Appendix C.2

Areas of Controversy—Potential Air Quality Impacts From Increased Use of Light Sweet Crudes

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Areas of Controversy – Potential Air Quality Impacts from Increased Use of Light Sweet Crudes

During public review of the IS/MND, several commenters expressed concern that, in the short term, the CBR Project could result in the increased use of light crudes such as Bakken at the Valero Benicia Refinery, thereby causing an increase in the emission of volatile organic compounds (VOCs) from storage tanks, pumps, compressors, valves, and connectors at the Refinery.

The City has considered this issue carefully, and reached the following conclusions.

(1) Once the Project is constructed and operational, Valero may well purchase large amounts of light sweet North American crudes. In fact, this is Valero's stated plan.

(2) If Valero were to purchase large amounts of light sweet North American crudes, this would not cause an increase in VOC emissions because (a) Valero must blend crude feedstocks to a narrow range of weight and sulfur content before processing them, and (b) therefore, the average weight and sulfur content of crudes delivered to the Refinery will remain the same. In other words, any deliveries of light North American crudes by rail would simply replace the delivery of other light crudes by ship.

(3) Even if the average crudes purchased, and blends processed, became significantly lighter as a result of the Project, there would still be no increase in fugitive VOC emissions. There is no relationship between the weight of a particular crude oil and the amount of fugitive emissions released from equipment containing that crude oil.

(4) Even if VOC emissions were to increase based on Valero's purchase of light North American crudes, any such emissions increases would properly be considered part of the baseline because the baseline includes the full scope of operations allowed under existing permits that were issued based upon prior CEQA review.

Valero has publicly stated that, when the Project is constructed and operational, Valero plans to purchase relatively light sweet North American crudes. According to Valero, the North American crudes will be "Alaskan North Slope (ANS) look-alikes or sweeter[1]," and will replace similar crudes that are currently delivered by ship.

[1] Valero Benicia Refinery, Response to BAAQMD 3/20/2013 Project Questions, April 11, 2013.

As explained in Chapter 3, *Project Description*, the Refinery's configuration imposes certain constraints on Valero's ability to process crude oil into products. One of the most important constraints is the fact that the crude to be processed must weigh between roughly 20° and 36° API gravity, and contain between 0.4%-1.9% sulfur. Moreover, actual practice shows that the optimum range is even narrower. Over a recent three year period at the Refinery, a substantial majority of crude blends processed ranged between 24° and 29° API gravity, and had a sulfur content ranging from 0.08%-1.6%.

It follows that the average weight and sulfur content of the crude feedstocks that Valero purchases over any given time (1) *must* also fall within the narrow ranges of 20° - 36° API gravity and 0.4%-1.9% sulfur content, and (2) *likely* will fall within the even narrower ranges of 24° - 39° API gravity, and 0.08%-1.6% sulfur content. To the extent that Valero purchases light sweet North American crudes, those purchases must be offset by the purchase of heavier more sour crudes in order to maintain the desired blend. Thus, the Refinery's VOC emissions will remain the same, including any emissions from crudes as they are delivered and crude blends that are actually processed.

Even if the average crudes purchased and processed by the Refinery became lighter, moreover, this would not cause an increase in fugitive VOC emissions from Refinery equipment. The amount of fugitive emissions from a piece of equipment is a function of the mechanical integrity of the equipment and the pressure applied to its contents. The weight of the crude oil is not a factor.

Finally, even if one assumed that Valero will purchase 70,000 barrels per day of light sweet North American crude, and the crudes delivered and processed became substantially lighter, any resulting increase in emissions would be within the baseline for operational air quality impacts.

Public Resources Code Section 21166 and CEQA Guidelines Section 15162 strictly limit the ability of a lead agency to require additional CEQA review of a project that has already undergone CEQA review. Thus, as the courts have recognized, when an applicant proposes to modify a previously approved project, the baseline includes the full scope of operations previously approved -- – regardless of whether the project is operating at maximum capacity when CEQA review commenced. (*Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4th 310, 326; *Fairview Neighbors v. County of Ventura* (1999) 70 Cal.App.4th 238, 242-3;, *supra*, 70 Cal.App.4th at 241; *Temecula Band of Luiseno Mission Indians v. Rancho California Water District* (1996) 43 Cal.App.4th 425, 437-38'; *Benton v. Board of* Supervisors (1991) 226 Cal.App.3d 1467, 1477-84;)

In *Fairview Neighbors*, for example, the operator of a mine applied to renew its conditional use permit in the early 1990's. (*Fairview Neighbors v. Ventura*, *supra*, 70 Cal.App.4th at 241.) A previous conditional use permit, approved in 1976, allowed the facility to mine 1.8 million tons of aggregate, which could generate 810 truck trips per day. (*Id*. at 240-41.) In 1994 when the mine filed its application, the mine was operating at less than permitted capacity, such that the volume of truck traffic was significantly less than 810 truck trips per day. The court held that the appropriate baseline for truck traffic was the amount permitted under the 1976 conditional use

permit, 810 trips per day, notwithstanding the fact that the facility was operating at less than the fully permitted capacity when the county commenced CEQA review. (*Id*. at 242.) In reaching this conclusion, the court noted that the use permit had undergone CEQA review in the past. (*Id*. at 243.)

Here, as required by the federal and California Clean Air Acts, Valero holds permits for all of the Refinery's process equipment. Valero also holds a use permit from the City. The City and the Bay Area Air Quality Management District (BAAQMD) issued these permits based on the environmental impact report (EIR) for the Valero Improvement Project (VIP) prepared and certified by the City in 2003. The baseline includes the full scope of operations allowed under these permits.

In particular, the baseline includes the permitted operation of the Refinery's eight crude oil storage tanks (storage tanks S-57 through S-62, S-1047, and S-1048). In connection with the VIP, the BAAQMD issued permits based on the City's EIR. The permits include a combined limit on the material throughput in the tank system as a whole – 171.5 thousand barrels per day (based on an annual daily average), or 62.6 million barrels per year. The permits do not place any restrictions on the weight of crude oil to be stored in the tanks. Thus, the full scope of permitted operations includes the storage of any weight crude oil in the tanks – no matter how light – as long as Valero does exceed the combined throughput limit. The Project would not increase the throughput limit. Thus, even if the Project were to cause an increase in VOC emissions from storage tanks, any such increase would be considered part of the baseline conditions.

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