

May 8, 2024

California Regional Water Quality Control Board  
San Francisco Bay Region  
John Madigan  
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*Re: Phillips 66 Company, Rodeo Renewable Energy Complex NPDES Permit CA0005053;  
Tentative Order R2-2024-00XX*

Dear Chair Strauss-Hacker and Members of the Board:

San Francisco Baykeeper (“Baykeeper”) submits the following comments regarding Proposed Order R2-2024-XXXX, NPDES Permit CA0005053 (“Proposed Permit”) for Phillips 66 Company (“Discharger”) for the Rodeo Renewable Energy Complex (“Facility”). Baykeeper submits these comments on behalf of our approximately 5,000 members and supporters who live and recreate in and around the San Francisco Bay Area and its watershed. Baykeeper’s mission is to defend San Francisco Bay from the biggest threats and hold polluters and government agencies accountable to create healthy communities and help wildlife thrive. Our team of scientists and lawyers investigate pollution via aerial and water patrols, strengthen regulations through science and policy advocacy, and enforce environmental laws on behalf of the public.

Baykeeper has long worked to reduce selenium pollution in San Francisco Bay, including litigating against refineries to enforce selenium discharge limits, advocating for the adoption of a Total Maximum Daily Load (“TMDL”) for selenium in San Francisco Bay, and commenting before this Board on various iterations of the Bay Plan, Triennial Reviews, refinery NPDES permits, and other significant sources of selenium. In July 2021, Baykeeper submitted comments on the Board’s Triennial Review urging the Board to “rapidly establish new, science-based selenium objectives that adequately protect designated beneficial uses, and then prioritize the establishment of protective selenium loads.” See Enclosure A, Baykeeper Letter to Regional Board, July 8, 2021. Baykeeper has continued to advocate for selenium reductions from the TMDL maximums.<sup>1</sup>

1 North San Francisco Bay, including San Pablo Bay, is impaired for selenium. See Fact Sheet at F-16. Substantial new scientific information, published since adoption of the TMDL, demonstrates that the TMDL’s limits are not protective of fish and wildlife.<sup>2</sup> Despite this information, the Regional Board has not revisited the TMDL, and has thus far refused to go beyond the maximum limits in implementing the TMDL through refinery NPDES permits, treating existing selenium discharge loads as acceptable. But the evidence demonstrates these existing loads are harmful, and that existing concentrations of selenium harm fish and wildlife and their associated

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<sup>1</sup> See also Enclosure B, Baykeeper Comments re Martinez Refinery, October 3, 2022, at pp. 3-4; Enclosure C, Baykeeper Comments re Chevron Refinery, September 15, 2023 at pp. 3-4.

<sup>2</sup> See, e.g., Enclosure D, Stewart, et al. (2019); Enclosure E, Johnson, et al. (2020); Enclosure F, NMFS (2022); Enclosure G, Rodgers, et al. (2020).

beneficial uses. Selenium pollution is harming Sacramento Splittail, Green Sturgeon, and White Sturgeon, putting rare fish species at further risk and negatively impacting the Bay's recreational and subsistence fisheries. Protection of these beneficial uses depends on the productivity of these fish populations and the body burden of toxins in fish that are consumed. Currently, the TMDL and this Board's implementation of it fail to protect fish, people, and beneficial uses of water.

2 In the face of selenium impairment and existing and ongoing harms to fish, wildlife, and beneficial uses, the renewal of the Proposed Permit presents the Regional Board with an opportunity to address selenium pollution and decrease allowed discharges. Instead, in the Proposed Permit, the Regional Board predetermines that there is no need for selenium removal from the Facility's wastewater, allowing ongoing discharges of selenium into selenium impaired waters that could be prevented or reduced through implementation of existing control technologies that have operated at the Facility for over a decade. The determination that no further selenium removal will be needed in the future is also based on conclusory and vague assertions. Without evidence to demonstrate the quantity and character of future selenium discharges, it is arbitrary to determine that such discharges are permissible in the future.

2 The Regional Board should direct staff to amend the Proposed Permit to require continued use of the Selenium Removal Plant to pretreat all wastewater discharges from the Facility which contain selenium. That requirement should remain in effect unless or until the Facility can demonstrate through monitoring results that its effluent contains zero selenium, such that there is no pollution benefit from continuing to utilize the Selenium Removal Plant.

2 Fact Sheet F-5 explains the decommissioning of the Selenium Removal Plant. As the Proposed Permit explains, the Selenium Removal Plant was used to "further pretreat[]" the Facility's stripped sour water because it contained "most of the selenium in the Facility's wastewater." According to the Proposed Permit, because "renewable feedstocks" are "expected to contain much less selenium" than the crude oil historically refined at the Facility, the Selenium Removal Plant will be decommissioned within the first year of refining only renewable feedstocks. This may be done once "operational experience shows [the Selenium Removal Plant] is no longer needed," Fact Sheet F-5, and explains that this requires the discharger to comply with Provision 6.3.4.7.

2 That Provision states that the Selenium Removal Plant can be shut down if "selenium in the Facility's wastewater no longer requires treatment . . . to comply with permit requirements." Proposed Permit section 6.3.4.7; *see also* Fact Sheet F-51, section 6.3.4.7 ("shutting down the Selenium Removal Plant will not cause non-compliance with this Order's selenium discharge requirements").

2 And the Permit's selenium discharge requirements, flowing from the inadequate TMDL, allow for nearly 100 kg per year of selenium, *because* this was the amount of selenium discharged from crude oil refining wastewater between 2000 and 2012. Since adoption of the TMDL, the Board has viewed its role as to ensure that the refineries are allowed to continue to discharge the same amount of selenium they did that set the TMDL limit.

2 Thus, so long as the assumption that the Facility’s new feedstocks will result in less selenium in the Facility’s wastewater is true, the Proposed Permit eliminates any obligation to treat, avoid, or reduce whatever selenium discharges remain. This is inconsistent with the Clean Water Act, especially where selenium discharges to selenium impaired waters continue to exist.

2 The Clean Water Act’s goal is to eliminate discharges of pollutants to waters of the United States (a goal that is decades overdue). It does so by forcing technology and action, demanding identification and implementation of control technologies to remove pollutants (especially toxic pollutants like selenium) from wastewater discharges.

2 Thus, if selenium is present in the effluent after it has gone through the existing treatment, to ensure that waters which are impaired for selenium do not suffer ongoing and future impairments, the law requires implementation of BAT. Here, as demonstrated by over a decade of practice at the Facility, the required BAT is, *at minimum*, to further pretreat that effluent to reduce or eliminate the selenium discharges. Despite this, the Proposed Permit both assumes those discharges will continue to exist *and* eliminates the legally required BAT which would reduce or eliminate them.

3 The only explanation of future selenium loads comes from the single sentence that “renewable feedstocks are expected to contain much less selenium than the crude oil the Facility previously refined.” Fact Sheet F-5. But the Proposed Permit does not define “renewable feedstocks,” quantify in any way what “much less selenium” means, or even attempt to determine whether further treatment of wastewater containing selenium (even much less of it) should still receive further treatment at the Selenium Removal Plant.

3 On the other hand, the Proposed Permit plainly contemplates a future where selenium discharges are not “zero.” Fact Sheet section 4.3.4.2.3 of the Fact Sheet acknowledges that selenium discharge from the facility is “expected” to be “less” than 2000 through 2012 but does not predict zero discharge. That section also explains that Board may impose a lower limit “when selenium discharge data” for future operations becomes available. This acknowledgement, that selenium discharges, while “expect[ed]” to be “less” than before, are likely to occur.

3 Relatedly, the Proposed Permit acknowledges that these discharges also need to be monitored. *See, e.g.*, Fact Sheet 7.2, Table F-14. The required monitoring includes weekly and annual monitoring of influent and effluent for selenium loads. Given that the Facility has ceased processing crude oil, this would be unnecessary if there were *evidence* that selenium discharges would be zero in the future.

2 In the face of assumed future selenium discharges, the Proposed Permit then predetermines that the refinery can decommission the best available technology to treat selenium, even though this technology is already in use. This gets the Clean Water Act backwards. And even assuming that the expectation of “much” less selenium is correct, permitting the elimination of control technologies despite ongoing discharges of the pollutants they are designed (and do) control, is prohibited backsliding. The Board (or Discharger’s) assumption that the total selenium

load is expected to decrease does not provide a sufficient justification for the backsliding allowed by decommissioning of the Selenium Removal Plant.

3 Beyond this, the basis for the predetermination is arbitrary and unsupported by any specific evidence or information. The Proposed Permit says decommissioning of the Selenium Removal Plant is appropriate because selenium discharges will be “much less.” But the Facility previously discharged 93 Kg/year of selenium.

3 In this context, the vague assumption of “much less” cannot support any future specific determination about whether BAT should be maintained at the Facility. Staff does not explain what “much less” selenium means in this context. A 20 kg per year reduction might be considered “much less” selenium but would leave the Facility discharging nearly 75 kg of selenium each year that could be treated and removed if the Selenium Removal Plant remained operational. In such a scenario, the Clean Water Act requires additional treatment and reductions through BAT. Eliminating these without evidence based on an unquantified assumption of “much less” is arbitrary and inconsistent with the law.

4 Finally, in considering this Proposed Permit, as well as the selenium TMDL, and other regulatory processes related to selenium pollution in San Francisco Bay, we also note that Baykeeper, with partners, recently petitioned to have White Sturgeon listed as a protected species under the California and federal Endangered Species Acts; the Bay’s population of Green Sturgeon are already federally listed as threatened. As the literature demonstrates, selenium is a significant risk to the Bay’s sturgeon populations. In March 2024, the California Department of Fish and Wildlife recommended to the Fish and Game Commission that Baykeeper’s petition to list White Sturgeon merited further evaluation. *See* CDFW (2024).

4 The Bay’s fish and fisheries and their related beneficial uses are in peril and are not being reasonably protected. Allowing continued selenium discharges to selenium impaired waters further harms them. And continuing to ignore the best available science—that current selenium levels are harmful and must be reduced—by treating an outdated TMDL as the most the Board can do or waiting for indefinitely delayed EPA rules to force the Board into action is not consistent with this Board’s obligations under the Clean Water Act nor with rational, evidence-based, decision-making.

2 We respectfully request that the Regional Board direct staff to amend the Proposed Permit to ensure that the Discharger is required to use its existing technology for selenium removal, rather than pre-judge that future selenium discharges into selenium-impaired waters are acceptable.

Regards,



Eric Buescher  
Managing Attorney  
San Francisco Baykeeper

Enclosures

- A. Baykeeper Comment Letter dated July 8, 2021.
- B. Baykeeper Comment Letter dated October 3, 2022.
- C. Baykeeper Comment Letter dated September 15, 2023.
- D. A. Robin Stewart, Frederick Feyrer, and Rachel Johnson, *Resolving selenium exposure risk: Spatial, temporal, and tissue-specific variability of an endemic fish in a large, dynamic estuary*, Elsevier, 2019.
- E. Rachel Cathleen Johnson, A. Robin Stewart, Karin E. Limburg, Rong Huang, Dennis Cocherell, and Frederick Feyrer, *Lifetime Chronicles of selenium Exposure Linked to Deformities in an Imperiled Migratory Fish*, Environmental Science and Technology, Feb. 2020.
- F. National Marine Fisheries Service, *Southern Distinct Population Segment of North American Green Sturgeon (Acipenser medirostris), Five-Year Review and Summary*, 2022.
- G. Essie M Rodgers, Jamilynn B Poletto, Daniel F Gomez Isaza, Joel P Van Eenennaam, Richard E Connon, Anne E Todgham, Alicia Seesholtz, Joe C Heublein, Joseph J Cech, John T Kelly, Nann A Fangué, *Integrating physiological data with the conservation and management of fishes: a meta-analytical review using the threatened green sturgeon (Acipenser medirostris)*, Conservation Physiology, Volume 7, Issue 1, 2019.
- H. California Department of Fish and Wildlife (CDFW), *Report to the Fish and Game Commission. Evaluation of the petition from San Francisco Baykeeper, The Bay Institute, Restore the Delta, and California Sportfishing Protection Alliance to list White Sturgeon (Acipenser transmontanus) as threatened under the California Endangered Species Act*, March 2024.