

Kevin Oei

From: (REDACTED)
Sent: Thursday, December 15, 2022 5:18 PM
To: CommentsP66RodeoRenewed
Subject: UPDATED: ADDED one reference (1b) - Fwd: Charles Davidson public comment to BAAQMD regarding the Phillips 66 Refinery Rodeo Renewed Project's impacts on residents located within 1,000 feet of the project wastewater unit - (REDACTED) DECEMBE...
Attachments: Charles Davidson (REDACTED) DECEMBER 15th public comment to BAAQMD regarding the Phillips 66 Refinery Rodeo Renewed Project's impacts on residents located within 1,000 feet of the project wastewater unit.docx; PastedGraphic-1.tiff; PastedGraphic-2.tiff

You don't often get email from (REDACTED). [Learn why this is important](#)

CAUTION: This email originated from outside of the BAAQMD network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

ADDED REFERENCE: 1b) Climate-critical S.F. plant unleashing 'gut-pinching' odors in Bayview. Jessica Wolfrom | Examiner (Dec 8, 2022) https://www.sfexaminer.com/news/climate_change/how-company-key-to-climate-change-fight-harms-sf-residents/article_96535584-7672-11ed-9d9f-fb89db674837.html

Begin forwarded message:

From: (REDACTED)
Subject: Charles Davidson public comment to BAAQMD regarding the Phillips 66 Refinery Rodeo Renewed Project's impacts on residents located within 1,000 feet of the project wastewater unit - (REDACTED) DECEMBER 15th 2022
Date: December 15, 2022 at 4:59:15 PM PST
To: commentsp66rodeorenewed@baaqmd.gov

Re: Public comment to BAAQMD regarding the Phillips 66 Refinery Rodeo Renewed Project's impacts on residents located within 1,000 feet of the project wastewater unit

From: Charles Davidson (REDACTED) December 15th
2022

I am commenting to the Bay Area Air District (BAAQMD) regarding the impacts of the Phillips 66's Rodeo Renewed Project upon residents of housing which is located within 1,000 feet of any refinery unit involved in the project.

As part of my public comment, I have included an annotated Google Earth map which shows a total of 12 separate multi-family residential apartment buildings in Bayo Vista (which are all section 8 housing) which fall into that category. The involved Phillips 66 unit located nearest to Bayo Vista (\leq 1,000 feet) is the existing wastewater (treatment) plant, which is a part of the planned (nearly \$1 billion) project and is shown on the maps, included below.

Odor issues are a likely concern for the residents within Bay Vista who live near the wastewater treatment plant containing residues from the cleaning of the project's raw biofuel oil feedstock used to make renewable diesel and may include significant amounts of oxidized rancid fats, oils and greases (i.e. FOGs). Historically, odor complaints are not uncommon at animal rendering plants. Odor complaints have already occurred at a California biodiesel refinery (1a and 1b) and are more likely to occur at a refinery biofuels project the size of the Rodeo Renewed Project (i.e., at 67,000 barrels per day capacity).

Lipid oxidation is perhaps the primary pathway for odorous complaints from a biofuels refinery, but also possibly ammonia derived from protein breakdown products and other odors. All community odor complaints should be followed up by prompt BAAQMD analysis using advanced chemical imaging methods for likely airborne odors. These should be both optical and other quantification methods, which should be included within the project at both the project start-up time and afterwards, to be incorporated into a refinery's fence-line monitoring system. Responding BAAQMD staff should have readily available state-of-the-art handheld detectors and also sampling methods. For one example (#2 among 3 advanced optical imaging methods cited; i.e., #s 2-4):

Advances in infrared technology have made it a promising method for the food industry. The development of the Fourier Transform (FT) algorithm has shortened scan time, improved signal-to-noise ratio, and improved the accuracy of wavelength. Innovations in personal computing has made FT-infrared (FTIR) spectroscopy common place in quality control labs. Analysts routinely combine FTIR spectra with multivariate analysis to quantify components in their matrix.

Food scientists have combined FTIR with chemometrics to detect adulteration in their products. Both near- (NIR) and mid- (MIR) infrared have proven to be valuable resources for rapidly authenticating the quality of food. NIR has been successful in authenticating edible oils

A novel application of a handheld FTIR is for monitoring oxidation in edible oils. Methods currently used for oil quality testing are subjective, time consuming, and use hazardous solvents (which then need to be disposed of). The aim of this research was to evaluate the capabilities of a handheld FTIR combined with multivariate analysis to characterize frying oils and to monitor chemical processes occurring during lipid oxidation as well as determining fatty acid composition. (2)

REFERENCES:

1a) Barrio Logan biodiesel plant ordered to mitigate 'putrid' odors
County Air Pollution Control District approves a plan for New Leaf Biofuel to install system to reduce smell. Tammy Murga. (Nov. 1, 2022) https://www.sandiegouniontribune.com/local/story/2022-11-01/barrio-logan-biodiesel-plant-on-deadline-to-mitigate-vomit-like-odors-residents-say-have-made-them-ill?sfmc_id=958464

1b) Climate-critical S.F. plant unleashing 'gut-pinching' odors in Bayview. Jessica Wolfrom | Examiner (Dec 8, 2022) https://www.sfexaminer.com/news/climate_change/how-company-key-to-climate-change-fight-harms-sf-residents/article_96535584-7672-11ed-9d9f-fb89db674837.html

2) Application of a Handheld Portable Infrared Sensor to Monitor Oil Quality (A Thesis Presented in Partial Fulfillment of the Requirements for the Degree Masters of Science in the Graduate School of The Ohio State University.) Meghan E. Allendorf (2010) https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=osu1289152348&disposition=inline

3) An Overview on Nondestructive Spectroscopic Techniques for Lipid and Lipid Oxidation Analysis in Fish and Fish Products. Jun-Li Xu, Cecilia Riccioli, Da-Wen Sun. (07 May 2015) <https://ift.onlinelibrary.wiley.com/doi/10.1111/1541-4337.12138>

4) Chemical Compositional Changes in Over-Oxidized Fish Oils. Austin S. Phung et al. (Foods. 2020 Oct; 9(10): 1501) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7590219/BAAQ> MD - Comment notice [DECEMBER 15th DEADLINE]:

GIS Maps A and B:

A. Annotated Google Earth Map of 12 different Bayo Vista Multi-family housing units located within 1,000 feet of the nearest refinery unit included within the Phillips 66 Rodeo Renewed Project, which is the existing wastewater plant:

B. Units involved in the Phillips 66 Rodeo Renewed Project

Charles Davidson (REDACTED) DECEMBER 15th public comment for the Bay Area Air Quality Management District (BAAQMD) regarding the Rodeo Renewed Project.

I am commenting to the Bay Area Air District (BAAQMD) regarding the impacts of the Phillips 66's Rodeo Renewed Project upon residents of housing which is located within 1,000 feet of any refinery unit involved in the project.

As part of my public comment, I have included an annotated Google Earth map which shows a total of 12 separate multi-family residential apartment buildings in Bayo Vista which fall into that category. The involved Phillips 66 unit located nearest to Bayo Vista ($\leq 1,000$ feet) is the existing wastewater plant, which is a part of the planned (nearly \$1 billion) project and is shown on the map.

Odor issues are a likely concern for the residents within Bay Vista who live near the wastewater treatment plant containing residues from the cleaning of the project's raw biofuel oil feedstock used to make renewable diesel and may include significant amounts of rancid fats, oils and greases (i.e. FOGs). Historically, odor complaints are not uncommon at animal rendering plants. Odor complaints have already occurred at a California biodiesel refinery (1a and 1b) and are more likely to occur at a refinery biofuels project the size of the Rodeo Renewed Project (i.e., at 67,000 barrels per day capacity).

Lipid oxidation is perhaps the primary pathway for odorous complaints from a biofuels refinery, but also possibly ammonia derived from protein breakdown products and other odors. All community odor complaints should be followed up by prompt BAAQMD analysis using advanced chemical imaging methods for likely airborne odors. These should be both optical and other quantification methods, which should be included in the project at both the project start-up time and afterwards, to be incorporated into a refinery's fence-line monitoring system. Responding BAAQMD staff should have readily available state-of-the-art handheld detectors and also sampling methods. For one example (#2 among 3 methods cited; i.e., #s 2-4):

Advances in infrared technology have made it a promising method for the food industry. The development of the Fourier Transform (FT) algorithm has shortened scan time, improved signal-to-noise ratio, and improved the accuracy of wavelength. Innovations in personal computing has made FT-infrared (FTIR) spectroscopy common place in quality control labs. Analysts routinely combine FTIR spectra with multivariate analysis to quantify components in their matrix.

Food scientists have combined FTIR with chemometrics to detect adulteration in their products. Both near- (NIR) and mid- (MIR) infrared have proven to be valuable resources for rapidly authenticating the quality of food. NIR has been successful in authenticating edible oils

A novel application of a handheld FTIR is for monitoring oxidation in edible oils. Methods currently used for oil quality testing are subjective, time consuming, and use hazardous solvents (which then need to be disposed of). The aim of this research was

to evaluate the capabilities of a handheld FTIR combined with multivariate analysis to characterize frying oils and to monitor chemical processes occurring during lipid oxidation as well as determining fatty acid composition. (2)

1a) Barrio Logan biodiesel plant ordered to mitigate 'putrid' odors County Air Pollution Control District approves a plan for New Leaf Biofuel to install system to reduce smell. Tammy Murga. (Nov. 1, 2022) https://www.sandiegouniontribune.com/local/story/2022-11-01/barrio-logan-biodiesel-plant-on-deadline-to-mitigate-vomit-like-odors-residents-say-have-made-them-ill?sfmc_id=958464

1b) Climate-critical S.F. plant unleashing 'gut-pinching' odors in Bayview. Jessica Wolfrom | Examiner Dec 8, 2022 https://www.sfexaminer.com/news/climate_change/how-company-key-to-climate-change-fight-harms-sf-residents/article_96535584-7672-11ed-9d9f-fb89db674837.html

2) Application of a Handheld Portable Infrared Sensor to Monitor Oil Quality (A Thesis Presented in Partial Fulfillment of the Requirements for the Degree Masters of Science in the Graduate School of The Ohio State University.) Meghan E. Allendorf (2010) https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=osu1289152348&disposition=inline

3) An Overview on Nondestructive Spectroscopic Techniques for Lipid and Lipid Oxidation Analysis in Fish and Fish Products. Jun-Li Xu, Cecilia Riccioli, Da-Wen Sun. (07 May 2015) <https://ift.onlinelibrary.wiley.com/doi/10.1111/1541-4337.12138>

4) Chemical Compositional Changes in Over-Oxidized Fish Oils. Austin S. Phung et al. (Foods. 2020 Oct; 9(10): 1501) [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7590219/BAAQMD - Comment notice \[DECEMBER 15th DEADLINE\]:](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7590219/BAAQMD-Comment%20notice%20%5BDECEMBER%2015th%20DEADLINE%5D)

GIS Maps A and B:

- A. Annotated Google Earth Map of 12 different Bayo Vista Multi-family housing units located within 1,000 feet of the nearest refinery unit included within the Phillips 66 Rodeo Renewed Project, which is the existing wastewater plant:



B. Units involved in the Phillips 66 Rodeo Renewed Project

