

Company: Southern California Gas Company (U 904 G)
Application: A.25-10-008, Proposing Woody Biomass Pilot Project
Exhibit: SCG-07

Sierra Club Response to SoCalGas's Data Request 3

APPLICATION OF SOUTHERN CALIFORNIA GAS COMPANY PROPOSING WOODY BIOMASS PILOT PROJECT

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA



California Public Utilities Commission Docket No. A.25-10-008

Application of Southern California Gas Company (U 904 G) Proposing Woody Biomass Pilot Project

Sierra Club Response to Data Request SoCalGas-Sierra Club-03

To: Ismael Bautista, Jr., on behalf of SoCalGas

From: Nina Robertson, Earthjustice, on behalf of Sierra Club

Date Request Sent: March 25, 2026

Response Due: April 7, 2026

QUESTION 1:

In reference to the response to the question on page 19 of the Testimony of Dr. Ranajit Sahu, “What are your key findings and recommendations regarding the proposed Pilot Project?”:

QUESTION 1a:

As provided in Lucas/Summers Testimony, the proposed project site is at the Central California Almond Growers Association (CCAGA) facility located at 8325 S Madera Ave, Kerman, CA 93630, which is approximately 7 to 8 miles from the border of the populated areas of the City of Kerman. What is the distance assumed from the project site to the populated area of the City of Kerman?

RESPONSE 1a:

Sierra Club objects on the grounds this question is ambiguous and assumes facts not in evidence. “[P]opulated areas of the City of Kerman” and “populated area of the City of Kerman” are not defined in the question, SoCalGas Application, or Corrected Testimony. The record does not include information regarding miles between the facility and a “polluted area” or “populated areas.” The references to both “areas” and “area” are confusing and ambiguous.

Subject to and without waiving the foregoing objections, Sierra Club answers as follows:

Sierra Club’s Testimony did not assume any distances, as air pollutants disperse and have impacts over wide areas. As noted in Sierra Club’s Testimony at page 19 and pages 35 to 39, these air pollutants will disperse into areas that already have high levels of pollution per CalEnviroScreen. Even if one or more “population areas” is 7 to 8 miles from the facility, there

are potential still impacts to air quality from the Project. SoCalGas has not conducted any analysis of the impact of the Project's emissions on sensitive receptors or provided necessary information on where such sensitive receptors may be located. Further, sensitive receptors not located in the undefined "populated areas" may also exist.

QUESTION 1b:

Explain the correlation between the distance of the two locations when providing the key findings and recommendations.

RESPONSE 1b:

Sierra Club objects on the grounds this question is vague, ambiguous, calls for speculation, and assumes facts not in evidence. The question does not explain nor define "the two locations." The prior question references both populated "areas" and "area." The record does not contain information regarding any specific "location" except for the address of the CCAGA facility as noted in Question 1a. The question does not explain what is meant by the word "correlation." Further, Dr. Sahu's "key findings and recommendations" include numerous findings and recommendations.

Subject to and without waiving the foregoing objections, Sierra Club answers as follows:

As indicated in Sierra Club's Opening Testimony on pages 19 to 20, Dr. Sahu's findings and recommendations address air pollutants and impacts on environmental and social justice communities, air emissions study and reporting, and greenhouse gases. To the extent the "correlation between the distance of the two locations" refers to the distance between the "CCAGA facility" and some other defined location where a populated area is located, Dr. Sahu did not assume any distances, as noted in response to Question 1a, because air pollutants disperse over a wide area and will increase pollution in an already polluted region, as indicated in Dr. Sahu's Testimony.

QUESTION 1c:

Explain in general how the distance to the city population makes a difference in air quality impact evaluations particularly concerns raised about air toxics.

RESPONSE 1c:

Sierra Club objects on the grounds this question is ambiguous, calls for speculation, and assumes facts not in evidence. The question does not explain nor define "the city population." The

question does not explain what “air quality impact evaluations particularly concerns raised about air toxics” means.

Subject to and without waiving the foregoing objections, Sierra Club answers as follows:

Air pollutants, once emitted and then dispersed in the ambient air will reach receptors (i.e., exposed individuals) wherever they breathe in the ambient air. Ambient air is defined as any air outside the facility. *See, e.g.*, <https://www.baaqmd.gov/en/about-air-quality/glossary/glossary> (defining ambient air as “[o]utside air; any portion of the atmosphere not confined by walls and a roof.”) (last accessed Apr. 7, 2026). Air impact evaluations, including evaluations of the impact of air toxics emissions, assess emissions into ambient air. Proximity to sensitive receptors is also a factor in such evaluations.

QUESTION 2:

In reference to the question on page 24 of the Testimony of Dr. Ranajit Sahu, “In its March 3, 2026 Response 3-2d to Sierra Club’s February 18, 2026 data request, SoCalGas lists exhaust emissions to be monitored by the local air district as O₂ and NO_x, as well as ‘periodic third-party testing of all criteria pollutant emissions[.]’ In your assessment, is this statement an accurate listing of the likely emitted pollutants?”:

QUESTION 2a:

Explain in detail if air districts regulate and typically require measurement of CO₂ and N₂O.

RESPONSE 2a:

Sierra Club objects on the grounds this question is ambiguous, irrelevant and unlikely to lead to admissible evidence. The question asked of Dr. Sahu concerned likely emitted pollutants, not the pollutants monitored and regulated by air districts in California. “[R]egulate” is not defined in the question and can have many meanings.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

Typically, air districts require CO₂ but not N₂O to be measured. If greenhouse gases are “regulate[d]” by an air district, then these two greenhouse gases would be “regulate[d,]” but the scope, design, level, and effect of the regulation and any measurements can vary.

QUESTION 2b:

Please provide all relevant references that substantiate the claim that the proposed pilot will emit “a range of combustion air toxics such as benzene, toluene, xylenes, hexane, formaldehyde, and acetaldehyde, among others.” Would these species be expected to be captured within measurement of VOC's using the EPA methods typically required by air districts?

RESPONSE 2b:

Sierra Club objects on the grounds this question is ambiguous. “Captured within measurement of VOCs...” is confusing, vague and not defined.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

U.S. EPA’s AP-42 Section 1.4 addresses emissions from the combustion of natural gas. Section 1.4.3 lists emissions from such combustion including volatile organic compounds (“VOCs”). Per federal regulation, VOCs include “any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions.” *See* 40 CFR 51.100(s). Each of the compounds listed in Question 2b are VOCs. *See* U.S. EPA, “Volatile organic compounds,” <https://cdxapps.epa.gov/oms-substance-registry-services/substance-details/761346> (listed under “Substance Relationships” tab) (last accessed Apr. 7, 2026).

These species are not separately quantified within the measurement of VOCs using the U.S. EPA methods typically required by air districts because the listed compounds are separate, individual, air toxics compounds, with a range of distinct, adverse health impacts. As a result, they are regulated separately from the regulation of VOCs as a whole. VOCs are regulated as a whole for their contribution to smog, and when VOCs are regulated as a whole, one indicator for VOCs is used, without speciation as to individual air toxics. Entirely separate regulations and thus test methods exist for individual air toxics that are VOCs. Those air toxics are regulated separately for their specific toxicity to humans.

QUESTION 2c:

Explain in detail if baseline/current disposal methods for biomass like air curtain burners, biomass plants, and diesel driven chipping and handling equipment are also expected to generate some amount of air toxics.

RESPONSE 2c:

Sierra Club objects on the grounds the question is vague and calls for speculation. The question does not explain the “disposal methods” in sufficient detail to determine “expected” air toxics.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows

The disposal methods presented in the Correct Testimony can emit air toxics, but the expected amount cannot be quantified because SoCalGas has not quantified these “baseline” air toxics or the air toxics from the Project. As noted in response to Question 2b, quantification of VOCs does not quantify emissions of individual air toxics.

QUESTION 3:

In reference to the question on page 25 of the Testimony of Dr. Ranajit Sahu, “Based on your knowledge, please explain the potential emissions from Lane 3, the bulk gas cleaning process.?”:

QUESTION 3a:

Please provide all citations to substantiate this claim that is relevant to the proposed pilot.

RESPONSE 3a:

Sierra Club objects on the grounds this question is ambiguous and vague, as it does not explain what is meant by “this claim[.]” No “claim” is referenced in the question.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

The summary of potential emissions from Lane 3 indicated in Dr. Sahu’s Testimony is based on Dr. Sahu’s evaluation of the project information regarding Lane 3 that was provided in SoCalGas’s Application, Corrected Testimony, and Data Request Responses. Based on that information, the Project will make use of a “flare.” Sierra Club indicated in testimony on pages 25 to 26 and 40 to 43 that flaring of syngas will emit a wide range of pollutants. As explained in response to Question 2b, combustion, which is used in a flare, emits a wide range of pollutants.

QUESTION 4:

In reference to the question on page 25 of the Testimony of Dr. Ranajit Sahu, “In its March 3, 2026 Response 3-2c to Sierra Club’s February 18, 2026 data request, SoCalGas states that this flare will be used ‘infrequently.’⁴⁰ Does this statement impact your conclusion that emissions from the flare are likely?”:

QUESTION 4a:

Please provide details of the projects that the expert was involved in where flaring was considerable. Explain in detail the expert, Dr. Ranajit Sahu, level of involvement in these projects.

RESPONSE 4a:

Sierra Club objects on the grounds this question is ambiguous, as the term “considerable” is not defined.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

Dr. Sahu has reviewed a wide range of projects involving flaring including numerous plants that use thermal (or catalytic) oxidizers for pollution destruction such as ethylene oxide sterilizers owned by Sterigenics, B. Braun, and Becton Dickinson. Dr. Sahu has also evaluated storage terminals that store petroleum products and derivatives and thermal oxidizers that are used to control tank emissions like degassing.

QUESTION 4b:

Explain in detail the correlation between these projects and the one involved in this proceeding.

RESPONSE 4b:

Sierra Club objects on the grounds this question is ambiguous, as the term “correlation” has many meanings and is not defined.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

To the extent the question seeks information on similarities between the projects previously studied by Dr. Sahu and the proposed Project, all propose the use of thermal oxidizers for the flaring of gas. Dr. Sahu indicated in testimony at page 40 that emissions from the thermal oxidizer (or flare) can be directly measured at the stack using continuous monitoring systems for NO_x, PM_{2.5} (filterable), CO, and other emissions and also by conducting periodic, representative, stack testing for other pollutants including air toxics.

QUESTION 5:

In reference to the question on page 26 of the Testimony of Dr. Ranajit Sahu, “SoCalGas states in its February 23, 2026 Response 2-14a to Sierra Club’s February 9, 2026 data request that the flare will only be used 0.5% of the hours.⁴² It also states in its March 11, 2026 Response 5-9f to Sierra Club’s February 25, 2026 data request that ‘WBF estimates the flare will be used for a maximum of 10 minutes for an initial startup or emergency shutdown of the methanation system. In the first year, which includes commissioning, WBF anticipates up to 120 startups and shutdowns which is the basis for less than 0.5% of hours. After the facility is commissioned, WBF only anticipates approximately 8 to 10 startups/shutdowns annually.’⁴³ Do these responses address your concerns with flare emissions? If not, why not?⁴⁰ Does this statement impact your conclusion that emissions from the flare are likely?”:

RESPONSE 5:

QUESTION 5a:

Please provide citations and quantitative calculations supporting the claim that the flare will release “a substantial amount of health-harming emissions”.

RESPONSE 5a:

Sierra Club notes that the page number cited in the question is incorrect. The correct page number is 25. Further, the question “Does this statement impact your conclusion that emissions from the flare are likely?” is asked in a separate question in Sierra Club’s Testimony on page 25.

Anytime there is flaring, emissions are inevitable, and those emissions are harmful to human health, as noted above in Response 2b. Emissions depend not only on the duration of the flaring but also the amount of gas flared. Since the information provided by SoCalGas only provides, at best, the possible durations of the flaring events, nothing is disclosed or known to the public about the amount of gases that will be flared. As Dr. Sahu explained in testimony at pages 25 and 26, it is his expert opinion that emissions will be substantial because:

 this is a pilot project where experimentation with the process, especially the methanation step, will occur regularly. Indeed, based on the information I have reviewed and based on my experience reviewing West Biofuels’s project at Woodland proposed by Pacific Gas & Electric Company (“PG&E”) in A.23-06-023, West Biofuels does not have much experience with syngas generation or methanation. The associated experimentation

necessarily entails many stops and starts and generation of syngas that is off-spec and must therefore be flared. Similarly, there will be substantial experimentation in the methanation lane of the proposed Project. Second, the scale of the proposed Project is substantial and much larger than any gasification and methanation project that West Biofuels has operated before. This large size means that a lot of syngas will be produced that may be off-spec and that needs to be flared. So, based on how much as well as how often the flare will be used in this experimental proposed Project, the emissions from flaring will be considerable.

QUESTION 6:

In reference to the question on page 25 of the Testimony of Dr. Ranajit Sahu, “In its March 3, 2026 Response 3-2e to Sierra Club’s February 18, 2026 data request, SoCalGas lists the composition of the gas that would be flared. Does this information indicate what the flare emissions will be?”:

QUESTION 6a:

Explain in detail if thermal oxidizers/enclosed flares are mature technology used by industry for safety and environmental protection.

RESPONSE 6a:

Sierra Club notes that the page number cited in the question is incorrect. The correct page number is 26.

They are mature technology, but this fact does not mean that they do not have substantial emissions of criteria pollutants, air toxics, or greenhouse gases.

QUESTION 6b:

Explain in detail if the manufacturer of a thermal oxidizer/enclosed flare would be expected to be able to model and estimate the destruction efficiency of the various gases in the syngas and guarantee the emissions performance from their product.

RESPONSE 6b:

This modeling is typically not done by manufacturers for each individual VOC and air toxic compound in the inlet to the flare. The waste gas composition generally does not show each individual VOC or air toxic. In addition, the flare will produce air toxics as a result of the combustion process that are not present in the inlet waste gas. For these compounds, the destruction efficiency (i.e., $(\text{outlet mass} - \text{inlet mass}) / \text{outlet mass}$) will be negative since the flare will be a net producer (not destructor) of these combustion-generated air toxics that are not present in the inlet waste gas.

QUESTION 7:

In reference to the question on page 27 of the Testimony of Dr. Ranajit Sahu, “Why, in your opinion, will there be fugitive emissions in Lane 4?”:

QUESTION 7a:

Explain in detail the role monitoring and implementation of an EPA leak detection and repair (LDAR) program would play in minimizing fugitive emissions.

RESPONSE 7a:

Sierra Club objects on the grounds this question is ambiguous, calls for speculation, and assumes facts not in evidence.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

Sierra Club does not know what role LDAR will play in the proposed Project’s monitoring and implementation of LDAR beyond what is stated by SoCalGas in the Application, Corrected Testimony, and Data Request Responses. As explained Dr. Sahu’s Testimony at pages 26 and 27, because the information provided by SoCalGas shows that there will be piping in Lane 4, there will be fugitive emissions from piping components, and there is no evidence that LDAR or any other methods or protocols proposed by SoCalGas will detect all levels of fugitive emissions.

QUESTION 7b:

Explain in detail if a well-developed LDAR program using EPA Method 21 detection equipment would be expected to minimize fugitive emissions as well as leaks.

RESPONSE 7b:

Sierra Club objects on the grounds this question is ambiguous and calls for speculation, as the term “well-developed” is not defined, is subjective, and can therefore have many meanings.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

As indicated in Sierra Club’s Testimony at pages 28 and 29, the record does not show that the proposed Project’s fugitive emissions will be minimized because the equipment and methods that the proposed Project intends to use (per SoCalGas Application, Testimony and responses to Data Requests) are intended to detect leaks that pose safety risks at higher concentrations, and not all fugitive emissions, which will be emitted at much lower concentrations.

QUESTION 7c:

Explain if a well-developed LDAR program generating Method 21 screening values for facility equipment can be used to generate a correlative fugitive emissions estimate for the facility.

RESPONSE 7c:

Sierra Club objects on the grounds this question is ambiguous and calls for speculation, as the term “well-developed” is not defined, is subjective, and can have many meanings.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

No, it cannot be used to generate a correlative fugitive emissions estimate for the facility because generating correlations of Method 21 screening measurements to fugitive mass emissions requires that the total amounts of fugitive emissions first has to be captured. That capture is not part of Method 21. Therefore no correlations can be developed just from Method 21 concentration measurements. Further Method 21 applies to VOCs, not methane.

QUESTION 8:

In reference to the question on page 28 of the Testimony of Dr. Ranajit Sahu, “What is the GHG impact of CO2 venting?”:

QUESTION 8a:

Explain in detail if a large fraction (or all) of the CO2 from the biomass is also released back to the atmosphere in the baseline cases.

RESPONSE 8a:

Sierra Club objects on the grounds this question is ambiguous and calls for speculation. The term “large fraction” is not defined and can have many meanings.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

The baseline cases presented in Application and Corrected Testimony do not indicate the “fraction . . . of the CO2” from the biomass that is released back into the atmosphere. Further, as the Testimony of Dr. Emily Grubert indicates at pages 7-10, the CO2 impact from the baseline cases is not correctly evaluated in the Application and Corrected Testimony.

QUESTION 9:

In reference to the question on page 31 of the Testimony of Dr. Ranajit Sahu, “Without such measurement and reporting, do you think SoCalGas can credibly claim that it has demonstrated GHG reductions in this Application?”:

QUESTION 9a:

Please all provide a reference and quantitative calculations supporting the claim of “they will not be zero and could be substantial.”

RESPONSE 9a:

Sierra Club notes that the page number cited in the question is incorrect. The correct page number is 30.

The question’s reference to “such measurement” refers to fugitive methane leakage measurement and reporting as indicated on page 30 of Sierra Club’s Testimony. As stated in the Testimony of Dr. Sahu, the assumption by SoCalGas that such emissions will be “negligible” is not supported by the evidence in the record given the risk of fugitive leaks and the inability to detect and prevent them. Therefore, as Sierra Club’s Testimony indicates, it is the expert opinion of Dr. Sahu that such emissions will not be zero and could be substantial (i.e., not negligible). The Testimony of Dr. Grubert further supports this conclusion at pages 11 and 12, and even if methane leakage were assumed to be zero (which is an unrealistic and unsupported assumption), the corrected Whole Orchard Recycling biogenicity assumption alone indicates that the base case has lower greenhouse gas emissions than the use cases both with and without CCS, such that Project emissions will not be zero and could be substantial.

QUESTION 10:

In reference to the question on page 31 of Dr. Ranajit Sahu, “In its February 26, 2026 Response 4 to Cal Advocates’ February 11, 2026 data request, SoCalGas indicates that ‘WBF employs regular scheduled inspections using advanced methane detection technologies, such as handheld detectors, optical gas imaging cameras, and continuous monitoring systems within confined areas and buildings. Inspections are conducted at key points, including production equipment, pipeline connections, and transfer points.’⁵⁶ In your opinion, is this methane leak detection sufficient to ensure no fugitive methane leakage occurs.?”:

QUESTION 10a:

Explain if EPA allows handheld detectors that are compliant with Method 21 to be used in LDAR programs. Explain if these detectors are expected to be able to detect fugitive leaks, particularly if they can detect down to tens of ppm levels.

RESPONSE 10a:

Sierra Club notes that the page number cited in the question is incorrect. The correct page number is 30.

Sierra Club objects on the grounds this question assumes facts not in evidence. SoCalGas did not present anything regarding use of Method 21 in the Application, Corrected Testimony, or Data Request Responses.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

U.S. EPA allows handheld detectors that are compliant with Method 21 to be used in LDAR programs that address VOCs. Whether these detectors will detect fugitive leaks of VOCs depends on how they are used and how trained the operators are, and this information is not in the record. Notably, EPA’s use of Method 21 to assess VOC leaks does not address methane leaks (since methane is not a VOC), which are a primary concern raised by Sierra Club’s testimony.

QUESTION 10b:

40 CFR Part 60, Appendix K requires optical gas imaging (OGI) cameras to detect methane leaks of down to 19 g/hr under specific conditions. Would it be prudent for a facility that is trying to screen for and prevent leaks and also minimize fugitive emissions to employ a hybrid program that utilizes both OGI and Method 21 detectors?

RESPONSE 10b:

Sierra Club objects on the grounds this question assumes facts not in evidence, requires speculation, and is ambiguous and vague. SoCalGas did not propose any part of the Project comply with 40 CFR Part 60, Appendix K requirements in the Application, Corrected Testimony, or Data Request Responses. “[H]ybrid program” is ambiguous and not defined. SoCalGas has not presented any program in the record. Also, “prudent” is ambiguous and subjective.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

A monitoring program that includes these methods could detect certain levels of leaks and fugitive emissions, but additional factors are relevant as indicated above in response to Question 10a, and SoCalGas has not proposed such a protocol for review in its Project materials. Furthermore, even if leaks and fugitives are detectable, there will still be some emissions of methane such that the assumption of zero methane leakage is unrealistic and unsupported.

QUESTION 11:

In reference to the question on page 33 of the Testimony of Dr. Ranajit Sahu, ‘To summarize, in your opinion, what pollutants will be emitted from the proposed pilot project?’:

QUESTION 11a:

Did SoCalGas provide estimates of volatile organic compounds (VOC)?

RESPONSE 11a:

Sierra Club notes that the page number cited in the question is incorrect. The correct page number is 32.

SoCalGas provided estimates of the emissions factor for VOCs in its Corrected Testimony but did not provide estimates of daily and annual VOC emissions from the proposed Project. Further, SoCalGas did not provide estimates of Project emissions of individual air toxics (which, as noted above in response to Question 2b, are VOCs) such as benzene, toluene, xylenes, hexane, formaldehyde, various polycyclic aromatic compounds, and numerous metals.

QUESTION 11b:

If air toxics do exist, would they be expected to be quantified within the measurement of VOC?

RESPONSE 11b:

No, air toxics cannot be “expected to be quantified within” the measurement of VOCs. See response to Question 2b above.

QUESTION 12:

In reference to the response to the question, “[W]here the gasification facility would be located,” Dr. Ranajit Sahu responded on page 35 that “the proposed facility would be located in Kerman, California.”

QUESTION 12a:

As provided in Lucas/Summers Testimony, the proposed project site is at the Central California Almond Growers Association (CCAGA) facility located at 8325 S Madera Ave, Kerman, CA 93630, which is approximately 7 to 8 miles from the border of the populated areas of the City of Kerman. What relevance does distance make in terms of the claimed air pollution impacts on the population of Kerman, CA?

RESPONSE 12a:

See responses to Question 1.

QUESTION 13:

In reference to the response to the question, “In your opinion, will the proposed project improve the air quality in and around Kerman, CA?,” Dr. Ranajit Sahu stated on page 38, “No. As explained above, I believe and the Application admits that the proposed facility will cause additional pollution. That pollution will worsen air quality in the region.”

QUESTION 13a:

Does this opinion factor in the regional emissions from the baseline practices that would be displaced? If not, explain in detail why not.

RESPONSE 13a:

Sierra Club notes that the page number cited in the question is incorrect. The correct page number is 37.

There is no evidence that a one-to-one “displace[ment]” of these emissions will occur. Air impacts of both baseline and Project emissions must be separately assessed since each will affect the ambient air differently, both spatially and temporally. Based on the record in this proceeding, SoCalGas has not conducted such an assessment. Further, SoCalGas has not provided sufficient information regarding the basis for baseline emissions factor assumptions, such that their accuracy can be evaluated. As noted in response to Question 2b and 11b, SoCalGas has not quantified the emissions of individual air toxics. Finally, even based on a comparison on SoCalGas’s base case assumption and Project use case assumptions as presented in Corrected Testimony at JLMS 15 and 16, the emissions factor for VOCs increases from 1.53 mg/MJ in the base case to 2.04 and 2.88 mg/MJ in the use cases without and with carbon capture and storage, respectively. Also, the emissions factor for NOx increases in the use case with carbon capture and storage from 19.69 mg/MJ to 24.86 mg/MJ.

QUESTION 14:

In reference to the question on page 38 of the Testimony of Dr Ranajit Sahu, “Will the project bring the region closer to attainment for PM2.5 and Ozone under the Clean Air Act?”:

QUESTION 14a:

In terms of “Attainment,” are emissions ever evaluated on a project-by-project basis or is it a characterization of the total emissions for the region as a whole?

RESPONSE 14a:

Sierra Club notes that the page number cited in the question is incorrect. The correct page number is 37.

Sierra Club objects on the grounds this question is ambiguous and calls for speculation. “[E]ver evaluated” can have many meanings, and the question does not specify the evaluator.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

To the extent the question asks whether air regulators evaluate air quality regionally and air quality impacts on a project-by-project basis, the answer is that both are conducted. Further, the regional analysis includes emissions inventories of permitted projects.

QUESTION 14b:

Is the “Attainment Plan” implemented by the San Joaquin Valley Air Pollution Control District the tool that ensures that criteria pollutant emissions are reduced for the region?

RESPONSE 14b:

Sierra Club objects on the grounds this question is ambiguous and calls for speculation. “[T]he tool” is not defined and can have many meanings. The “Attainment Plan” is not defined. Multiple “attainment plans” are applicable.

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

No. Each air district has multiple attainment plans, and these plans are not enforcement documents that can “ensure” reductions by themselves.

QUESTION 14c:

Do all projects reviewed for air permits by the San Joaquin Valley Air Pollution Control District have to follow their Attainment Plan, which typically requires offsets or improvements that reduce regional pollution while enabling development?

RESPONSE 14c:

Sierra Club objects on the grounds this question is ambiguous, calls for speculation, and assumes facts not in evidence. “[R]eview[.]” is not defined and can have many meanings. The “Attainment Plan” is not defined. Multiple attainment plans are applicable. The record does not contain evidence that the applicable attainment plans “typically require[.] offsets or improvements that reduce regional pollution while enabling development[.]”

Subject to and without waiving the foregoing objection, Sierra Club answers as follows:

Sierra Club cannot speak to what “review[.]” will be conducted, how thoroughly this Project will be evaluated by the San Joaquin Valley Air Pollution Control District, or what if any offsets or improvement will be required as a result of the proposed Project.