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QUESTION 6-1:

Please indicate the relevant qualifications of Witness James Lucas.

QUESTION 6-1:

The qualifications of Witness James Lucas are provided in the Direct Testimony of Lucas/Summers (Chapter 2) at JLMS-21.

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QUESTION 6-2:

Please indicate the relevant qualifications of Witness Matthew Summers.

RESPONSE 6-2 (WBF):

The qualifications of Witness Dr. Matthew Summers are provided in the Direct Testimony of Lucas/Summers (Chapter 2) at JLMS-22.

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QUESTION 6-3:

In Rebuttal Testimony at JLMS-12 footnote 44, SoCalGas states that "[t]hese percentages are derived from CI scores of 36.1 g CO_2e/MJ (without CCS) and −49.7 g CO_2e/MJ (with CCS), as presented in the Lucas/Summers Testimony, which was updated to have consistent treatment of biogenic carbon."

QUESTION 6-3a:

Please state the basis for the alteration of the CI scores indicated in the Corrected Revised Testimony on pages JLMS-17.

RESPONSE 6-3a (WBF):

After reviewing Sierra Club's Prepared Testimony, the CI scores were revised to 36.1 g CO_2e/MJ (without CCS) and −49.7 g CO_2e/MJ (with CCS) to promote a mathematically consistent treatment of biogenic carbon across all lifecycle scenarios. The updated scores remove this tailpipe credit in Table 3 of Lucas/Summers Testimony (Chapter 2), treating the biogenic content of the Bio-SNG as a positive emission at the tailpipe.

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QUESTION 6-3b:

Please provide the modeling spreadsheet that was used to determine the new CI scores in the Corrected Revised Testimony.

RESPONSE 6-3b(WBF):

There is no spreadsheet used to calculate the new CI scores because the calculation only involved removing the row that contained the –55.0 gCO2e/MJ in Table 3 of Lucas/Summers Testimony (Chapter 2).

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QUESTION 6-3-c:

Please indicate which witness conducted the modeling that led to this revision.

RESPONSE 6-3c:

As stated in the response to Question 6-3b, there was no modeling involved in removing the row with the -55.0 gCO2e/MJ in Table 3. Dr. Matthew Summers is the witness.

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QUESTION 6-3d:

Please indicate which witness is responsible for this answer.

RESPONSE 6-3d:

Dr. Matthew Summers, in consultation with Dr. Eric Tan of National Laboratory of the Rockies (formerly National Renewable Energy Laboratory).

QUESTION 6-4:

Please state the basis for the assertion in Corrected Revised Testimony at JLMS-17 that "[p]roducing and utilizing the Bio-CNG fuel from this project will be a net carbon sink over its lifecycle" when the proposed Project without CCS has a revised CI of 36.1 CO2e/MJ.

RESPONSE 6-4 (WBF):

As stated in NREL's memorandum titled *GREET Analysis for Bio-SNG Project at the CCAGA Facility,*[1] "Producing and utilizing the Bio-CNG fuel from this project is estimated to be a net carbon sink over its lifecycle with avoided emissions considered". The designation of "net carbon sink" reflects a comparison between the lifecycle emissions associated with producing Bio-CNG (as shown in Table 3), which include avoided emissions, and the carbon intensity (CI) of conventional natural gas (also shown in Table 3). Because the CI associated with producing Bio-CNG is approximately 49% lower than the CI of natural gas,[2] the project achieves net lifecycle emission reductions.

[1] Revised Direct Testimony of Lucas/Summers, Attachment 1.
[2] Direct Rebuttal Testimony of Lucas/Summers at JLMS-11.

QUESTION 6-5:

Rebuttal Testimony at JLMS-14 that "[w]ith biogenic and non-biogenic emissions fully accounted for in both the base case and use cases in the lifecycle analysis, the net CI remains the most important factor for compliance with 17 CCR §95893(d)(5)."

QUESTION 6-5a:

What is meant by "net CI."

RESPONSE 6-5a (WBF):

As stated in the Rebuttal Testimony of Lucas/Summers, Net CI is described as "Net CI evaluates the emissions delta between the SB 1440 Pilot Project and "business-as-usual" waste disposal baseline."[3]

[3] Rebuttal Testimony of Lucas/Summers at JLMS-14.

QUESTION 6-5b:

Please state the basis for "net CI" being an indicator of compliance with 17 CCR §95893(d)(5).

RESPONSE 6-5b:

As provided in the Rebuttal Testimony of Lucas/Summers, "D.22-02-025 does not prescribe any particular lifecycle emissions model, such as CA-GREET, for evaluating SB 1440 Pilot Projects. Similarly, 17 CCR §95893 requires only that allowance auction proceeds be used for projects that demonstrably reduce GHG emissions. The regulation is outcome-based, not method-prescriptive. It imposes no obligation to use CA-GREET, or any other specific modeling platform, but rather focuses on demonstrable emissions reductions."[4] Accordingly, SoCalGas and West Biofuels concluded that evaluating net carbon intensity on a lifecycle basis provides the most accurate and transparent method for demonstrating the greenhouse gas emission reductions achieved by the project.

[4] Direct Rebuttal Testimony of Lucas/Summers at JLMS-13.

QUESTION 6-5c:

Please indicate the witness responsible for this answer.

RESPONSE 6-5c:

The witness for the response to Question 6-5a is Dr. Matthew Summers and for Question 6-5b is James Lucas.

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QUESTION 6-6:

Rebuttal Testimony at JLMS-19 and in Attachment 1 indicates reliance on “U.S. EPA (1995). Protocol for Equipment Leak Emission Estimates. EPA-453/R-95-017. November 1995” for a “component-level analysis” of methane leakage at the facility.

QUESTION 6-6a:

Where, if at all, does this U.S. EPA document indicate that the leakage emissions factors used in the Protocol are relevant for methane?

RESPONSE 6-6a (WBF):

The U.S. EPA Protocol (EPA-453/R-95-017) is the industry-standard guidance for estimating equipment leaks from valves, flanges, and connectors in pressurized gas systems. While the factors are often expressed as "Total Organic Compounds" (TOC), they are technically valid for methane, the primary component of the gas in this facility, and are used to generate defensible engineering estimates for fugitive methane leakage.

QUESTION 6-6b:

Please indicate the witness responsible for this answer.

RESPONSE 6-6b:

Dr. Matthew Summers.

QUESTION 6-7:

Rebuttal Testimony at JLMS-31 states that "[b]y replacing high emission agricultural burning with controlled and permitted operations, the SB 1440 Pilot Project 3 supports the Commission's ESJ and clean air objectives."

QUESTION 6-7a:

Please note, this question does not have a question number associated with it.

Please explain what is meant by "high emission agricultural burning" and the extent to which it differs, if at all, from "open burning" and "agricultural burning" as described in the following two publications by San Joaquin Valley Air Quality Management District https://www.valleyair.org/agriculture/agricultural-burning https://www.valleyair.org/media/hjgh03mb/2024-final-ag-burnreport.pdf.

RESPONSE 6-7a (WBF):

As of January 1, 2025, San Joaquin Valley Air Pollution and District reached the end of a multiyear tiered phase-out of nearly all agricultural open burning in the San Joaquin Valley. While the completion of these phase-outs marks a significant reduction in open agricultural burning in the San Joaquin Valley, there are limited exceptions for which agricultural burning will continue to be permitted.[5] "High emission agricultural burning" references air curtain burning which is still in practice for disposal (e.g., diseased material). As shown in Table 1 of the Revised Testimony of Lucas/Summers (page JLMS-15), "air curtain inc." exhibits the highest criteria pollutant emissions in three of the five categories and the second-highest emissions in the remaining two categories. With funding running out for the San Joaquin Valley Air Pollution Control District Ag Burn Alternatives Grant Program, which provides incentives to whole-orchard recycling operations in the San Joaquin Valley, there may be upward pressure to use agricultural burning for disposal.

[5] CARB, *San Joaquin Valley Agricultural Burning – Phase Dow*n, *available at: https://ww2.arb.ca.gov/our-work/programs/agricultural-burning/san-joaquin-valley-agricultural-burning*

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QUESTION 6-7b:

Please note, this question is listed as, "Question 6-7a"

Please describe how, if at all, emissions from "high emission agricultural burning" as referenced in the Rebuttal Testimony are reflected in the "base case" emissions presented in SoCalGas's Testimony.

RESPONSE 6-7b (WBF):

As shown in Table 1 of the Revised Testimony of Lucas/Summers (page JLMS-15), "air curtain inc." exhibits the highest criteria pollutant emissions in three of the five categories and the second-highest emissions in the remaining two categories.

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QUESTION 6-7c:

Please note, this question is listed as, "Question 6-7b"

If "high emission agricultural burning" is assumed in the base case, please provide the geographic coordinates of the assumed burning.

RESPONSE 6-7c (WBF):

The placement of air curtain burners will vary annually based on the geographic location of the woody biomass generated in each year.

QUESTION 6-8:

SoCalGas indicates in Rebuttal Testimony that "[a]t a distance of approximately 7-8 miles, incremental concentrations from an individual stationary source are indistinguishable from regional background levels and do not materially affect lifetime cancer risk or chronic hazard indices. Accordingly, air toxics impacts at the population center from this project are less than significant under CARB and SJVAPCD risk evaluation frameworks." Rebuttal testimony also states at JLMS-29, "the San Joaquin Valley Air Pollution Control District (SJVAPCD) will evaluate air toxics impacts at the property line and nearest sensitive receptors as part of the permitting process."

QUESTION 6-8a:

Please provide the analysis conducted to reach the above conclusions regarding lifetime cancer risk, chronic hazard indices, and air toxic impacts from the proposed Project.

RESPONSE 6-8a (WBF):

The conclusion is based on standard air dispersion modeling principles and the West Biofuels facility's 7-to-8-mile distance from the populated areas. Concentrations of toxic air contaminants decrease rapidly with distance. At 7-to-8 miles, incremental impacts from a stationary source of this small scale are indistinguishable from regional background levels. Formal Health Risk Assessments (HRA) will be finalized during the SJVAPCD permitting process.

QUESTION 6-8b:

Has SoCalGas identified the sensitive receptors relevant to evaluating the impact of the proposed Project's emissions?

RESPONSE 6-8b (WBF):

The specific sensitive receptors (schools, hospitals, residences) is a mandatory component of the SJVAPCD Rule 2201 review and will be identified after the CPUC issues a decision on this application.

QUESTION 6-8c:

If the answer to the above question is yes, please provide the geographic coordinates of the sensitive receptors that have been evaluated, if any, to reach the above conclusions.

RESPONSE 6-8c (WBF):

Not applicable.

QUESTION 6-8d:

Does SoCalGas's conclusion assume that the current geographic locations of sensitive receptors and population areas will not change in the future?

RESPONSE 6-8d (WBF):

Not applicable.

QUESTION 6-8e:

Please indicate the witness responsible for this answer.

RESPONSE 6-8e:

Dr. Matthew Summers.

QUESTION 6-8f:

Please detail the witness's experience in evaluating the impact of air toxics from emitting stationary sources.

RESPONSE 6-8f (WBF):

Dr. Matthew Summers is a former Air Resources Engineer, understands the methodology of dispersion modeling, and has direct experience with permitting facilities of this type in multiple California air districts, including permits that include health risk assessment.

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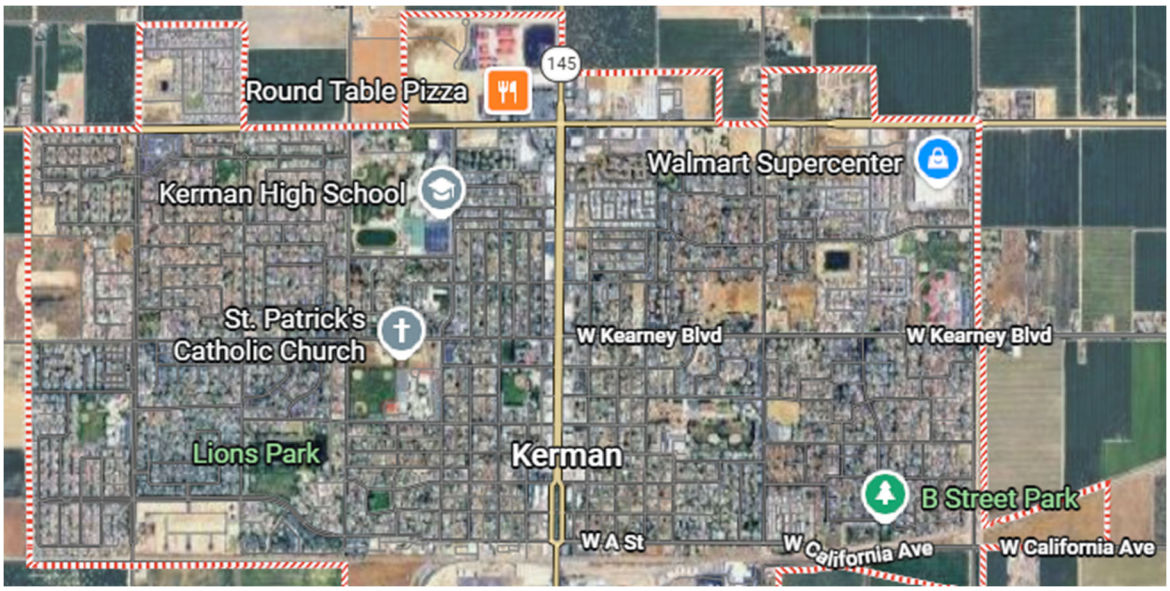
QUESTION 6-9:

Please provide the geographic coordinates of the "populated areas" and the "population center" to which SoCalGas refers in Rebuttal Testimony at JLMS-29 and JLMS-30, respectively. Please indicate the witness responsible for this answer.

RESPONSE 6-9 (WBF):
Below provides the location of the populated areas/center of the City of Kerman. An example of one geographic coordinate is 36.72756493376932, -120.06664485083795 (St Patrick's Catholic Church). Dr. Matthew Summers is the witness.



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QUESTION 6-10

Rebuttal Testimony at JLMS-19 states that the proposed Project would displace emissions from "air curtain burning, biomass power generation, and diesel-intensive handling operations."

QUESTION 6-10a:

Please provide the geographic coordinates of the air curtain burners that the proposed Project purports to displace.

RESPONSE 6-10a (WBF):

The geographic coordinates are not known as the placement of air curtain burners will vary annually based on the geographic location of the woody biomass generated in each year.

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QUESTION 6-10b:

What are the distances of these air curtain burners relative the “populated areas” in the City of Kerman to which SoCalGas refers in Rebuttal Testimony at JLMS-29.?

RESPONSE 6-10b (WBF):

See response to Question 6-10a.

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QUESTION 6-10c:

Please provide the geographic coordinates of diesel-intensive handling operations that the project purports to displace?

RESPONSE 6-10c (WBF):

The geographic coordinates are not known as the location of the diesel-intensive handling operations will vary annually based on the geographic location of the woody biomass generated and placement of the wood chips in each year.

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QUESTION 6-10d:

What are the distances of the diesel-intensive handling operations to the populated areas in the City of Kerman to which SoCalGas refers in Rebuttal Testimony at JLMS-29.?

RESPONSE 6-10d (WBF):

See response to Question 6-9c.

QUESTION 6-10e:

What are the names of the biomass plants the emission from which the proposed Project purports to displace?

RESPONSE 6-10e (WBF):

DTE Stockton.

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QUESTION 6-10f:

Figure 3 of the Corrected Revised testimony indicates “cogeneration plant”. What is the name of the cogeneration plant?

RESPONSE 6-10f (WBF):

DTE Stockton.

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QUESTION 6-10g:

What are the addresses of the biomass and/or cogeneration facilities, the emissions from which that the project purports to displace?

RESPONSE 6-10g (WBF):

The DTE Stockton biomass plant address is listed at 2526 W Washington St., Stockton, CA 95203.

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QUESTION 6-10h:

Please indicate the witness responsible for this answer.

RESPONSE 6-10h:

Dr. Matthew Summers.

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QUESTION 6-11:

The modeling spreadsheet provided by SoCalGas indicates in the “Baseline Case” sheet, in cells D7, D8, D10, and D13 that “West Biofuels design data” is the “Source” for several assumptions used in the modeling of emissions.

QUESTION 6-11a:

Please provide all “West Biofuels design data” that provided the basis for these modeling assumptions.

RESPONSE 6-11a (WBF):

The reference in cells D7, D8, D10, and D13 indicate that West Biofuels has designed the facility to process the mass quantities of biomass mentioned in cells B7, B8, B10, and B13. For example, the facility is designed to process 3038 dry kg/hr of almond biomass, which appears in cell B7 and equates to a daily throughput rate of 80 dry tons per day.

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QUESTION 6-11b:

Please indicate the witness responsible for this answer.

RESPONSE 6-11b:

Dr. Matthew Summers.

QUESTION 6-12:

The modeling spreadsheet provided by SoCalGas indicates in the "Baseline case" sheet, in cells D9, D11, D12, D14, D15 and D16 that "CCAGA communication of current disposal practices" is the "Source" for the percentages assigned to baseline uses of woody biomass feedstock.

QUESTION 6-12a:

Please provide all "CCAGA communications of current disposal practices" that were relied upon for the values entered in the spreadsheet at cells A9, A11, A12, A14, A15, A16 and B9, B11, B12, B14, B15, B16.

RESPONSE 6-12a (WBF):

The President and Chief Operating Officer of CCAGA communicated verbally in a meeting in August of 2025 with West Biofuels the current disposal practices for the types of biomass to be used in the project. As previously provided in the response to SIERRA CLUB-SCG-01 Question 1-5b, Base case disposal methods and quantities were developed based on conversations with the CCAGA and what they are currently doing with their almond biomass. The project plans to procure all of its almond biomass from CCAGA and its members, so these percentages are representative of where the biomass is currently going and projected to go in the future.

QUESTION 6-12b:

Please indicate the witness responsible for this answer.

RESPONSE 6-12b:

Dr. Matthew Summers.

QUESTION 6-13:

The modeling spreadsheet provided by SoCalGas indicates in the "Baseline case" sheet, in cell I26 that "Chipping and Loading" is the "Source" for the emissions factors for "biomass preprocessing" reports in cells B26-G26.

QUESTION 6-13a:

Please provide the relevant source used for the associated modeling assumptions.

RESPONSE 6-13a (WBF):

The source for these emissions factors is R&D GREET 2024 category "Chipping and Loading".

QUESTION 6-13b:

Please indicate the assumed make and model of the diesel equipment used in calculating the “biomass preprocessing” emissions.

RESPONSE 6-13b (WBF):

The emissions for "Chipping and Loading" are determined using a representative composite rather than a single specific "make and model" of commercial machinery. Instead of naming a brand, Argonne National Laboratory bases the emission factors on U.S. EPA NONROAD model emission standards for specific engine power categories and tiers. The model assumes the following technical parameters for the diesel equipment used in forest residue processing:

- Equipment Type: The "Chipping" component typically assumes a Horizontal Grinder or Drum Chipper powered by a heavy-duty diesel engine.
- Engine Size: The default assumption is usually a 300–600 horsepower (hp) engine for high-volume chipping operations.
- Emission Tier: GREET 2024 assumes a fleet-average mix or Tier 4 Final standards for new pathway simulations, reflecting current U.S. EPA regulations for off-road diesel engines.
- Fuel Consumption: The model uses an energy intensity factor of approximately 0.35 to 0.50 gallons of diesel per dry ton of biomass processed for chipping and loading combined.

QUESTION 6-13c:

Please indicate assumed annual operating time of the diesel equipment used in calculating the “biomass preprocessing” emissions.

RESPONSE 6-13c (WBF):

The emission factor for 'Chipping and Loading' is sourced from the GREET 2024 model and is defined as, e.g., in g CO2e/kg of biomass. Because this is a throughput-dependent variable, the resulting emission is a function of total biomass processed, making it mathematically independent of the annual operating hours of the machinery. (Note: In GREET, the g/kg factor is usually derived from an hourly fuel consumption rate divided by an hourly processing rate.)

QUESTION 6-13d:

Please indicate the witness responsible for this answer.

RESPONSE 6-13d:

Dr. Matthew Summers in consultation with Dr. Eric Tan of National Laboratory of the Rockies (formerly National Renewable Energy Laboratory).

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QUESTION 6-14:

The modeling spreadsheet provided by SoCalGas indicates in sheet “Baseline case” cell I29 “NREL data” as the source for the emissions factors for “Dairy Bedding Direct” presented in cell B29.

QUESTION 6-14a:

Please provide the relevant “NREL data.”

RESPONSE 6-14a (WBF):

The Dairy Bedding Direct emission was determined by NLR (formerly NREL) based on values in the study by Carman et al (2021):

Carman, J., Severy, M., Barrientos, C., Blasdel, M., Geronimo, C., Harris, A., Hsu, C., Kane, J., Rios-Romero, S., Wright, M., and Fingerman, K. California Biomass Residue Emissions Characterization (C-BREC) Model Framework: Version 1.2. EPC-16-047. Humboldt, CA: Schatz Energy Research Center. Available at: https://schatzcenter.org/pubs/2021-biomass-R2.pdf.

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QUESTION 6-14b:

Please indicate the witness responsible for this answer.

RESPONSE 6-14b:

Dr. Matthew Summers in consultation with Dr. Eric Tan of National Laboratory of the Rockies (formerly National Renewable Energy Laboratory).

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QUESTION 6-15:

The modeling spreadsheet provided by SoCalGas indicates in the "Baseline case" sheet, in cell I31, that "EPA Biomass Air Curtain Incinerator" is the "Source" for the emissions factors for "Air Curtain Incinerator Direct" presented in cells B31 -G31.

QUESTION 6-15a:

Please provide the relevant emissions factor source

RESPONSE 6-15a (WBF):

The citation for the air curtain incinerator emissions factor source is below:

SJVAPCD, Air Curtain Incinerator Emission Factor Determination, March 10, 2017, available at:
https://www.valleyair.org/media/dpipwseq/criteria-air-incinerator-ef-determination-analysis.pdf

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QUESTION 6-15b:

Please indicate the witness responsible for this answer.

RESPONSE 6-15b:

Dr. Matthew Summers.

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QUESTION 6-16:

The modeling spreadsheet provided by SoCalGas includes in the "Baseline Case" sheet "Table 1".

QUESTION 6-16a:

Please provide the sources for the percentages listed in columns B and C in Table 1.

RESPONSE 6-16a (WBF):

As previously provided in the response to SIERRA CLUB-SCG-01 Question 1-5b, "Base case disposal methods and quantities were developed based on conversations with the CCAGA and what they are currently doing with their almond biomass. The project plans to get all almond biomass from CCAGA, so these percentages are representative of where the biomass is currently going and projected to go in the future."

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QUESTION 6-16b:

Please indicate the witness responsible for this answer.

RESPONSE 6-16b:

Dr. Matthew Summers.

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QUESTION 6-17:

Rebuttal testimony at JLMS-31 states "West Biofuels has successfully executed two interconnected distributed energy projects of the same scale as the proposed SB 1440 Pilot Project. These projects have achieved high-capacity factors of greater than 90%, demonstrating that West Biofuel's systems are engineered for high availability commercial service rather than sporadic research use."

QUESTION 6-17a:

Please indicate the names of both projects referenced.

RESPONSE 6-17a (WBF):

The projects are the Hat Creek Bioenergy Facility (Burney, CA), commissioned in 2025, and the Rice Hull Bioenergy Facility (Williams, CA), commissioned in 2022.

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QUESTION 6-17b:

Do either of these two projects include methanation?

RESPONSE 6-17b (WBF):

No.

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QUESTION 6-17c:

Do either of these two projects use a flare?

RESPONSE 6-17c (WBF):

No.

QUESTION 6-17d:

If the answer to the above question (c) is yes, please provide data on the duration and amount of gases that have been flared from these facilities since they began operations.

RESPONSE 6-17d (WBF):

Not applicable.

QUESTION 6-17e:

Please provides the calculations used to conclude that these projects operate at “90% capacity factors.”

RESPONSE 6-17e (WBF):

These facilities have a design capacity of 3000 kW net. Capacity factor for a given period of time is calculated as follows:

Capacity Factor (%) = Generated Electricity (kWh) / [3000kW x Time(h)] x 100%

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QUESTION 6-17f:

For each facility, please indicate the span of time during which a 90% capacity factor was achieved.

RESPONSE 6-17f (WBF):

Hat Creek Bioenergy Facility – 6/30/2025 – Present.
Rice Hull Bioenergy Facility – During commissioning and initial operations ~ June to August 2022. Facility is currently operated by another party.

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QUESTION 6-17g:

Please indicate the witness responsible for this answer.

RESPONSE 6-17g:

Dr. Matthew Summers.

QUESTION 6-18:

Revised Corrected Testimony at JLMS-13 lists permits and CEQA review that is still pending. Rebuttal Testimony at JLMS-29 indicates that "[t]he San Joaquin Valley Air Pollution Control District (SJVAPCD) will evaluate air toxics impacts at the property line and nearest sensitive receptors as part of the permitting process." Please indicate the status of the following permits and reviews and when their completion is expected:

QUESTION 6-18a:

Applicable Air Quality Permit(s) from the San Joaquin Air Pollution Control District, including the air toxic impact analysis.

RESPONSE 6-18a (WBF):

As provided in the Testimony of Lucas/Summers (Chapter 2 at JLMS-13), "While the permitting process for this project has not yet begun….". The permit process will not start until after the CPUC issues a decision on this Application.

As provided in the Testimony of Lucas/Summers (Chapter 2 at JLMS-13), "WBF estimates that it will take 8 to 12 months to obtain all required permits after submitting finalized facility drawings and a detailed description of planned operations with an application for a Conditional Use Permit with Fresno County."

QUESTION 6-18b:

Building Permit from Fresno County

RESPONSE 6-18b (WBF):

See response to Question 6-18a.

QUESTION 6-18c:

Applicable CEQA review initiated by Fresno County.

RESPONSE 6-18c (WBF):

See response to Question 6-18a.

QUESTION 6-18d:

Please indicate the witness responsible for this answer.

RESPONSE 6-18d:

Dr. Matthew Summers.

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QUESTION 6-19:

Please indicate the fate of the CO2 that will be captured from the proposed Project through the CCS process.

QUESTION 6-19a:

If any of the CO2 will be stored, please indicate where the storage will occur.

RESPONSE 6-19a (WBF):

As provided in Lucas/Summers Testimony (Chapter 2), “Continuously capturing CO2 for long term onsite storage will not be practical so implementation of CDR will be dependent on having an offtake partner for carbon dioxide.” WBF does not plan on pursuing an offtake partner until after the CPUC issues a decision on the Application.

QUESTION 6-19b:

If the CO2 will be stored, please indicate the leakage rates of the storage reservoir and whether the CO2 storage facility is permitted.

RESPONSE 6-19b (WBF):

See response to Question 6-19a.

QUESTION 6-19c:

Please indicate the witness responsible for this answer.

RESPONSE 6-19c:

Dr. Matthew Summers.

QUESTION 6-20:

Rebuttal Testimony at JLMS-19 refers to "commercial CCS data," "Industry data from established global technology suppliers" and "commercial benchmarks" Testimony cites the following projects and companies: GE Vernova, SLB Capturi, Shell CANSOLV, Baker Hughes, and Carbon Clean.

QUESTION 6-20a:

Please indicate which, if any, of the cited examples have both captured CO2 emissions from biomass gasification and been deployed commercially.

RESPONSE 6-20a (WBF):

West Biofuels has not surveyed all cited examples to determine if any have both captured CO2 emissions from biomass gasification and been deployed commercially. Suppliers like GE Vernova and Shell CANSOLV have commercially deployed CCS systems for industrial gas streams with similar CO2 profiles to those to be produced for this project. The project's 78-80% capture target is a conservative design floor compared to the 90-95% benchmarks demonstrated by these providers.

QUESTION 6-20b:

Please indicate the witness responsible for this answer.

RESPONSE 6-20b:

Dr. Matthew Summers.

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QUESTION 6-20c:

Please indicate witness's experience in evaluating and implementing CCS projects.

RESPONSE 6-20c (WBF):

Dr. Matthew Summers has participated in R&D projects that have included CO2 separation from syngas, tailgas, and flue gas. For the proposed project, West Biofuels plans to partner with one of the companies mentioned in the Direct Rebuttal Testimony of Lucas/Summers to supply CCS technology.