaker?

GARY HUGHES: Hello, Directors. My name is Gary Hughes. I'm an East Bay resident. It's a little disappointing to see how people are leaving such a critical body. I really appreciate the

fact that you're all here. I guess as someone who has worked for decades in leveraging environmental law to secure protections of the environment and public health, it is very disturbing to me to see that the Bay Area Air Quality Management District seems to be unwilling to really go into the court of law and fight in the public interest. So, these settlements and the weakening of rules are of great concern to me, especially as other speakers have said that we've been told that rules are legally defensible and that's why they're being approved yet settlements occurring. So, again, we are facing a crisis. Climate chaos is coming on. The situation on the border is very tied to climate disruption. The fires, the air quality clearly very tied to climate disruption, and we know that the number one cause of climate change is our ongoing extraction, mobilization, processing and burning of fossil fuels. And if the Bay Area Air Quality Management District isn't willing to go mano-a-mano in a court of law fighting for public interest against the fossil fuel industry, who is going to do it? So, please defend the residents of the Bay Area.

CHAIRPERSON DAVID HUDSON: Thank you. Next speaker?

WILLENE ELLEN SWEET: Ellen Sweet, 350 Bay Area and West Marin Standing Together. I seem to speak at the end and reiterate

[02:40:00]

what other speakers have said, but the current proposal of Rule 6-5 removes condensable particulate matter and sulfur dioxide which is a precursor to particulate formation from the list of pollutants intended for future FCCU control under the rule. This retraction is what the District agreed to do in its enforcement agreement to stay litigation signed with Bay Area refineries in March of 2017. We request that the Board reject the portion of this settlement concerning the above-described changes to Rule 6-5 and prepare to defend it in court for the protection of public health in the Bay Area and in furtherance of your mission. I'd also like to make a comment on the changes to Rule 11-10. The proposed amendments to Rule 11-10 involve changing existing monitoring requirements for refinery cooling towers. The proposed amendments may contribute to, may result in reactive organic gas emissions that will exceed the significant threshold of 10 tons per year. The only feasible method to reduce ROG emissions from cooling towers is more frequent monitoring and repair, but this method was concluded to not be feasible due to economic factors. Thus, no feasible mitigation measures have been identified that could avoid the significant impact or reduce the impact to less than significant. And ROG emissions are a precursor [INDISCERNIBLE].

CHAIRPERSON DAVID HUDSON: Okay, thank you. Next speaker, and can you put up the last slide, Marcie, for staff recommendations?

CHARLES DAVIDSON: Charles Davidson again, from Hercules. In addition to the FCC regenerator being kilns and not a simple crude process unit that operates at 1800 degrees, which is 800 degrees hotter than the hottest crude processing capability, it's combustion. I would like to ask for the Board to request a scientific study about why condensable particulate matter should be taken out of the rulemaking. I would like to see why condensable particulate matter from a

technical scientific point of view has been made insignificant as opposed to simply a legal decision. Thank you very, very much.

CHAIRPERSON DAVID HUDSON: Thank you. Are there any other speakers? Anyone wish to speak? Public hearing is closed. Did you wish a comment or is it still on?

FEMALE 1: Oh, I'm sorry.

CHAIRPERSON DAVID HUDSON: Okay, go ahead. Mr. Broadbent?

JACK BROADBENT: Mr. Chairman, I just want to reiterate what has been said as part of the staff presentation, and also just reassure you that we are not weakening these rules. Okay, let me be very, very clear. We are making some administrative changes to these rules and there's one in particular that you've heard about, 11-10, which is calling on a monitoring approach with regard to cooling towers at the refineries themselves. We are proposing to go from a daily monitoring to a weekly monitoring only because we think that that's more in line with what our own practices are and we got convinced that we think that's a reasonable request, keeping in mind that we have fence-line monitoring at these facilities themselves. So, we are assured that if there's going to be any kind of VOC emissions from these types of sources that'll get picked up, because there's another parametric monitoring going on as well. So, in the interest of being reasonable but also being tough and moving the agenda forward in terms of getting emission reductions, this is one in which we strongly believe we need to make these kind of changes. And that's what this is about. That's all these changes are about. Now, keep in mind with regard to the adoption of Item 12, we are now going to embark on a very strong process to further reduce emissions from these processes at these facilities. So, I think you've got a good, reasonable approach here moving forward in terms of emission reductions from the refineries here at the Bay Area.

CHAIRPERSON DAVID HUDSON: Director Gioia?

DIRECTOR JOHN GIOIA: Yeah, I just want to say I appreciate I know that whenever there are settlements and lawsuits and whether there are changes is always concerned by the public. But let me just say I think this Air District has stood up to

[02:45:00]

and fought in court the oil industry. We've been sued on every rule we have passed. In fact, every refinery related rule that we've passed, and even when we've been threatened with a lawsuit as we're considering adoption, this Board has adopted those rules. And so, and at the same time the staff has reviewed with the Board that these changes aren't creating any impact in terms of increased emissions and we are relying on that. And that's ultimately the outcome, is that we don't want increased emissions. All these rules are designed to decrease emissions. So, I realize what the perception is but I think the staff has been working hard to continue with this Board's direction of no increased emissions and we do stand up in court. We spend the money to fight the industry and, in some cases, we win outright and in other cases there maybe a

settlement, but the result has been no increased emissions from this. And that's to me what's most important.

CHAIRPERSON DAVID HUDSON: Thank you. Director Bauters, then Ross.

JACK BROADBENT: Sorry, did you call me?

CHAIRPERSON DAVID HUDSON: Yep.

JACK BROADBENT: Sorry. Thank you, Mr. Chair. Just to start, just a couple questions for staff on Rule 12-15. Could you provide the reasons again why cargo carrier ships and trains were removed from the emissions requirements?

COUNSEL BRIAN BUNGER: Yeah, the answer to that is it's third-party information. We have as well or better access to it than the refineries do, and so to get past a discussion point we were willing to go get it ourselves. It's not an issue. We get exactly the same information from the third-parties that would be passed to us, so, we're perfectly capable of recovering it ourselves.

JACK BROADBENT: It's easy to recover then?

COUNSEL BRIAN BUNGER: It is.

JACK BROADBENT: Okay, the other question is modifying the monthly crude-slate reporting requirements. Why did we do that?

COUNSEL BRIAN BUNGER: That is what we were talking about.

JACK BROADBENT: That's the same thing?

COUNSEL BRIAN BUNGER: It was confidential information. It just allows the data to stay in a place where the refineries feel it's more secure. We get what we need out of it. We do the calculations onsite. It just avoids a discussion over protecting CBI that was getting entrenched.

JACK BROADBENT: And so, then when it comes to the clarification and applicability of definitions, it was in that exact same vein or were there other things outside those items?

COUNSEL BRIAN BUNGER: Those are minor tweaks to ensure that we're getting the data we need without sort of over-collecting information, like on intermediates and things like that. Those are small quantities that we weren't expecting to capture in the first place.

JACK BROADBENT: Okay, thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Director Ross?

DIRECTOR MARK ROSS: Thank you, Mr. Chair and I would echo what Director Gioia was saying about the process. It is a long process and we tried to build it on a solid foundation and has been noted, it takes a long time. It's a long process, and so, when we get to the point that we pass the rule, as sure as the sun will rise WSPA will sue and that's a credit to the rule's efficacy or effectiveness because if it wasn't effective, they wouldn't sue. If they weren't concerned about it, they wouldn't sue. So, on all the graphs we saw earlier as the timeframe of the passage of those rules I was wondering which one of those little blue bars includes the litigation period that is sure to follow? And it doesn't, obviously. So, that's part. And then with all legislation the sausage making is always ugly, especially at the end with litigation, where sides come together. The attorneys come together somewhere or they stakeholders, somewhere out of view, and decide what's going to work. Our option usually is to take the least meaningful changes we can and see if that will fly. In my experience I haven't seen anything that has increased emissions in our settlements. We have stood very firm, but the option is to go back to the long process. So, we have to weigh the timeframes involved in starting from scratch if there is no resolution. So, you have to weigh the time element as well. You have to weigh the money element as well. It's the public's money. We have to spend -- it's not our money, it's the public's money and the people who sue us know that we have, it's not our personal money and that we have to have a responsibility, so, they know that's a pressure point for us that will make us come to the table. That's just the world we live in. I wish it was different, but we try to do our best and we do vigorously defend everything we pass and I've yet to meet a lawyer who says their case isn't the one that's going to win. Every lawyer says that and that's why there is a court because there's so many different opinions and even if our attorney says we're rock solid, we're bulletproof,

[02:50:00]

and we may be, a [INDISCERNIBLE] may be employed just to file a suit anyway. And so, we operate in good faith here with sound legal advice and with good intent.

CHAIRPERSON DAVID HUDSON: Okay. Further comments or motions? Director Zane?

DIRECTOR SHIRLEE ZANE: Yeah, I just wanted to say, to thank the staff for all the work that you did on this. I'm glad we're finally here. I did have a, kind of a more pragmatic question though, based upon some of the public comment. On 11-10 in the cooling towers, if we're going from a daily monitoring to a weekly monitoring do the refineries know what day we're going to choose to monitor them?

GREGORY NUDD: Director Zane, the refineries do the sampling. They pay for the sampling and the lab analysis and then we oversee that as part of our inspections and enforcement process. So, we have to go in and ensure that they're following that schedule. We can also go in and pull our own samples as well, as we need to.

DIRECTOR SHIRLEE ZANE: That's what I'm looking --

JACK BROADBENT: And those, and those are unannounced.

GREGORY NUDD: Right.

DIRECTOR SHIRLEE ZANE: Okay. That's what I'm interested in knowing. That they are unannounced. And you know, I understand them doing it themselves. It's just, it seems like it's more likely that we're going to get the results, the actual results if we had an independent entity doing the sampling. So, I don't know whether we've ever considered that. I don't want to go back to court, that's for sure. We need to move this ahead, but I just always, I'm concerned. I don't think they've been very honest with us or the public, so, I am concerned that we allow them to do it themselves. But sounds like you guys are going to keep up on this, so.

CHAIRPERSON DAVID HUDSON: Director Wagenknecht?

DIRECTOR BRAD WAGENKNECHT: I would just move the requested action at this point.

CHAIRPERSON DAVID HUDSON: Okay. Motion Wagenknecht, second?

DIRECTOR SHIRLEE ZANE: Second.

CHAIRPERSON DAVID HUDSON: Zane. All those -- oh, we got to do a roll call. I'm sorry.

CLERK MARCIE HARITZKA: Okay. Directors Spering, Abe-Koga, Ronen are out, not present. Director Cutter?

DIRECTOR PAULINE CUTTER: Aye.

CLERK MARCIE HARITZKA: Directors Sanchez and Kim are not present. Director Mitchoff?

DIRECTOR KAREN MITCHOFF: Yes.

CLERK MARCIE HARITZKA: Director Jue?

DIRECTOR TYRONE JUE: Aye.

CLERK MARCIE HARITZKA: Director Zane?

DIRECTOR SHIRLEE ZANE: Aye.

CLERK MARCIE HARITZKA: Director Kniss?

DIRECTOR LIZ KNISS: Aye.

CLERK MARCIE HARITZKA: Director Gioia?

DIRECTOR JOHN GIOIA: Yes.

CLERK MARCIE HARITZKA: Secretary Sinks?

SECRETARY ROD SINKS: Aye.

CLERK MARCIE HARITZKA: Chair Hudson?

CHAIRPERSON DAVID HUDSON: Yes.

CLERK MARCIE HARITZKA: Vice Chair Rice?

VICE CHAIR KATIE RICE: Yes.

CLERK MARCIE HARITZKA: Director Groom?

DIRECTOR CAROLE GROOM: Yes.

CLERK MARCIE HARITZKA: Director Miley?

DIRECTOR NATE MILEY: Yes.

CLERK MARCIE HARITZKA: Director Haggerty is not present. Director Wagenknecht?

DIRECTOR BRAD WAGENKNECHT: Yes.

CLERK MARCIE HARITZKA: Director Ross?

DIRECTOR MARK ROSS: Yes.

CLERK MARCIE HARITZKA: Director Barrett?

DIRECTOR TERESA BARRETT: Yes.

CLERK MARCIE HARITZKA: Director Chavez?

DIRECTOR CINDY CHAVEZ: Yes.

CLERK MARCIE HARITZKA: Director Canepa is not present. Director Bauters?

JACK BROADBENT: Aye.

CLERK MARCIE HARITZKA: Director Mandelman?

DIRECTOR RAFAEL MANDELMAN: Yes.

CLERK MARCIE HARITZKA: The ayes have it. Motion carries.

CHAIRPERSON DAVID HUDSON: Okay, thank you. Concludes 12 and 13. Item 14 is Public Comment. It is open. Do we have any cards for public comment?

CLERK MARCIE HARITZKA: Richard Gray.

CHAIRPERSON DAVID HUDSON: Richard, you're up.

RICHARD GRAY: I spoke earlier. Thank you.

CHAIRPERSON DAVID HUDSON: Okay, thank you, Richard. That is nice. Public Comment is closed. Next item is Board member comments. Starting from the right. Nope, nope, nope. Director Gioia?

DIRECTOR JOHN GIOIA: I'll just make one comment. So, last week the Air Resources Board adopted a new rule that's pretty groundbreaking. It requires that, and it sort of will help us meet our Diesel Free by '33 goal. It will require starting in 2029 that all new bus purchases by public transit agencies in California need to be zero emission electric buses. It ramps that up incrementally for large transit districts before 2029 but starting in 2029 100 percent and by 2040 the whole fleet would need to be zero mission electric. So, all new purchases starting in 2029 and by 2040 the whole fleet. So, that's pretty significant. That means no diesel buses roaming around but zero emission electric buses.

CHAIRPERSON DAVID HUDSON: Good. Reindeer's first, go ahead. We'll work back this way.

JACK BROADBENT: Ho, ho, ho, and Merry Christmas to everybody. Season's greetings to those who don't celebrate Christmas. Thank you for being here.

CHAIRPERSON DAVID HUDSON: Thank you. Cindy? Teresa?

DIRECTOR JOHN GIOIA: Thank you for bringing the spirit, the holiday spirit to us.

JACK BROADBENT: You're welcome.

CHAIRPERSON DAVID HUDSON: Mark, go please.

DIRECTOR MARK ROSS: Yes, happy holidays and hope your holy days are good too. Back to the Fremont school. I'm not looking for a dossier on this, but what would be nice would be a flow chart as to the approval process for the siting of a school like that. Where did we fit -- there was an implication, it was implied that somehow our information, whatever it was, was used to make a decision. I'd like to see if we could verify that, that where in the process, how crucial our information was to the decision-making process of the powers that made those decisions?

[02:55:00]

Maybe just a one-page flow chart. I don't really need a whole history but just kind of how it goes. And not just for this case but for others, because I think this is going to happen more and more where the new use comes in and challenges the existing old use more and more.

JACK BROADBENT: Director Ross, be glad to. Mr. Chairman, we'll send that out to the full Board. Kind of a flow chart. Because we've put it together. There's a timeline and I'm hoping that I'll be able to report in the next month or two some progress in working with the facility to erect some processes and put some things in place that will mitigate the dust in other operations affecting the school.

DIRECTOR MARK ROSS: Yeah, good. And also, if there's any, Brian, if there's any precedents in California law as to who takes precedence, the old use or the incoming new use? If there's some case line that -- that could be two or 300 hundred pages.

COUNSEL BRIAN BUNGER: Yeah, there's about half a law library on that topic I would guess, over the years. It's a complicated issue, and I think Jack's right. When we can give you the summary you can get a better understanding of how this, how these things happen and how this one in particular came about. But you've got, you do have a situation of a new use coming in where an existing use has been permitted and allowed both by the city and others, and information flows probably could be different, and we'll talk a bit about that.

DIRECTOR MARK ROSS: Okay, thank you.

CHAIRPERSON DAVID HUDSON: Okay. Brad? Nate? Carole?

DIRECTOR CAROLE GROOM: Mr. Chairman, thank you. I just wanted to follow up with John's announcement, the San Mateo County Transit District has purchased nine electric buses. They will be on the streets in March and following that additional express service will be added which we hope will remove lots of cars from both El Camino Real and Highway 101.

CHAIRPERSON DAVID HUDSON: Okay. Future Vice Chair Sinks?

SECRETARY ROD SINKS: Thank you. I'll disclose that several of us, Scott Haggerty and I, then [PH] Rocana as well as [PH] Cants and Jue wrote a letter to Jack in October asking what we could do to better manage the odor issues that continue to plague Milpitas after many decades, actually. And I know, Jack, that you've prepared a response. We're looking forward to that. I had a meeting with City Manager and Assistant City Manager in Milpitas along with Rocana's office about a week ago, so, I appreciate continued focus on this on behalf of the cities of Santa Clara County and Milpitas in particular. So, thank you for that.

JACK BROADBENT: Yes, Director Sinks, for all the Board actually. So, the District is going to step up and take a leadership role and conduct the odor study for that area, wherein based on

that study we're going to be able to do a very fine granular source apportionment, meaning figure out who contributes exactly to these odors under what conditions. That will take some time but I know the District is probably the best organization to do that, given our scientific background and so, I think you'll be pleased on our response. We'll give you a copy of that letter today.

SECRETARY ROD SINKS: And I appreciate that, and to the extent that we don't have authority, that things fall under CalRecycle as we've talked about previously, our ability to go to Sacramento and ask for changes either in our regulatory authority or get them to help us manage this issue would be most welcome. So, thank you so much.

CHAIRPERSON DAVID HUDSON: Okay. Chair Rice?

VICE CHAIR KATIE RICE: Yeah, I just want to share. We don't generally do adjournments in memory of folks but I want to propose that we adjourn this meeting in memory of Pete Arrigoni. Supervisor Pete Arrigoni, who some of you may know by name or reputation. He served as Supervisor in Marin County, in the seat I sit in. I believe I might have the dates wrong here. Was elected in 1970, served two terms and he basically is the person responsible for preventing the development of freeways heading from 101 out to West Marin and basically the wholesale development of West Marin, and that's probably his biggest, most well-known legacy in terms of public acts. But his, I would say as great a legacy was his amazing civility, graciousness and the way he treated everyone with such respect and his ability to establish rapport with just about anyone. He was a model as a public servant in so many ways and he passed away yesterday, and I just want to acknowledge him and what he represents as a public servant and what he's done. So, thank you.

CHAIRPERSON DAVID HUDSON: Thank you. Okay, Executive Director? Oh, I'm sorry. I thought we went through there. Director Kniss?

[03:00:00]

DIRECTOR LIZ KNISS: Just something for, to chew on or for thought over the holidays. Across the way from us this afternoon, MTC will be meeting and they'll be discussing CASA, and I know all of you are very aware of that. So, trying to put that together with air quality one of the things they mentioned on NPR since we have these long commutes here in the morning is that one in 36 Americans now have a cumulative of over 90 minutes a day when they are working, which is rather astonishing. The intent of CASA, as you know, is to intensify housing in the Bay Area. It's getting good comments from some, not so good from others. But thinking of what would increase the air quality, it certainly would be people not having to drive as far. So, as much as we think electric cars are really well accepted, they are still four percent of cars in the Bay Area. It's four percent. The rest of us or the rest of you are driving something that takes gasoline. So, it will be very interesting to put these two needs together, one for better air quality, one for more housing and yet I know a number of the cities will object to control being taken over by the state. But if you think back to a year and half ago, that was what we faced at the Air

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District as well, was control going to the state. It's interesting to think about. Something to muse on during your holiday break. And happy holidays to all of you, including the reindeer.

CHAIRPERSON DAVID HUDSON: Okay, Executive Officer?

JACK BROADBENT: Yes. Marcie, would you mind putting up the? So, this last year relative to our PM levels it's been a tough year. In the past the staff would have told you well, if it's a wildfire it doesn't count against our attainment status so, don't worry about it but frankly that's not our thinking and that's not where we are. We clearly believe that we need to step up and launch a bold initiative next year. So, you heard about that a little bit today and we plan to talk to you in more detail at the Retreat about this clean air shelters proposal, and I think between now and then we'll have a lot more detail, a lot more information for you legislatively as well as just numbers to make that happen. So, and this chart says it all. You saw that just, we're not even halfway through the year, the Winter Spare-The-Air season and we've had already 14 days over the 35-microgram per cubic level. Frankly we had a few days where the levels were 275, 300, those kind of numbers. So, we did have a tough year, Mr. Chairman, and that doesn't speak to your leadership at all. I just want to mention that you had a tough year. Our worst air quality was this last year. So.

DIRECTOR JOHN GIOIA: Mr. Chair, I think Krampus is sitting over there at the Director's seat.

CHAIRPERSON DAVID HUDSON: I didn't start him.

JACK BROADBENT: But anyway, with that I want to leave on a positive note. I want to wish you all on behalf of the staff happy holidays. So, thank you.

CHAIRPERSON DAVID HUDSON: Okay. [INDISCERNIBLE]. Where do we go? I think it's the, oh, Chairperson's Report. A couple things that we just brought up. The electric bus idea is really catching on. I don't know if people are aware but [PH] Gillig went straight to the 40-foot bus, tried to go over to Hawaii and found out going up to Poly with a full bus might be problematic. But it's coming and I don't think they're going to go away from it here or there or anywhere else. That's about as big a bus-maker as they have in this world. Next, I'd like to congratulate [PH] Damien for picking the right time to go on vacation and obviously Karen contributed immensely today. We might have to tell Damien that there's a hint there, that the less said is better.

MALE 1: Is he in Ireland or something?

CHAIRPERSON DAVID HUDSON: Oh, he's all over the place. I can't let this go without saying it enough because we spent enough time, it almost sounds like we're defending staff but we have to defend our own position and I want to thank Carole Groom for bringing this up to me. I may repeat it at every meeting that I have left.

MALE 1: You're done.

CHAIRPERSON DAVID HUDSON: Yeah, there's a fork in me. The lifetime criteria pollutants reduced, 173.28 tons. Whenever we hear this "you're not doing anything," it's kind of hard -- if we didn't do anything what the heck is 173 tons? Also, the lifetime greenhouse gas emissions reduced 105,000 tons. So, the goal for next year, just remember under this Chairmanship we did this much. I want to see these numbers increase next year. With that, the next Special Board of Directors Meeting Retreat will be on Wednesday, January 16th, [03:05:00]

2019, at 9:30. Not 9:00, at the Embassy Suites by Hilton, San Rafael/Marin County. That's 101 McInnis Parkway, San Rafael, and we will, I'd say happy holidays, but we are going to close this meeting in memory of Pete Arrigoni. Thank you very much for coming.

FEMALE 1: Excuse me, can you give that address once more.

CHAIRPERSON DAVID HUDSON: Yes. The address once more is 101 McInnis Parkway in San Rafael. Happy holidays.

EXHIBIT 2

Prepared for
Latham & Watkins LLP

Project Number
1690021643

Prepared by
Ramboll
Irvine and Emeryville, California

Date
July 2021

WATER TECHNICAL REPORT

A REVIEW OF WATER ISSUES RELATED TO THE PROPOSED BAAQMD REGULATION 6 RULE 5

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EXECUTIVE SUMMARY

The Bay Area Air Quality Management District (BAAQMD) has proposed amendments to Regulation 6, Rule 5 (Proposed Amendments) to further control particulate matter (PM) emissions from Fluidized Catalytic Cracking Units (FCCUs). The air pollution control equipment necessary to reach the levels of control contained in the Proposed Amendments are Wet Gas Scrubber (WGS) systems, which require substantial amounts of water. The primary objective of this report is to summarize the issues regarding the additional water demand required by the Proposed Amendments and to highlight the issues regarding the availability of long-term potable and non-potable (recycled) water. The information provided in the report mainly relies on publicly available information and data.

BAAQMD Staff's analysis of the Proposed Amendments is set forth in a Staff Report released March 30, 2021 (Staff Report) (BAAQMD 2021). Staff is also relying on an environmental impact report that was certified by the BAAQMD Board in 2018 when the BAAQMD's AB617 Expedited BARCT Schedule came before the Board (AB 617 Schedule EIR) (BAAQMD 2018). Overall, Staff has not adequately addressed the significant impact of using potable or recycled water to meet the very large water demand of WGS. The water required by WGS in this rulemaking is equivalent to the amount of water that could serve 12,000 Bay Area residents per day. We have found the following shortcomings in the Proposed Amendments' rulemaking record:

- The AB 617 Schedule EIR did not substantiate the water demand calculations, and thus may be underestimating the water demand;
- Staff did not perform the necessary evaluations to substantiate the availability of recycled water to support the operation of WGS, and at least one refinery will not have access to additional recycled water;
- Staff did not work with the Regional Water Board, responsible for the regional water management, or engage local water districts as part of the Proposed Amendments rulemaking, as requested by the Board of Directors in 2018;
- Neither the AB 617 Schedule EIR nor the Staff Report assessed the increased demand for recycled water in response to the Proposed Amendments, which would likely require additional infrastructure development for water supply;
- Neither the AB 617 Schedule EIR nor the Staff Report assessed the increase in wastewater generation, which may require that facilities modify their National Pollution Prevention Discharge Elimination System (NPDES) permit; and
- The Proposed Amendments do not adequately address what is likely to be an increased burden on the existing infrastructure at the impacted refineries to handle the increase water demand and wastewater generation.

The issue of water supply in the Bay Area is complex and contentious. The projected increase in population, subsequent rise in water demand, and uncertainty of future water supply will require thoughtful allocation of the region's water resources, especially as the supply of potable water may become more variable. Further, in times of drought, the overwhelming majority of the state's water is reserved for agriculture, which should be considered when determining the Bay Area's ability to support added demand from the region's refineries.

The Proposed Amendments will create additional demand for potable and/or recycled water, yet this issue has gone unanalyzed in connection with the Proposed Amendments. More analysis of the Proposed Amendments' requirement of WGS is necessary to determine whether sufficient water is

available to meet the increased demand that would result from the Proposed Amendments and if this is the best use of water resources in the Bay Area.

This technical report summarizes the issues and information regarding water demand and water availability now and in the future. Although the Valero Benicia refinery already has WGS installed, the future water supply associated with WGS usage at that refinery is assessed in this report to represent the total water demand that would likely result due to the Proposed Amendments.

This report builds upon the issues previously identified in Ramboll's comment letters, dated April 30, 2021 and May 26, 2021, to create a single technical report summarizing water-related comments and findings, with additional analysis of water supply issues and drought conditions.

1. BACKGROUND

The Bay Area Air Quality Management District (BAAQMD) has proposed amendments to Regulation 6, Rule 5 (Rule 6-5 or Proposed Amendments)¹ to further control particulate matter (PM) from Fluidized Catalytic Cracking Units (FCCUs). It is expected that affected refineries would install new or modify existing air pollution control equipment to comply with Rule 6-5. The control equipment necessary to meet the levels of control in the Proposed Amendments would include Wet Gas Scrubber (WGS) systems, which require substantial amounts of water.

In support of the Proposed Amendments, the BAAQMD has relied upon analyses completed in connection with its adoption of an expedited schedule for implementation of Best Available Retrofit Control Technology (BARCT), known as the Expedited BARCT Implementation Schedule, pursuant to the requirements of Assembly Bill 617 (AB 617). At the time the Expedited BARCT Implementation Schedule was approved by the BAAQMD Board (2018), an Environmental Impact Report ("AB617 Schedule EIR") was certified pursuant to the California Environmental Quality Act (CEQA). The AB617 Schedule EIR identified water usage as a significant impact resulting from the Expedited BARCT Implementation Schedule.

The AB617 Schedule EIR projected additional maximum daily water usage of 1.74 million gallons per day (MGD), of which 1.296 MGD would be required for operation of WGS (**Table 1**).

Equipment	Estimated Operational Water Use (gal/day)
Refinery WGS (3 Units)	1,296,000
Coke Calciner LoTOX	432,000
Cement Kiln Lime Injection	13,000 ⁽¹⁾
Maximum Daily Water Usage	1,741,000
Significance Threshold	263,000
Significant?	Yes

(1) A portion of this water is expected to be reclaimed water.

Table 1: Estimated Operational Water Use of Expedited BARCT Implementation Schedule (Source: BAAQMD, 2018)

There are five oil refineries in the Bay Area- 1) Chevron Richmond Refinery 2) PBF Martinez Refinery (former Shell), 3) Valero Benicia Refinery, 4) Phillips 66 Refinery, and 5) Marathon Martinez Refinery (**Figure 1**).

¹ Available at: https://www.baaqmd.gov/~media/dotgov/files/rules/reg-6-rule-5-particulate-emissions-from-refinery-fluidized-catalytic-cracking-units/2020-amendment/documents/20210525_13_fsr_0605-pdf.pdf?la=en. Accessed: July 2021.

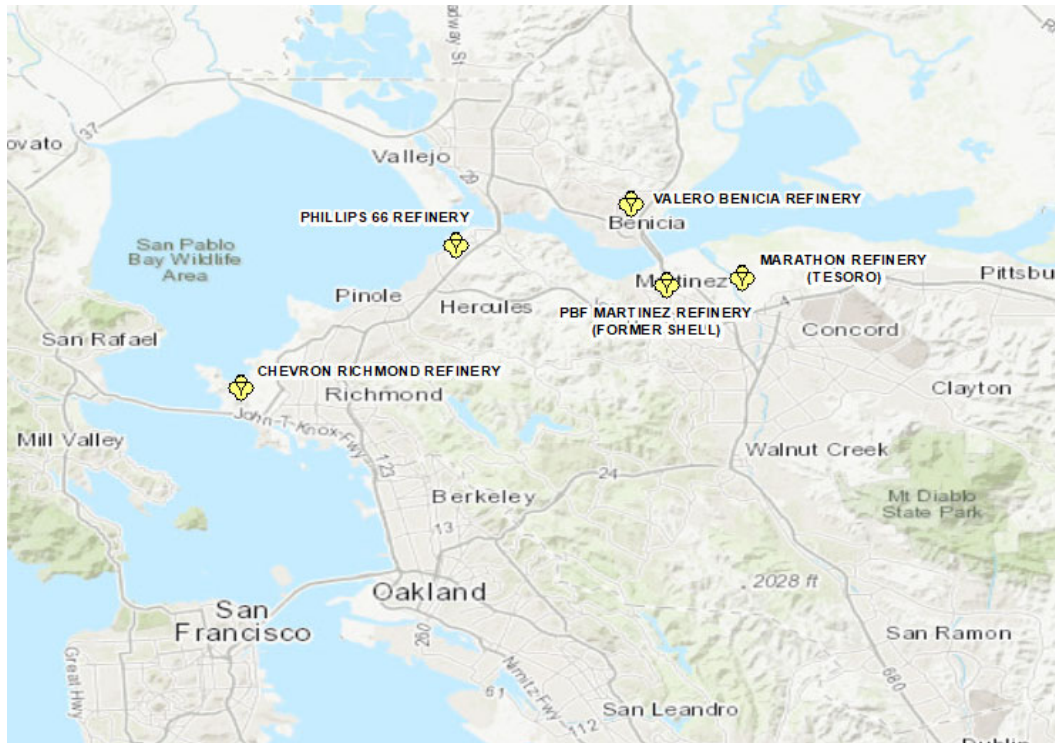


Figure 1: Location Map of the Bay Area Refineries

All of these refineries, except Phillips 66, have FCCUs. The Marathon Martinez refinery has been indefinitely idled since April 2020.² The Valero refinery already has WGS installed. Thus, there are two refineries that may need to install a new WGS if the Proposed Amendments are adopted: 1) Chevron Richmond Refinery, and 2) PBF Martinez Refinery. In addition to the two impacted refineries, this report also includes discussion on the future water supply issues for the Valero refinery.

² Available at: https://www.20210330_sr_0605-pdf.pdf (baaqmd.gov). Accessed: July 2021.

2. AB 617 EIR AND RULE 6-5 PROPOSED AMENDMENTS

The BAAQMD Board adopted its Expedited BARCT Implementation Schedule and certified the AB 617 Schedule EIR on December 19, 2018. During the public hearing, Directors raised several questions pertaining to the significant environmental impacts of the proposed BARCT rules, particularly regarding water resources. The BAAQMD Staff responded with assurances that there would be additional CEQA analysis for each of the BARCT rules brought to them for approval.

Some of the major questions raised by the Board of Directors included the following:

- The Board requested confirmation that further CEQA analysis of each proposed rules would be prepared.
- The Board suggested working with the Regional Water Quality Control Board (RWQCB) to assess if it would be possible to meet the additional water demand for the WGS. Also, it was advised that staff engage local water districts as part of the rulemaking.
- The Board emphasized not utilizing freshwater resources unless it is absolutely necessary. The use of recycled water was suggested.
- There were concerns about the wastewater generation and any intensive treatments needed for the disposal.

The BAAQMD Staff responses are summarized below:

- The Staff assured the Board (and the public) that additional CEQA analysis for each BARCT rule would be conducted.
- Staff indicated that they would reach out to the water quality agencies as part of this process.
- Staff mentioned that they would look into the process and available technologies for recycled water. They also indicated that the chemistry of source water would be an important consideration and will take this into account for the further development of the rule.
- The Staff would consider addressing the wastewater issues in the context of the rulemaking.

The analysis conducted, and information provided by the BAAQMD Staff in support of the Proposed Amendments, does not address the concerns raised by the Board in 2018. Staff acknowledged at the December 2018 hearing that the AB 617 Schedule EIR did not include analyses to address the Board's questions, and Staff further assured the Board that additional analysis would be forthcoming. However, no additional CEQA document has been prepared, and there is no indication of any other analysis of water impacts in the amended Staff Report.

Key issues raised by the Board that remain unaddressed include:

- The Staff documents supporting the Proposed Amendments do not present any new analysis of water demand by WGS. The Staff Report indicates that there is no new information available that would change the analysis in the AB617 Schedule EIR (BAAQMD 2021). The AB 617 Schedule EIR did not adequately disclose the basis for

the water demand for WGS, referencing only a 2007 EIR prepared by South Coast AQMD, and failed to provide any updated estimates of water demand specific to the Proposed Amendments.

- During the 2018 public hearing, the Board suggested that Staff include local water districts and the California Regional Water Quality Control Board in the review of the proposal. It does not appear that any water agency or utility was engaged in the Proposed Amendments rulemaking process.
- The AB 617 BARCT FEIR did not adequately disclose the basis for the water demand for WGS. The Proposed Amendments do not present substantial changes in the analysis of water demand by WGS (as compared to the impacts described in the DEIR) under the proposed project.
- On the issue of using reclaimed or recycled water to meet the growing water demand, the Staff Report acknowledges that the WGS process requires specific water quality standards. However, no specific details on the treatment/infrastructure requirements associated with each individual system are mentioned in the Staff Report, and there is no clear indication that recycled water is readily available today and going forward to supply a WGS (BAAQMD 2021).
- The Staff Report contains no mention of wastewater generation/water quality impacts leaving a key question from the Board unanswered.

The Staff Report contains unsubstantiated estimates of increased water demand, and provides only a conclusory number value for the water demand (BAAMQD 2021, page 3.4-18). There are no supporting calculations included in the Staff Report or any other documents produced by Staff in support of the Proposed Amendments,³ nor are there calculations in the documents cited as support for the water demand estimate of the WGS (i.e., the SCAQMD 2007 document cited in the AB 617 Schedule EIR). Without further substantiation, it is impossible to know if the projected water demand is accurate. Based on the estimates provided in the AB 617 Schedule EIR, approximately 1.296 MGD of additional water will be required for operation of three (3) WGS, an amount equivalent to the daily consumption of 12,000 Bay Area residents.⁴ Whether or not this demand can be fully met with recycled water is uncertain, and potable water usage may be necessary. As discussed further below, anticipated limits on water supply combined with the growth in the region make the consumption of so much water a significant impact, worthy of more detailed evaluation.

³ Available at: <https://www.baaqmd.gov/rules-and-compliance/rules/reg-6-rule-5-particulate-emissions-from-refinery-fluidized-catalytic-cracking-units>. Accessed: July 2021.

⁴ Available at: <https://bawsca.org/water/use/percapita>. Accessed: July 2021.

3. BAY AREA WATER RESOURCES

3.1 Sources of Water

The sources of water in the San Francisco Bay Area are the local streams and groundwater basins within the area and importations from streams in the Sacramento and San Joaquin River basins. In addition to potable drinking water, the Bay Area is highly dependent on the recycled water supply. Although there are eight major groundwater basins in the area, overdraft is a critical and persistent issue. Due to deficient water supply from the basins, more than two-thirds of the water supply comes from outside the region (**Figure 2**).⁵

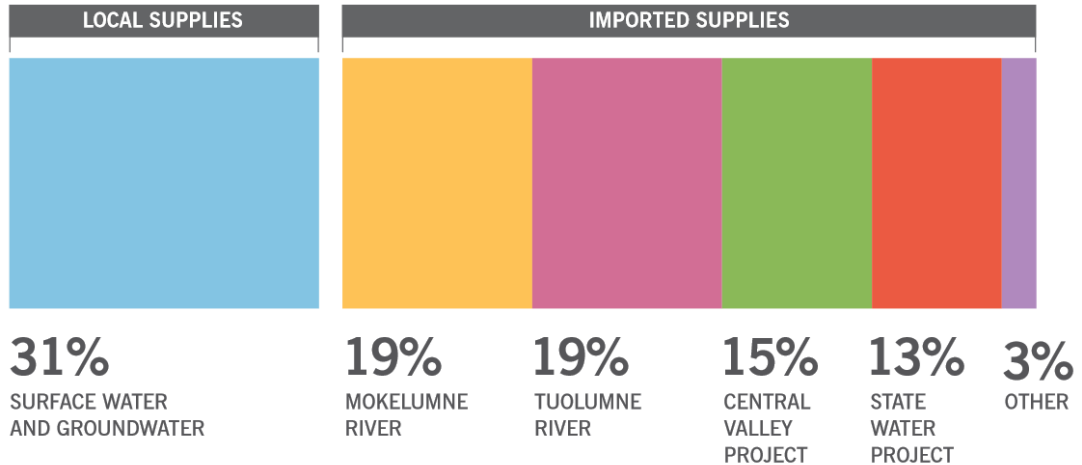


Figure 2 : Water Supply Sources in the Bay Area (Source: BAIRWMP, 2006)

The regional water system in the Bay Area provides water to millions of Bay Area residents. There are 11 water agencies that serve the majority of the water demands in the Bay Area Region (**Figure 3**). About 40% of that water comes from the Sierra Nevada snowmelt, which travels 160 miles from Yosemite National Park via rivers.⁶ The snowpack retains large amounts of water in the winter that is then released as temperatures rise in the spring and summer. Snowpack acts to delay the rate of release of water to man-made surface reservoirs into the summer when precipitation is low and water demand is high. This may impact the water supply in the summer months. Thus, the WGS that would use water 24/7 could have more significant impacts at certain times of the year.

The water is imported from the Tuolumne River basin (Hetch Hetchy system) for the San Francisco Metropolitan area, the Mokelumne River basin for the East Bay Municipal Utility District (EBMUD), the Sacramento-San Joaquin Delta via Contra Costa Canal for the Contra Costa County area, and the Cache Slough, a tributary to the Delta, for the city of Vallejo.

The Mokelumne River, originating in the western slope of Sierra Nevada, is eventually collected in the two man made reservoirs, Pardee and Camanche Reservoirs, located southwest of Sacramento. The Mokelumne River watershed provides EBMUD with

⁵ Available at: https://www.pge.com/includes/docs/pdfs/shared/edusafety/training/pec/water/map-waterdistricts_48x52_0307.pdf. Accessed: July 2021.

⁶ Available at: <https://bawsca.org/water>. Accessed: July 2021.

approximately 90 percent (%) of its water supply and supports water management features such as power generation and flood control. The water also supports necessary ecosystem functions, such as supply for local fisheries, plants, and wildlife.

The Tuolumne River also receives critical supply from the Sierra Nevada snowmelt, and the runoff supports three major reservoirs: Hetch Hetchy, Lake Lloyd, and Lake Eleanor. Water diverted from the Hetch Hetchy Reservoir supports the Hetch Hetchy Regional Water System. This provides San Francisco Public Utility Commission (SFPUC) with 85% of its water supply, serving San Francisco, Alameda, Santa Clara, and San Mateo counties.

The Sacramento and San Joaquin Rivers drain into the Sacramento-San Joaquin River Delta. Several Bay Area water agencies depend on imported water purchased from the Sacramento-San Joaquin Delta. Contra Costa Water District (CCWD) depends on the Delta to transport 75% of its water supply. Bay Area supplies are fed from the Delta into the North and South Bay Aqueducts, which delivers to Alameda, Napa, Santa Clara, and Solano counties.



Figure 3: Water Agencies in the Bay Area (Source: BAIRWMP, 2019)

Local watersheds provide an important source of supply to several Bay Area regional water agencies. For Marin Municipal Water District (MMWD), the City of Napa, and the Sonoma County Water Agency (CWA), local surface water provides over 60% of total supplies. For other agencies, local surface water supplies contribute a small but important part of their diverse water supply portfolios. For example, Contra Costa Water District (CCWD) uses water supplies from Mallard Slough and the San Joaquin River, EBMUD's secondary water supply source comes from runoff originating in local watersheds of the East Bay area, and the Alameda and Peninsula watersheds produce about 15% of the total water supply for San Francisco Public Utility Commission (SFPUC).

Groundwater is another important local supply source for many Bay Area Region agencies, including Alameda County Water District (ACWD), Bay Area Water Supply and Conservation Agency (BAWSCA) member agencies, Santa Clara Valley Water District (SCVWD), SFPUC, and Sonoma CWA. Groundwater comprises about 20% of the Bay Area region's water supply. Although groundwater supplements local water supplies throughout the Bay Area, it is most heavily utilized in Santa Clara, Napa-Sonoma, Livermore, and Petaluma and Petaluma Valley (BAIRWMP 2019).

Recycled Water

Recycled water is a critical element of the region's water supply portfolio. Recycled water provides a sustainable local water source, in addition to environmental restoration and enhancement, surface water protection, preservation of drinking water, improvement of water quality, and reduction of wastewater discharges. Recycled water provides a more sustainable water source for uses such as park and golf course irrigation, toilet flushing, and industrial uses conserving valuable drinking water.

Many Bay Area Region water agencies produce and use recycled water to supplement local water supplies, however, it is dependent on adequate wastewater supply, infrastructure to treat wastewater, and infrastructure to deliver it to users. During drought years, wastewater supply is reduced due to less runoff and water conservation, and this in turn reduces recycled water production. Also, recycled water cannot be delivered via potable water infrastructure, and expanding delivery of recycled water to new regions often requires new infrastructure and permitting.

Other Sources of Water in the Bay Area

Desalination is a developing water supply alternative for Bay Area Region water agencies, however, these supplies have a lower sustainability profile. Desalination is generally more expensive on a per-unit basis than other types of projects using a similar treatment process, such as potable reuse projects and recycled water.

Several Bay Area Region water agencies (including ACWD, CCWD, EBMUD, SCVWD, SFPUC, Solano CWA, and Zone 7) have also participated in various types of water transfers to supplement their existing water supplies. These transfer agreements may occur as short-term, one-time deals, lasting less than a year, or long-term agreements, such as options to buy excess supply in dry years for irrigation districts or agricultural suppliers (SPUR 2013). This method of water supply management does not provide new supply, it only serves to help balance the water supply amongst the agencies.

3.2 Supply and Demand

Although water supply and demand are unique to each agency, all Bay Area agencies face similar challenges relating to water supply reliability. Many challenges, including threats to baseline supplies, increasing demands, hydrologic variations, and infrastructure vulnerability, are facing the region.

Water supplies are regularly threatened by drought, increasing population, water quality impairments and new regulations on availability and usage.

Potable Water

In 2010, more than 7.1 million people relied upon the Bay Area's urban water suppliers. By 2035, that population is projected to grow by 25%. In this same time frame, projected employment growth will result in an additional 1.1 million jobs, of which only one-third will be accommodated by existing development. This combination of residential

and commercial/institutional growth will account for two-thirds of all Bay Area urban water use (SPUR 2013).

The past (2010-2020), current, and projected water demand in the Bay Area is presented in **Figure 4** below. While the data indicates that the water supply in the area is able to meet the water demand in a normal year, during a dry year or multiple dry years, the Bay Area will be unable to meet the demand. In very dry years, there will not be enough water to meet demand even at today’s levels.

The Central Valley Project (CVP) and State Water Project (SWP) deliveries vary considerably each year. To meet the additional water demand, a few districts rely on groundwater resources. That results in aquifer overdraft and subsidence issues. In addition, population growth, agricultural-to-urban land conversion, unknown future laws and regulations, and potential future climate change effects add uncertainty to future demand estimates and may increase the risk that existing facilities and infrastructure will not adequately meet demand in the future. Thus, comparing water demand and supply on a regional basis does not provide an accurate representation of supply-demand gaps at the local level. If one district has surplus supply, it cannot be assumed that the surplus water can be conveyed to fill another district’s supply-demand gap.

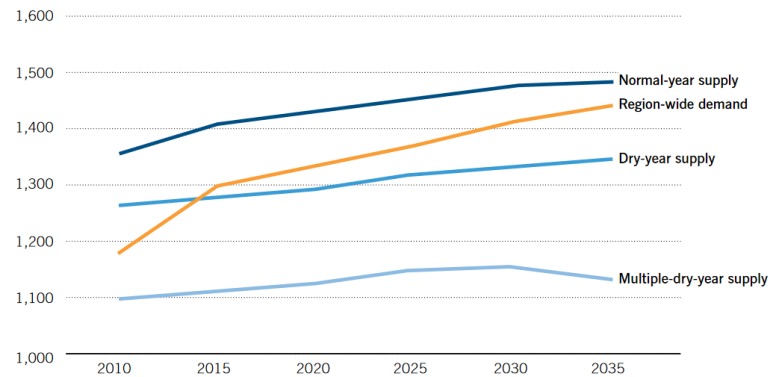


Figure 4: Current and Projected Regional Water Supply and Demand (in MGD)⁷

Recycled Water

Over 30 agencies in the Bay Area Region have developed recycled water programs to provide recycled water to their customers for a variety of uses including irrigation, commercial, industrial, agricultural, municipal, and residential. The Bay Area recycles approximately 58,000 acres feet per year (AFY), almost 10% of the wastewater effluent generated.⁸

While water agencies have goals to double the recycled water supply over the next 20 years,⁹ according to the Public Policy Institute of California, the growing prevalence of

⁷ Available at: <https://www.spur.org/publications/spur-report/2013-03-18/future-proof-water>. Accessed: July 2021.

⁸ Available at: https://www.planbayarea.org/sites/default/files/documents/2021-06/3.14_Public%20Utilities_DEIR.pdf. Accessed: July 2021.

⁹ Available at: https://bacwa.org/wp-content/uploads/2019/12/BACWA_RW_ScopingEvalPlan_20191126.pdf. Accessed: July 2021.

water conservation is expected to make wastewater for recycling less available.¹⁰ Several episodes of dry conditions and droughts in the past (including the current drought period of 2020-21) prompted the need for mandatory reduction of water usage in different Bay Area water districts.¹¹ The reduction in water usage results in less wastewater supply for the reclamation units, particularly in dry months. Even if the wastewater is available, bringing it to the existing treatment facilities often requires additional infrastructure.

In addition to the quantity of wastewater, decline in wastewater quality may also affect recycled water production in the future. For example, as households become more water-efficient, the wastewater they discharge to sewers can have higher concentrations of salts, which are not removed in most treatment processes. If this issue grows in severity, agencies may be forced to incorporate desalination into wastewater treatment, which is likely to add significant cost and complexity.¹² In some areas, recycled water project infrastructure investments are not yet economically viable when compared to other sources of water.¹³

Per the SPUR 2013 report, the survey results of 107 wastewater agencies in the Bay Area show that 85% of agencies reported reductions in influent flows to their wastewater treatment plants during the 2012-16 drought (**Figure 5**). More than 60% of agencies reported a change in the quality of influent or effluent (SPUR 2013).

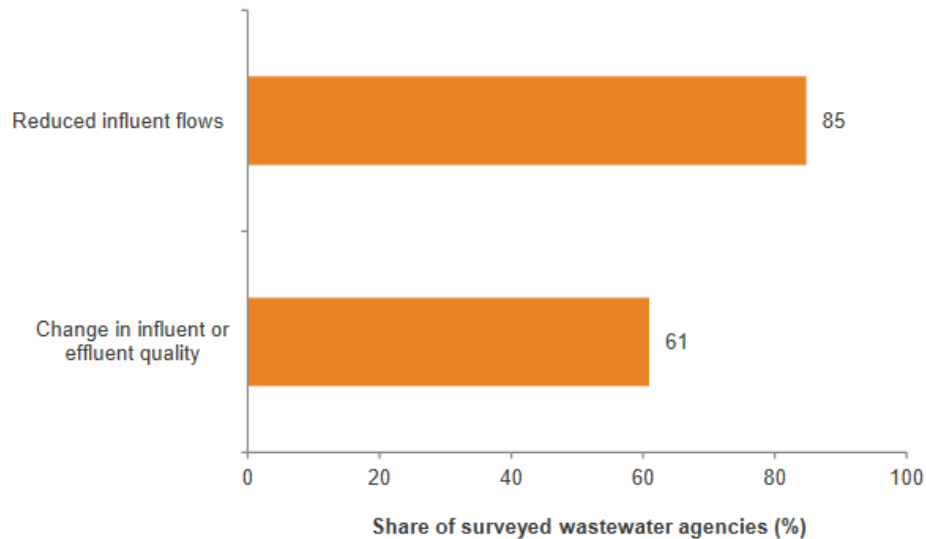


Figure 5: Declining Influent Quantity and Quality for Wastewater Agencies in the Bay Area during 2012-16 Drought¹⁴

¹⁰ Available at: <https://www.ppic.org/wp-content/uploads/managing-wastewater-in-a-changing-climate.pdf>. Accessed: July 2021.

¹¹ Available at: <https://www.sfgate.com/bayarea/article/Santa-Clara-Bay-Area-water-restrictions-drought-16235537.php>. Accessed: July 2021.

¹² Available at: <https://www.ppic.org/blog/californias-growing-demand-for-recycled-water-has-ripple-effects/>. Accessed: July 2021.

¹³ Available at: https://www.waterboards.ca.gov/rwqcb2/board_info/agendas/2020/September/7_ssr.pdf. Accessed: July 2021.

¹⁴ Available at: <https://www.ppic.org/wp-content/uploads/0419ccr-appendix.pdf>. Accessed: July 2021.

It also remains challenging for prospective recyclers to navigate the multiple agencies involved in recycled water regulations and permitting. Projects may face regulatory uncertainty in areas such as onsite reuse of non-potable water and direct potable reuse.

Technical challenges can also make it difficult to use recycled water. For example, reverse osmosis, a form of treatment technology used to filter water for high-quality reuse, produces a concentrated brine, which has disposal impediments. Recycled water in industrial applications can also cause additional mechanical degradation of equipment shortening their life or requiring increased maintenance.

4. CURRENT SOURCE AND WATER USAGE

The Proposed Amendments will create a significant additional water demand and existing recycled water supply may not be able to satisfy this demand. As a consequence, use of potable water may be required. The refineries get their water supply from various agencies based on the service area within which they are located (**Figure 6**), with three being relevant for this analysis.

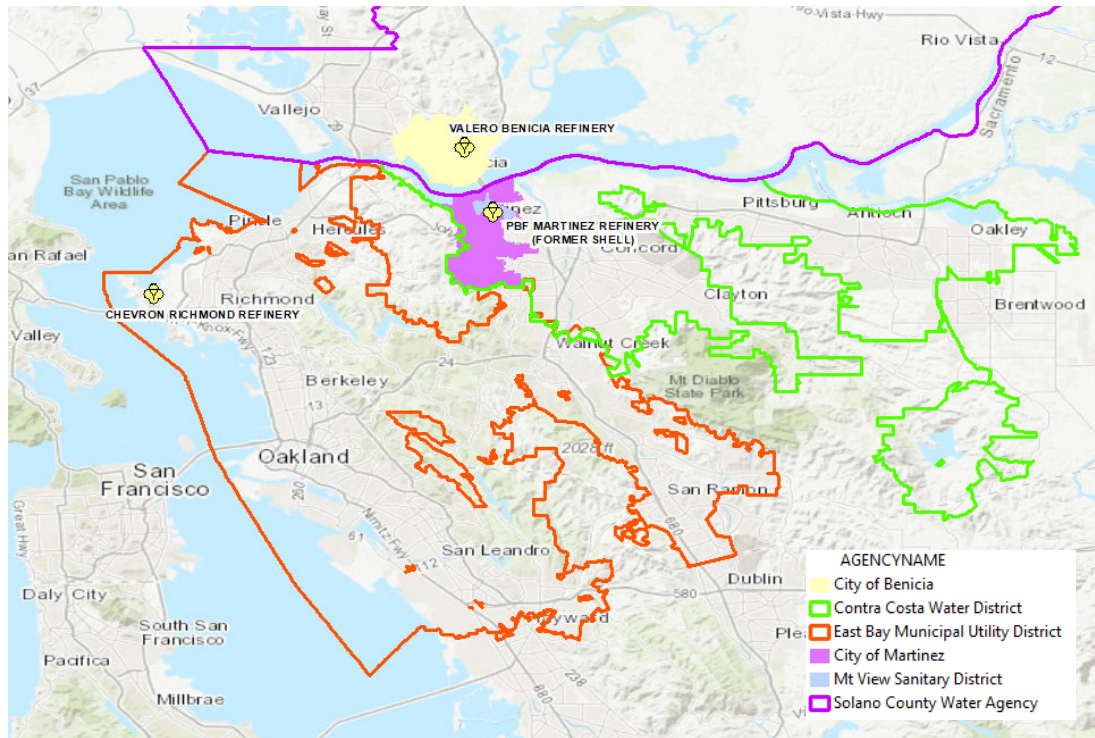


Figure 6: Location of Impacted Refineries within the Water Service Area

Below is an overview of the water supply status for the water districts where the impacted refineries are located:

City of Benicia (Valero Benicia Refinery)

The Valero Benicia Refinery is located within the service area of the City of Benicia. The City of Benicia provides potable/non-potable water service for residential, commercial, light industrial, and industrial customers within its service area. The city provides the refinery with untreated raw water which is treated by Valero’s treatment facility. The non-potable water provided to Valero represents over half of the city’s water supplies.¹⁵

The city’s water is a blended supply from the SWP and the federal Solano Project. The city has the ability to store/bank raw water in Lake Herman (City owned) and Lake Berryessa (federal Solano Project facility) and draw from those supplies as needed. In a normal, non-drought year, the SWP supplies 75 to 85% of the city’s demand and the

¹⁵ Available at: <https://www.ci.benicia.ca.us/>. Accessed: July 2021.

Solano Project supplies the remaining 15% to 25% of the demand.¹⁶ According to the city's 2020 Urban Water Management Plan (UWMP), these diverse surface water supply sources have embedded water rights and contracts that impact the monthly availability of each supply source. In other words, the monthly availability of these supplies is transient and does not guarantee the reliability of the annual supply volume. Although the city can meet the projected water demand for the next five years (2021-2025), water rights and contract limitations require the city to carefully manage its water supply portfolio to have sufficient water supply available in extended drought periods.¹⁷

Recycled Water

The city provides wastewater collection, treatment, and disposal services to customers within its service area. The city operates and maintains a 4.5 MGD wastewater treatment plant (WWTP) facility. Treated wastewater or effluent is discharged into the Carquinez Strait of the San Francisco Bay via a deep-water outfall. Recently, the city has considered treating the wastewater and potentially blending it with its raw water sources in Lake Herman. This investigation is in its the early developmental stages but could provide a long-term additional water supply.

Overall, careful consideration should be given to the water supply and availability in the future.

Contra Costa Water District (PBF Martinez Refinery)

Contra Costa Water District (CCWD) provides water service to the PBF Martinez refinery via Bollman Water Treatment Plant (WTP) facility with a capacity of 75 MGD.¹⁸ The district operates two other treatment facilities, the 50 MGD Randall-Bold WTP, and the 16.5 MGD City of Brentwood WTP. The CCWD supplies water to six municipal agencies, major industrial customers, irrigation customers, and retail treated water customers consisting primarily of residential and commercial uses.

The CCWD operates and maintains a complex system of water transmission, treatment, and storage facilities to supply both treated and untreated (raw) water to its customers. It provides treated water to approximately 200,000 customers in Clayton, Clyde, Concord, Pacheco, Port Costa, and parts of Martinez, Pleasant Hill, and Walnut Creek. In addition, CCWD provides wholesale treated water to the City of Antioch, the Golden State Water Company in Bay Point, the Diablo Water District in Oakley, and the City of Brentwood. It also sells untreated water to the cities of Antioch, Martinez, and Pittsburg, as well as to industrial and irrigation customers.¹⁹

The CCWD is almost entirely dependent upon the Delta for its water supply. CCWD's primary source of water supply is diverted from the Delta under a contract with Reclamation's CVP. Other water supply sources used within the service area include surface water from the Delta diverted under the District's and East Contra Costa

¹⁶ Available at: [https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/City_of_Benicia_2020_UWMP_-_Final_06.10.21\(1\).pdf](https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/City_of_Benicia_2020_UWMP_-_Final_06.10.21(1).pdf). Accessed: July 2021.

¹⁷ Available at: [https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/City_of_Benicia_2020_UWMP_-_Final_06.10.21\(1\).pdf](https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/City_of_Benicia_2020_UWMP_-_Final_06.10.21(1).pdf). Accessed: July 2021.

¹⁸ Available at: <https://www.ccwater.com/DocumentCenter/View/211/Bollman-Water-Treatment-Plant-in-Concord-PDF?bidId=>. Accessed: July 2021.

¹⁹ Available at: https://www.planbayarea.org/sites/default/files/documents/2021-06/3.14_Public%20Utilities_DEIR.pdf. Accessed: July 2021.

Irrigation District's (ECCID) water rights, recycled water, a minor amount of groundwater, and water transfers. The CVP contract provides for maximum delivery of 195,000 AFY of CVP supply, which is subject to reduction during water shortages including regulatory restrictions and drought. The CCWD conducted a water supply reliability assessment in which they determined they do not expect to be short on water in normal years or single dry years. However, under multiple dry-year conditions, they may experience deficits of up to 15% of demand.²⁰ The CCWD expects the demand for untreated water for industrial uses in their service area to increase from 34.9 MGD in 2025 to 39.5 MGD in 2045, further straining their water supply. With the current drought conditions, there are no mandatory restrictions, however, the district is asking customers to be cognizant of water use.

Recycled Water

Four wastewater agencies provide wastewater treatment within CCWD's existing service area and are the potential sources of recycled water: Mt. View Sanitary District (MVSD), Delta Diablo Sanitization District, Centra Contra Costa Sanitary District (Central San), and Ironhorse Sanitary District. The CCWD District has several agreements in place with wastewater agencies that provide recycled water supplies for industrial uses, wildlife enhancement, and landscape irrigation within CCWD's service area. Currently, over 10,000 AFY of recycled water is put to direct beneficial use, with up to 17,000 AFY projected to be used by 2045. The 2020 UWMP indicates that the district recycled projects could supply highly treated recycled wastewater to select industrial customers, including Martinez refinery.²¹

The availability of total recycled water for a refinery in this area is uncertain. While there may be some availability of recycled water for the installation of WGS in the future from the Central San WTP, it has not currently been clearly established as available. In addition, the refinery is located outside the current distribution network of the Central San (**Figure 7**). So, even if the water is available, there would be significant additional infrastructure needed to deliver for the recycled water supply.

In addition, the infrastructure improvements, and changes will be required for the disposal of additional wastewater generated at the refinery that will likely require treatment before disposal. Increase in wastewater generation may require the refinery to modify their National Pollution Prevention Discharge Elimination System (NPDES) permit. This should be further evaluated.

²⁰ Available at: <https://www.ccwater.com/DocumentCenter/View/9851/2020-Urban-Water-Management-Plan-Draft-PDF>. Accessed: July 2021.

²¹ Available at: <https://www.ccwater.com/DocumentCenter/View/9851/2020-Urban-Water-Management-Plan-Draft-PDF>, page 6-11. Accessed: July 2021.

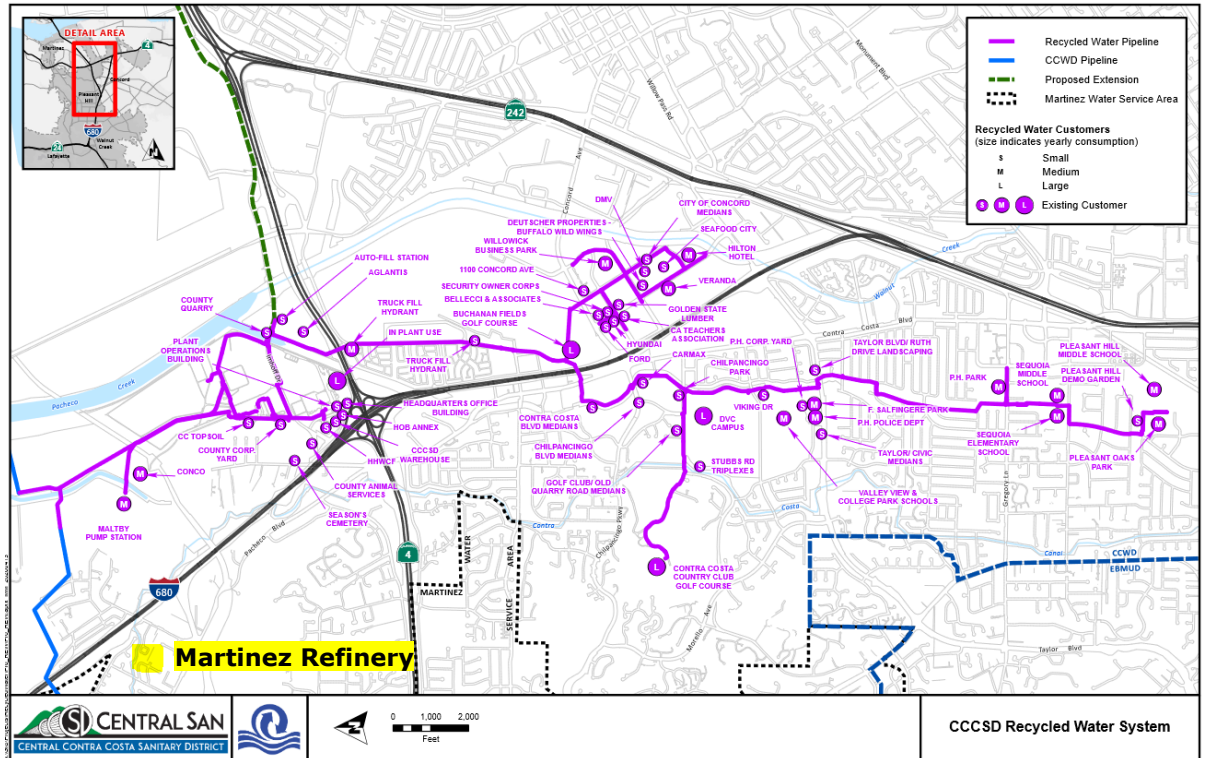


Figure 7: Recycled Water Distribution Network of Central San District²²

East Bay Municipal District (Richmond Chevron Refinery)

The East Bay Municipal Utility District (EBMUD) supplies potable/recycled water to the Chevron refinery.

Per the EBMUD 2020 UWMP, the current water demand in the district is about 180 MGD. The primary sources of raw water for EBMUD are the Mokelumne River (90%) and runoff from the protected watershed lands in the East Bay Area (10%). After treatment, water is distributed to the incorporated cities and unincorporated communities in Alameda and Contra Costa counties that EBMUD serves. The reliability of EBMUD’s water supply sources and distribution system is affected by many factors with varying degrees of impact. Droughts, water quality impacts due to wildfire, and climatic variations can adversely affect the availability of EBMUD’s water supplies. Due to ongoing drought conditions, the district has advised its customers to reduce water use by 10%. Moreover, according to the EBMUD 2020 UWMP, EBMUD may add over 300,000 customers to its service area in the next 20 years.²³ This expected population growth is projected to increase the water demand by 39 MGD by 2040 from the current usage.

Recycled Water

Chevron currently uses all of the available recycled water from EBMUD. The recycled water supply at Chevron is currently from two recycled water projects, the North

²² Available at: https://www centralsan.org/sites/main/files/file-attachments/2017_rew_map.pdf?1608753463. Accessed: July 2021.

²³ Available at: https://www ebmud.com/index.php/download_file/force/9875/1402/?UWMP_WSCP-2020-Public_Draft-FINAL-Bookmarks_v2.pdf. Accessed: July 2021.

Richmond Water Recycling Plant, and the Richmond Advanced Recycled Expansion (RARE) Water Project, operated by EBMUD.²⁴

The North Richmond Water Recycling Plant was the first industrial recycled water project for the EMBUD, and came online in 1996. This facility is designed to provide recycled water for refinery cooling systems and delivers approximately 4 MGD of recycled water to the refinery. The RARE water project came online in 2010. The RARE can currently treat 3.5 MGD of municipal wastewater and has the space to expand to 5 MGD. However, the facility cannot be expanded due to unavailability of additional wastewater.

The EBMUD has provided Chevron a letter confirming that there is no availability of additional recycled water beyond what Chevron already receives (Letter from Florence Wedington, EBMUD, to Shawn Lee, Chevron, dated June 7, 2021). Thus, the additional water will need to come from municipal drinking water supplies from EBMUD as the reclaim systems cannot supply additional recycled water.

Overall, there is a need for more substantive evaluation to get potable water, given that recycled water may not be available. Moreover, the increased use of potable water will generate wastewater and likely require treatment before disposal. The AB617 DEIR/FEIR does not adequately address what is likely to be an increased burden on the wastewater treatment systems at the refinery. The large volume of water and the particular characteristics of the new wastewater from a WGS controlling on an FCCU will likely require infrastructure improvements and changes. These would include potential environmental impacts from construction to develop such infrastructure and substantial costs in infrastructure development. It is not clear that the Staff Report has accounted for this in their evaluation

²⁴ Available at: <https://www.ebmud.com/water/recycled-water/recycled-water-master-plan/>. Accessed: July 2021.

5. CALIFORNIA DROUGHTS AND POTENTIAL IMPACT ON THE WATER RESOURCES

California’s annual water supply conditions are highly variable due to recurring droughts in the state.²⁵ In the last few decades, California experienced several episodes of drought (1976-1977, 1987- 1992, 2007-2009, 2012-2016, and 2020-2021).²⁶ **Figure 8** shows the percent area of State under drought conditions in the last two decades. In between 2014 -2016, almost 85% of the state was under severe or extreme drought conditions, and 33% of that is under exceptional drought. Currently, about 25% of the state is under exceptional drought conditions (**Figure 8**).

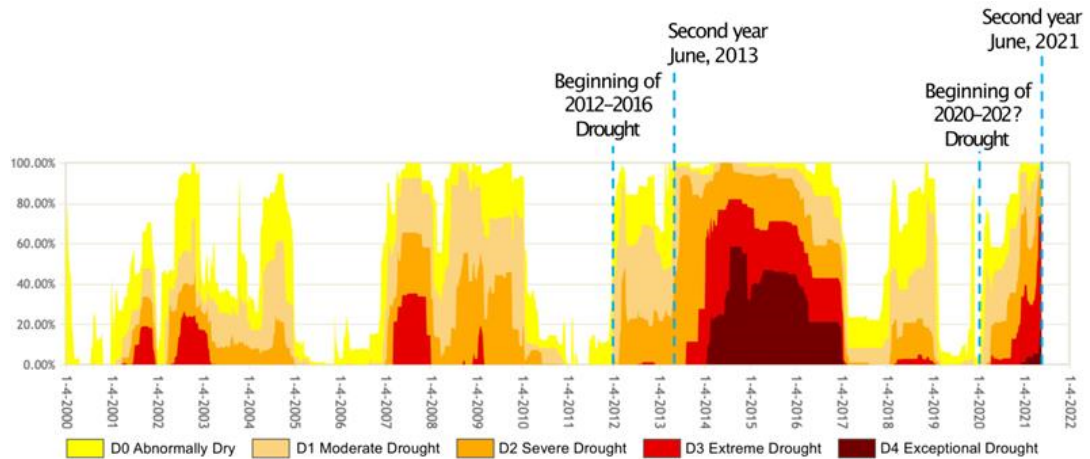


Figure 8: California’s Drought Conditions through the years²⁷

With California’s history of droughts, it is imperative to understand where the state’s water resources will be allocated in dry years. During the 2014 drought, 61% of the state’s water was allocated to the agricultural sector, 28% went to environmental uses, and 11% was for urban use²⁸ (**Figure 9**). The agriculture industry requires large volumes of water to keep yield productivity high, leading to the overwhelming majority of the state’s water being reserved for agriculture during times of drought. The environmental water resources were cut down to almost 50% during the dry year. This disparity in water use should be considered when determining the Bay Area’s ability to support added demand from the region’s refineries during times of drought.

²⁵ Available at: <https://water.ca.gov/water-basics/drought>. Accessed: July 2021.

²⁶ Available at: https://cawaterlibrary.net/wp-content/uploads/2017/05/CalSignificantDroughts_v10_int.pdf. Accessed: July 2021.

²⁷ Available at: <https://www.sfchronicle.com/local/article/2021-04-California-drought-maps-fires-16119579.php>. Accessed: July 2021.

²⁸ Department of Water Resources, California Water Plan Update 2018 (Public Review Draft).

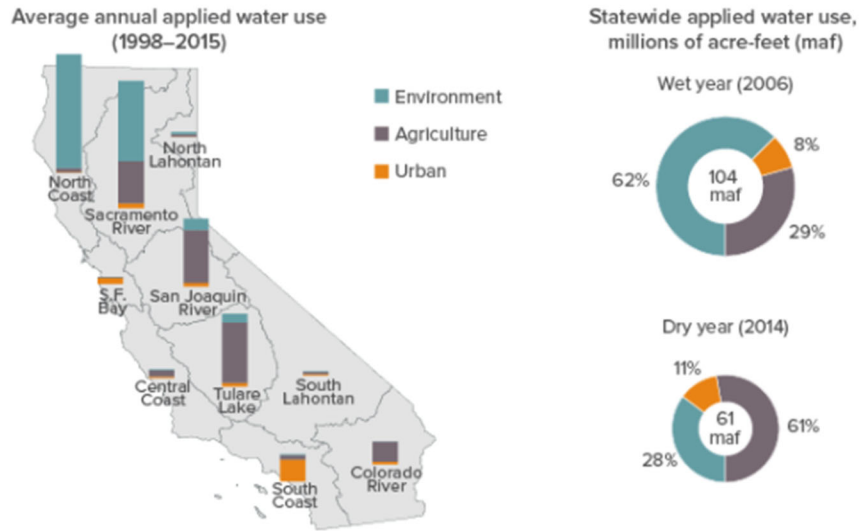


Figure 9 : Statewide Water Allocation During Wet versus Dry Year²⁹

California is frequently dealing with a lack of water, which has prompted the need for water conservation and recycled water use in the state. From June 2019 to June 2021, the water level in the Lake Oroville (state’s second largest reservoir) fell 190 feet (**Figure 10**).³⁰ These conditions may result in the need for voluntary reduction in water use throughout the Bay Area.³¹ The reduced water usage will further decrease the wastewater supply available for water treatment and reuse.

²⁹ Available at: <https://www.ppic.org/publication/water-use-in-california/>. Accessed: July 2021.

³⁰ Available at: <https://earthobservatory.nasa.gov/images/148447/california-reservoirs-reflect-deepening-drought>. Accessed: July 2021.

³¹ Available at: <https://www.nbcbayarea.com/news/local/california-drought-heres-a-look-at-bay-area-water-restrictions/2578634/>. Accessed: July 2021.



Figure 10: Satellite Images of Lake Oroville that Shows California’s Worsening Drought From 2019-2021³²

California is the most populated state in the U.S. and is expected to continue to grow. With projected increase in population, water demand is expected to grow with it. The Bay Area is expected to grow from 7.8 million residents in 2018 to 9.6 million in 2040.³³ The water demand for the Bay Area is also expected to increase by 20% between 2020 and 2035.³⁴ This increase in population, subsequent rise in water demand, and uncertainty of future water supply will require thoughtful allocation of the region’s water resources. As the need for additional water becomes more pertinent, analysis of water availability should include an assessment to ensure that a reliable water supply is available for future needs.

Although the water demand is expected to grow, the supply of potable water may become more variable according to California government analyses.³⁵ If the summers get warmer in California and the snow in the Sierra Nevada snowpack begins melting faster and earlier, the snowpack could become an unreliable method of storing water for drier periods. The California Department of Water Resources predicts that the snowpack in the Sierra Nevada’s to see a 48-65% reduction from the historical April 1 average (**Figure 11**).³⁶ This would represent a significant loss to the state’s water supply as

³² Available at: <https://earthobservatory.nasa.gov/images/148447/california-reservoirs-reflect-deepening-drought>. Accessed: July 2021.

³³ Available at: <http://files.mtc.ca.gov/library/pub/30060.pdf>, pg. 33. Accessed: July 2021.

³⁴ Available at: <https://www.spur.org/publications/urbanist-article/2013-03-07/future-water>. Accessed: July 2021.

³⁵ Available at: <https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Change-and-Water>. Accessed: July 2021.

³⁶ Available at: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf. Accessed: July 2021.

California derives roughly one-third of its water from the snowpack.³⁷ It is also important to note that all three water municipalities that service the impacted refineries in the Bay Area derive almost 70% of their water supply from the Sierra Nevada. Thus, the future variability in snowmelt should be considered when assessing the availability of water. The AB617 BARCT Schedule EIR did not include this analysis.

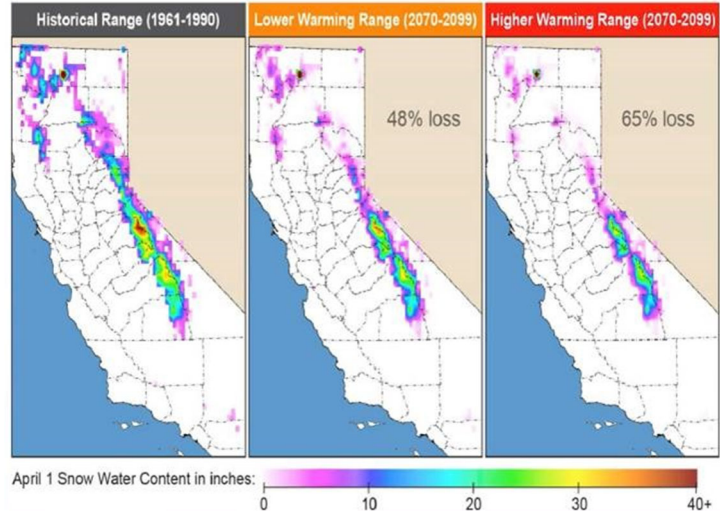


Figure 11: Historical and Projected Snowpack in California³⁸.

³⁷ Available at: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf. Accessed: July 2021.

³⁸ Available at: <https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Change-and-Water>. Accessed: July 2021.

6. KEY FINDINGS

The BAAQMD Staff Analysis supporting the Proposed Amendments do not adequately address the significant impacts related to the additional water demand of 1.296 MGD from WGS. Below are the key findings of this report regarding water supply and demand, including those areas that require further analysis:

- The water supply for the region comes from separate water districts with variable water availability. The Bay Area water supply is highly dependent on the allocation of surface water supply to the area. Surface water is allocated by the State Water Resources Control Board's Division of Drinking Water (Water Board), based on, among other factors, the drought situation and state-wide water demand. Also, the Department of Water Resources (DWR), manages distribution of water supply via aqueduct and also regulates groundwater usage. Thus, it is important to work with relevant water resource agencies and engage with local water districts as part of the Proposed Amendments rulemaking to better evaluate and disclose the impact on water supply due to air emissions control equipment.
- In light of the past and ongoing droughts in California, a thorough evaluation of the availability of potable water supply is necessary and has not been performed. The supply of potable water may become more variable due to the effects of climate change and the growing demand for water in the area caused by increasing population. It is an important regulatory decision to either fulfill the need of additional water to the refineries for WGS or to meet the basic water demands of individual households in the Bay Area.
- The Proposed Amendments did not include evaluation of the availability of recycled water. Persistent drought conditions, including the most recent (2020-21) dry conditions, prompted the need for mandatory reduction of water usage in different Bay Area water districts. The reduction in water usage results in less wastewater supply for the reclamation units, particularly in dry months. Thus, a more substantive evaluation of the availability of recycled water is necessary.
- Even if the potable/recycled water is available, bringing it to the refineries would require additional infrastructure given the volume required to support WGS units. The environmental impacts of this additional development as well as the costs associated with necessary infrastructure improvements have not been accounted for in the staff analyses.
- For each gallon of additional water usage, there will be a commensurate increase in wastewater, that will likely require treatment before disposal. The large volume of water and the particular characteristics of the new wastewater from a WGS will likely require infrastructure improvements and changes. This has not been evaluated.
- The potential increase in wastewater generation may require that facilities modify their National Pollution Prevention Discharge Elimination System (NPDES) permit, which varies from facility to facility.

7. REFERENCES

- Bay Area Air Quality Management District (BAAQMD), 2018. Appendix D: Final Environmental Impact Report –AB 617 Expedited Best Available Retrofit Control Technology (BARCT) Implementation Schedule, December 2018.
- BAAQMD, 2021. Staff Report: Proposed Amendments to Regulation 6, Rule 5: Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units, May 2021.
- Bay Area Integrated Regional Water Management Plan (BAIRWMP), October 2019. Available at: <http://bayaireairwmp.org/2019-bay-area-irwm-plan-update/>. Accessed: July 2021.
- Bay Area Water Supply & Conservation Agency (BAWSCA). Available at: <https://bawasca.org/water>. Accessed: July 2021.
- San Francisco Bay Area Planning and Urban Research Association (SPUR), 2013. Future-Proof Water: Where the Bay Area Should Get Its Water in the 21st Century. Available at: www.jstor.org/stable/resrep22934. Accessed July 2021.

EXHIBIT 3



June 7, 2021

Shawn Lee
841 Chevron Way
Office TC449
Richmond, CA 94801

Dear Shawn,

EBMUD's Richmond Advanced Recycled Expansion (RARE) Water Facility currently produces up to 3.5 million gallons per day (MGD) of recycled water for boiler feed make-up water. There is no available supply or treatment capacity at RARE to provide additional recycled water to Chevron, such as the estimated 0.4 MGD of recycled water required for the proposed wet gas scrubber. EBMUD is already using all of the wastewater supplied from West County Wastewater District to provide Chevron with recycled water from RARE and EBMUD's North Richmond Recycled Water Treatment Plant for use in cooling towers.

If you have any additional questions, you may contact Ben Glickstein at 510-671-0571 or ben.glickstein@ebmud.com

Sincerely,

A handwritten signature in cursive script that reads 'Florence Wedington'.

Florence Wedington
Senior Civil Engineer
East Bay Municipal Utility District

ATTACHMENT 2

ATTACHMENT 2

Comparison of Statements Made in 2018 Related to AB 617 and Statements Made in Rule 6-5 Rulemaking

Topic	AB 617 Expedited BARCT Implementation Schedule (2018)	Rule 6-5 Proposed Amendments (2021)
Scope of CEQA Analysis – Staff Representations	<p><u>Director Karen Mitchoff</u> (Dec. 19, 2018 Board Meeting at 2:16:45): “I just have one question, just to make it as clear as possible. One of the recommendations here is to certify the CEQA Final Environmental Impact Report. That’s on the <i>schedule</i>. Because you mentioned earlier that there’s going to be a CEQA on each one of those rules. So, what we’re voting on is just the EIR of the <i>schedule</i>, not the technicalities, if you will, of how that implementation will take place.” (Emphasis hers, based on audible observation.)</p> <p><u>Jack Broadbent</u>: “That’s correct, Director Mitchoff. I want you to be assured that the Staff, when we go through and identify explicitly what we’re going to be proposing to you in those rules, we will have a CEQA analysis associated with it. So you’ll have an opportunity to not only hear all the very detailed, there’ll be a socioeconomic impact analysis in addition to a CEQA analysis. And those are all separate.”</p> <p>-----</p> <p><u>Director Katie Rice</u> (2:19:20): [Referring to slide 12 of Staff presentation with schedule of BARCT implementation] “Just so I’m crystal clear, looking at the chart on slide 12, those purple boxes, by the time we get to the end of the purple box, it actually includes the CEQA process. <i>So the proposal is, or the projection is, that you’ll be bringing to us the CEQA document to certify and the rule to approve</i> by the time you get through those purple boxes.” (emphasis added)</p>	<p>Greg Nudd (June 2, 2021 Board Meeting): “As David [Joe] discussed, when we asked the Board to consider the Expedited BARCT Schedule, that work was required under AB 617. <i>We did a complete environmental impacts analysis for every rule that would come out of that schedule, including this one.</i> We looked very carefully at both what the impacts would be for wet gas scrubbers or for electrostatic precipitators...When the Board adopted that BARCT Schedule they also adopted a Statement of Overriding Considerations to address the significant water usage. We’ve looked very carefully at that old CEQA analysis, and there’s nothing new that we’re presenting here that wasn’t considered in that analysis. <i>So we’re going to continue to rely on that EIR</i>, pursuant to CEQA Section 21166.” (1:26:25) (emphasis added)</p> <p><u>Staff Report</u>: “The proposed amendments to Rule 6-5 do not present substantial changes in the project or circumstances or new information that would require a new analysis...Air quality impacts associated with the construction of this air pollution control equipment and water demand impacts from the operation of this control equipment are not anticipated to be substantially</p>

Topic	AB 617 Expedited BARCT Implementation Schedule (2018)	Rule 6-5 Proposed Amendments (2021)
	<p><u>Jack Broadbent</u>: “That’s correct.”</p>	<p>different than the impacts described in the EIR. No subsequent or supplemental EIR is required as there have not been substantial changes in the proposed project that would require major revisions to the EIR, there have not be [sic] substantial changes with respect to the circumstances under which the project is being undertaken that would require major revisions to the EIR, and there is no new information available that would change the analysis in the EIR.” (Rule 6-5 Staff Report at p. 45.)</p>
<p>Scope of AB 617 Schedule EIR</p>	<p><u>AB 617 Schedule EIR</u>: “To fulfill the purpose and intent of CEQA, the Air District has prepared this Environmental Impact Report (EIR) under the requirements of CEQA Guidelines §15187 to address the <i>potential environmental impacts associated with the Expedited BARCT Implementation Schedule</i>. Prior to making a decision on the adoption of the proposed project, the Air District Governing Board must review and certify the EIR as providing adequate information on the <i>potential adverse environmental impacts of implementing the proposed Expedited BARCT Implementation Schedule</i>.” (AB 617 Schedule EIR, Rule 6-5 Staff Report Appendix D, p. 1-1 of DEIR, emphasis added)</p>	<p><u>Staff Responses to Comments</u>: “Even though the decision being made in 2018 was whether to proceed with the Expedited BARCT Schedule, the state of understanding regarding future control options for particulate from FCCUs allowed the Air District to fully evaluate the impacts of these options. The result was an EIR in support of the Expedited BARCT Schedule that addressed the full range of choices at issue in the proposed amendments Rule 6-5 amendments, and that is substantively sufficient to evaluate the impacts of those choices as required by CEQA.” (Staff Responses to Comments (May 25, 2021), at p. 25)</p>
<p>Analysis of Water Demand</p>	<p><u>Director Scott Haggerty</u>: “I’m a bit concerned. Let me ask this. When we develop these rules do we work with the Regional Water Quality Control Board? I realize this was an EIR, so I’m sure. Did they comment on this? And the reason why is you know we have a rule coming in effect June of next</p>	<p><u>Staff Report</u>: “The proposed amendments to Rule 6-5 do not present substantial changes in the project or circumstances or new information that would require a new analysis...Air quality impacts associated with the construction of this</p>

Topic	AB 617 Expedited BARCT Implementation Schedule (2018)	Rule 6-5 Proposed Amendments (2021)
	<p>year in relationship to dust that requires more water usage. And now if someone uses a fluidized catalytic cracking unit [sic] there's a good chance that there's going to be a significant increase in water usage. Director Ross just touched on the wastewater issue. You know, water in California is almost more valuable than oil. I'm just curious you know, when we look at these, are we taking in the fact that this may not be the best way to go? And what happens then, if the fluidized catalytic cracking unit [sic] is the way to go, then where do we go from there?"</p> <p><u>Jack Broadbent</u>: "You can think of this as a programmatic EIR for all the potential rules are going to be put forth for your consideration that we are calling BARCT. But <i>there will be a separate CEQA analysis for each and every single one of them as they are brought forward. That's when we're going to do the more detailed impacts on water and land and other types of environmental impacts.</i> And so, I do know that we reached out to water quality agencies, and that's just part of this normal process, but <i>I do know that there's also going to be a more detailed analysis subsequently,</i> if that helps you." (1:51:28, emphasis added)</p> <p>-----</p> <p><u>Staff Report</u>: "Additional testing and study of the FCCUs and CO boilers are likely necessary to properly characterize condensable PM emissions. This further study would be expected to inform the evaluation of efficacy, feasibility, and cost-effectiveness of various potential control options. Potential controls involving ESP improvements or additional capacity would need to be evaluated for costs and space constraints, and the feasibility of achieving the ammonia slip</p>	<p>air pollution control equipment and water demand impacts from the operation of this control equipment are not anticipated to be substantially different than the impacts described in the EIR. No subsequent or supplemental EIR is required as there have not been substantial changes in the proposed project that would require major revisions to the EIR, there have not be [sic] substantial changes with respect to the circumstances under which the project is being undertaken that would require major revisions to the EIR, and there is no new information available that would change the analysis in the EIR." (Rule 6-5 Staff Report at p. 45.)</p>

Topic	AB 617 Expedited BARCT Implementation Schedule (2018)	Rule 6-5 Proposed Amendments (2021)
	<p>limit would need to be analyzed on a site-specific basis. <i>Potential controls involving wet gas scrubbing would also need to be evaluated for other potential environmental impacts, as wet gas scrubbers may require substantial water usage.</i>” (AB 617 Expedited BARCT Implementation Schedule, Final Staff Report, Attachment A: <i>Scope Papers for Potential Rule Development Projects in Expedited BARCT Implementation Schedule, Fluidized Catalytic Crackers and CO Boilers – Rule Development Project Scope</i>, p. 3 (emphasis added))</p>	
Use of Recycled versus Fresh Water	<p><u>Director Scott Haggerty</u>: [...] “I guess a follow up question that I would ask ...Do we look at, when we do this type of technology, that we use purple pipe water? Do we require, could they use recycled water?”</p> <p><u>Jack Broadbent</u>: “That was the point that Mr. Joe was making before, is as we get deeper into looking at this process and understanding what the available technologies are, it’s possible that that might be a solution. It’s also possible it won’t be because of the chemistry in the various streams. But we will look at that, yeah. <i>That’s exactly the kind of thing that goes into the further development of the rule.</i>” (emphasis added)</p> <p>-----</p> <p><u>Director Karen Mitchoff</u> (1:39:10): “Can nonpotable water be used for the cleaning, and/or does it become nonpotable water after the cleaning? What I’m trying to do is look at not utilizing fresh water resources unless we absolutely have to, and how that all comes together.”</p>	<p><u>Staff Report</u>: “In addition to these design and technology considerations, water demand requirements can be affected by the availability and use of water supplies other than fresh water, such as reclaimed and/or recycled water. Any other types of water used would still need to meet specific water quality standards required by the individual system design, as wet gas scrubbing equipment may be susceptible to water quality-related issues.... Therefore, the use of these other types of water stream would be dependent on the specific availability and treatment/infrastructure requirements associated with each individual system.” (Staff Report at p. 13)</p> <p><i>[This is the extent of the discussion of whether recycled water could be used in WGS in the Staff Report; it is no more detailed than what Staff said to the Board at the Dec. 2018 meeting. Director Mitchoff specifically asked for this issue to be addressed in Staff Reports.]</i></p>

Topic	AB 617 Expedited BARCT Implementation Schedule (2018)	Rule 6-5 Proposed Amendments (2021)
	<p><u>Greg Nudd</u>: “We have looked at the potential for using treated water rather than potable water in the wet scrubbers. There are some potential issues with the chemical reaction. So, it’s unclear at this point whether we’d be able to use re-used water.”</p> <p><u>Mitchoff</u>: “When will it become clear?”</p> <p><u>Nudd</u>: “Well, as David [Joe] pointed out, we don’t know that the end result of this rulemaking is going to be that we require wet scrubbers. There are other ways to address these emissions. <i>And as we continue with the rulemaking process and redo that more detailed environmental review based on the findings of the rulemaking, we’ll look at the issue of reusable water in that context at that time.</i>” (emphasis added)</p> <p><u>Mitchoff</u>: “Thank you. <i>And if you’ll just make sure you put a star by it, that’s one of my number one issues that I’d like to be highlighted in Staff Reports.</i>” (emphasis added)</p>	
Engaging Local Water Districts	<p><u>Director Scott Haggerty</u>: “I think that we would be better off also engaging local water districts that are responsible for the aquifer, because they would probably want to be more involved, to be very honest. They would be like a local elected official down in it, as opposed to the state kind of looking at the more broader view, so I would just suggest that we look at those water districts that are responsible for aquifers. Just a thought.”</p> <p><u>Broadbent</u>: “Director Haggerty, <i>we’ll just make sure for the Board’s sake, we’ll take this as direction as we move forward on the rulemaking for each of these.</i>” (emphasis added)</p>	It does not appear that EBMUD or any other local water utility was engaged in the Rule 6-5 Proposed Amendments rulemaking. Further, EBMUD has provided Chevron a letter confirming that there is no availability of additional recycled water beyond what Chevron already receives. (Letter from Florence Wedington, EBMUD, to Shawn Lee, Chevron, dated June 7, 2021.)

Topic	AB 617 Expedited BARCT Implementation Schedule (2018)	Rule 6-5 Proposed Amendments (2021)
Analysis of Wastewater Treatment	<p><u>Director Mark Ross</u> (1:47:45) “First, on the scrubbers, the wastewater that comes from a wet scrubber. How difficult is that to treat, and how energy intensive is the treatment of that water. I know you’re going to have different scrubbers and there could be different answers.”</p> <p><u>Gregg Nudd</u>: “It depends on a lot of things. Depends on the waste stream, depends on the scrubber design, it depends on the existing capacity of the facility’s wastewater treatment system. A lot of the refineries already have wastewater treatment systems. There’s some controversy, as we work through this process about the extent to which those existing wastewater treatment systems can be used to address the scrubber water at the refineries. The cement plant is a little bit of a different problem in terms of their wastewater treatment system. <i>That will be something we will have to address in the context of the rulemaking.</i> But our assessment is that there wasn’t a significant impact on wastewater for the purposes of the EIR. And nobody brought out, we didn’t receive any comments that provided evidence to the contrary.” (emphasis added)</p> <p>-----</p> <p><u>AB 617 Schedule EIR</u>: “Most air pollution control equipment does not use water or generate wastewater. However, <i>additional water demand and wastewater generation impacts are expected to result from the operation of wet gas scrubbers</i> and/or wet ESPs, which may be used to control refinery FCCUs and coke calciners, and water to make the lime slurry to control emissions from the cement kiln. [...]</p> <p>Water quality impacts from installing <i>most types of air pollution control equipment</i> that use water as part of the</p>	<p>The AB 617 Schedule EIR concluded there would be no significant impacts on water quality because most air pollution control equipment does not generate wastewater. In that same section, the EIR acknowledges that wet gas scrubbers <i>do</i> have the potential for wastewater generation impacts.</p> <p>The Rule 6-5 Staff Report contains no mention whatsoever of wastewater generation/water quality impacts. Such impacts were not analyzed in either the AB 617 Schedule EIR nor the Rule 6-5 Staff Report.</p>

Topic	AB 617 Expedited BARCT Implementation Schedule (2018)	Rule 6-5 Proposed Amendments (2021)
	control process would not exceed applicable water quality significance thresholds and, therefore, are concluded to be less than significant.” (Section 1.4.3.2, p. 1-11 of DEIR, emphasis added)	