

Appendix A

Responses to Draft IS/MND Comments

BayoTech Draft IS/MND Response to Comments

Central Valley Regional Water Quality Control Board

Comment Code	Comment	Response
CVRWQCB-1	<p>Antidegradation Considerations: All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf</p> <p>In part it states: Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.</p> <p>This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives. The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.</p>	<p>The Port thanks the Regional Water Quality Control Board for their comments. The proposed project will comply with all applicable regulations and permits.</p>
CVRWQCB-2	<p>Clean Water Act Section 404 Permit; If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250. https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/</p>	<p>The proposed project will not require any discharge of dredged or fill material in navigable waters or wetlands; therefore, a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) is not required.</p>
CVRWQCB-3	<p>If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.</p>	<p>The proposed project will not require a USACE permit; therefore, a Section 401 permit is not required.</p>

BayoTech Draft IS/MND Response to Comments

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CVRWQCB-4	<p>Waste Discharge Requirements – Discharges to Waters of the State</p> <p>If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/.</p> <p>Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf.</p>	<p>As noted in the Draft Initial Study/Mitigated Negative Declaration (IS/MND), the proposed project is expected to require a National Pollutant Discharge Elimination System (NPDES) permit to regulate construction-related stormwater at the site.</p> <p>The proposed project will comply with all applicable regulations and permit conditions.</p>
CVRWQCB-5	<p>Dewatering Permit: If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board’s Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.</p> <p>For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf. For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf. Limited Threat General NPDES Permit</p>	<p>The proposed project does not include construction or groundwater dewatering; therefore, a dewatering permit is not required.</p>

BayoTech Draft IS/MND Response to Comments

Delta-Sierra Group

Comment Code	Comment	Response
DSG-1	<p>The Delta-Sierra Group of the Sierra Club and the undersigned hereby submit an argument that the proposed BayoTech Hydrogen Production and Filling facility Project may have a significant environmental impact even after the proposed mitigation measures are fully implemented. An environmental impact report (EIR) must be prepared because the proposed Project may substantially degrade the quality of the environment.</p>	<p>The Port thanks the Delta-Sierra Group for their comments. Please see the responses to individual comments as follows in this response document. The proposed project includes mitigation measures that would reduce impacts to below significance levels. California Environmental Quality Act (CEQA) guidelines state that, "Where, prior to the commencement of public review of an environmental document, a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment [...] or would mitigate the significant effect to a point where clearly no significant effect on the environment would occur, a lead agency need not prepare an environmental impact report solely because, without mitigation, the environmental effects at issue would have been significant." Therefore, there are no changes to the IS/MND findings as a result of the comment and an EIR is not warranted.</p>
DGS-2	<p>We appreciate the extended time for comment submittal from 6.29.2023 to 7.10.2023 considering the length of the appendices to the BayoTech Initial Study/Mitigated Negative Declaration.</p> <p>In addition to the reference to the 180 day lead agency processing time for negative declaration applications in the extension, California Code of Regulations, Title 14 Section 15107 states: With private projects involving the issuance of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies, the negative declaration must be completed and approved within 180 days from the date when the lead agency accepted the application as complete. Lead agency procedures may provide that the 180-day time limit may be extended once for a period of not more than 90 days upon consent of the lead agency and the applicant.</p> <p>Furthermore, The California Code of regulations states: (a) A lead agency shall provide a notice of intent to adopt a negative declaration or mitigated negative declaration to the public, responsible agencies, trustee agencies, and the county clerk of each county within which the proposed project is located, sufficiently prior to adoption by the lead agency of the negative declaration or mitigated negative declaration to allow the public and agencies the review period provided under Section 15105.1 Prior to determining whether a negative declaration or environmental impact report is required for a project, the lead agency shall consult with all responsible agencies and trustee agencies. Prior to that required consultation, the lead agency may informally contact any of those agencies. Pursuant to the Public Records Act ("Act") (Gov. Code § 7920.000, et seq.). Please provide all communications with responsible agencies and trustee agencies regarding whether the BayoTech Hydrogen Production and Filling Project required a negative declaration or environment impact report.</p>	<p>The Port confers regularly with responsible and trustee agencies. As noted in Table 1 of the Draft IS/MND, there are no trustee agencies identified for this project. Seven responsible agencies were identified. None of the responsible agencies have requested that the Port prepare an environmental impact report (EIR) for this project. The Port complied with Delta-Sierra's Public Record Request Act on April 19, 2023; therefore, no additional response is required.</p>
DSG-2	<p>The public review time is to occur once the application is accepted or after 30-day if no finding is made. Then the agency shall determine within 30 days after accepting an application as complete whether it intends to prepare an EIR or a negative declaration or use a previously prepared EIR or negative declaration except as provided in Section 15111. The 30 day period may be extended 15 days upon the consent of the lead agency and the project applicant. The BayoTech Initial Study/Mitigated Negative Declaration was made available May 30, 2023, for a 30 day public comment period. The Port of Stockton has been aware of this Project for at least 60 days, likely much longer. No disclosure of the application date was provided to inform the community of the 180 day/270 day consideration period.</p>	<p>There is no requirement under the CEQA to notify the public of a complete application or the decision to prepare an IS/MND. The timeline guidelines cited in the comment are contingent on an agency's receipt of a complete application, not knowledge of a proposed project.</p> <p>In addition, the proposed project was discussed with the community ahead of the release of the Draft IS/MND at the April 19, 2023, Port Outreach Committee meeting.</p> <p>No changes to the IS/MND are required.</p>
DSG-3	<p>The Port Commissioners will decide whether the Project, as put forth in the BayoTech Initial Study/Mitigated Negative Declaration, may have a significant effect on the environment which was not mitigated or avoided and if this is the case, "the lead agency shall prepare a draft EIR and certify a final EIR prior to approving the project. It shall circulate the draft EIR for consultation and review pursuant to Sections 15086 and 15087 and advise reviewers in writing that a proposed negative declaration had previously been circulated for the Project. We will provide substantial evidence as fact and fact-based reasonable assumptions or expert opinion 6 that the BayoTech Initial Study/Mitigated Negative Declaration failed to consider fully the following significant negative environmental impacts and potential significant impacts that may remain for the proposed Project: • Hydrogen Gas Hazards, Hydrogen Production Process and Dispensing Safety, Natural Gas Supplies, Hydrogen Production Emissions • Greenhouse Gases, Global Warming Potential, Climate Change, Emissions, and Mitigation Measures, • Environmental Assessment of Odor Impacts</p>	<p>The Draft IS/MND presents a full and thorough analysis of the proposed project, and an EIR is not required. Please see responses to specific comments.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-4	<p>Hydrogen gas (H₂) is highly flammable with lower ignition energies than gasoline or methane (natural gas). Special engineering controls are needed to monitor including leak detection along with special flame detectors because hydrogen burns with a nearly invisible flame. Hydrogen is a nontoxic and lighter-than-air gas, which negates most risk from inhalation or pooling. However, the U.S. Department of Energy strictly regulates the production, storage, and delivery of hydrogen at high pressure due to its flammability, according to the BayoTech Initial Study/Mitigated Negative Declaration. Hydrogen gas transportation and storage requires specialized infrastructure to prevent embrittlement of metals, as hydrogen (H₂) is the smallest molecule and can leak through metal or polymer materials as well as through tiny cracks. Hydrogen is an attractive fuel because emissions are only heat and water when combusted. Additionally, hydrogen powered vehicles weigh less, resulting in fuel conversions that are 2 to 3 times more efficient than internal combustion engines using gasoline or diesel.</p> <p>However, hydrogen gas has been identified as an indirect greenhouse gas (GHG) that causes increases in methane, ozone, and stratospheric water vapor in the atmosphere. Most of hydrogen's warming impacts occur during the first few decades after its emission. Rapid reduction in greenhouse gas emissions is critical to avoid several tipping points can further contribute to warming impacts. Currently, there are no commercially available leak detection systems for hydrogen that can detect smaller leaks that would have climate warming effects. Larger leaks can be detected by the sound produced when escaping pressurized vessels.</p>	<p>Regarding the potential for leaks, BayoTech will employ several systems to monitor and control leaks at the facility, including the following:</p> <ul style="list-style-type: none"> • Use of pressure sensors, which detect pressure loss in production equipment, compression systems, ground storage pods, and filling facilities. • Use of gas and flame detection, which involves using thermal and optical sensors to detect natural gas or hydrogen leaks and flames. • Automated control and shutdown systems that isolate the affected system. • Valve testing to the Canadian Standards Association (CSA)/American National Standards Institute (ANSI) <i>Fuel System Components for Hydrogen Vehicles Hot Gas Valve (HGV)</i> 3.1 standards (2015) <ul style="list-style-type: none"> ○ CSA/ANSI HGV 3.1 sets requirements for newly produced compressed hydrogen gas fuel system components and a maximum leak rate of 10 normal cubic centimeters per hour (N cc/hr) of hydrogen. <p>However, due to the nature of hydrogen, some level of leakage is expected. Through system tests, BayoTech has found that 0.018 kilogram per year (kg/yr) of hydrogen would be lost through leakage per each 25-cylinder storage pod. The proposed project includes eight storage pods for a combined maximum assumed leakage rate of 0.144 kg/year.</p> <p>Once produced, hydrogen would be stored in 310 liter cylinders. The cylinders' design pressure is 520 bar and hydrogen would be kept at an ambient temperature of 25°C (77°F). Hydrogen, at 520 bar/22°C, is above its critical point¹ and would be 100% gas within cylinders. Cylinders would be stored in groups of 25 in pods, with 8 pods in total.</p> <p>Regarding whether hydrogen should be considered a GHG, the Intergovernmental Panel on Climate Change (IPCC) does not consider hydrogen a GHG because it does not have the inherent property of trapping heat in the atmosphere. However, the IPCC has found that hydrogen reacts similar to carbon monoxide (CO) in the troposphere leading to ozone production and methane enhancement and like CO, considers hydrogen an indirect GHG. Based on these properties, the IPCC has calculated a 100-year GWP for hydrogen of 5.8.</p> <p>While the effects of leaks were not calculated as hydrogen is not a direct GHG, the indirect effects of hydrogen expressed as CO₂e can be calculated as 0.000144 metric tons (MT) H₂/yr x 5.8 = 0.00084 MT CO₂e/yr. This information does not change the findings of the Draft IS/MND and has been added to the Recirculated Draft IS/MND.</p>
DSG-5	<p>Hydrogen gas can be produced using three energy sources: fossil fuels (methane or coal), biogases renewable and municipal trash), and solar. The type of hydrogen production proposed is from natural gas which produces carbon dioxide without carbon sequestration and is called "gray hydrogen." Approximately 95% of hydrogen produced in the United States is by the reaction of natural gas (methane) with high temperature steam (700°C–1,100°C) in a process known as steam methane reforming (SMR). Generating hydrogen in this manner is carbon intensive and energy intensive relating to energy needed for compressing and cooling the hydrogen gas. Further energy would be required to produce liquified hydrogen gas.</p> <p>The quantification of the amount of hydrogen gas that will be stored onsite (310 gallons) suggests that perhaps the Project will include further cooling and compressing of the gas to produce a liquefied hydrogen fuel product instead of a pressured gaseous fuel.</p> <p>According to the BayoTech Initial Study/Mitigated Negative Declaration H₂ on site storage tanks are described as the following:</p> <ul style="list-style-type: none"> • Each pod contains 25 cylinders. • Pod dimensions are 9 feet wide, 12 feet long, 9 feet high. • Each cylinder capacity is 310 gallons of H₂ fuel. 	<p>As fully disclosed in the Draft IS/MND, hydrogen will be produced using natural gas through SMR, which was fully assessed in the Draft IS/MND, including the energy needed to produce hydrogen and the GHG emissions from hydrogen production. As stated in the energy analysis (Draft IS/MND Section 3.3.6), the proposed hydrogen production and filling station would require energy to power lights and equipment, including computers, machineries, and heating and cooling units. The proposed project would obtain energy from local providers by connecting to existing Port power infrastructure, including electricity and natural gas from Pacific Gas and Electric (PG&E). As noted in Table 5 of the Draft IS/MND, the proposed project would generate a daily demand of up to 33,372 kilowatt hours (kWh); that is an annual demand for 11,680,234 kWh of electricity and 142 to 300 standard cubic feet per minute of natural gas.</p> <p>The comment further suggests that liquified hydrogen will be produced. This suggestion is incorrect. No liquified hydrogen gas will be produced.</p> <p>The proposed cylinder volume is 310 liters, not 310 gallons. The tank volume was incorrectly presented in gallons, not liters, in the Draft IS/MND and has been corrected in the Recirculated Draft IS/MND. However, the tank volume was not used in any analysis; therefore, this error does not affect any analysis or conclusions presented in the Draft IS/MND. The cylinders' design pressure is 520 bar (7,800 pounds per square inch [psi]), and hydrogen will be kept at 25°C (77°F). Hydrogen at 520 bar/22°C is above its critical point (or 13 bar, -240°C; at the critical point there is no change of state when pressure is increased or if heat is added) and therefore will be 100% gas within cylinders.</p>

¹ At the critical point, there is no change of state when pressure is increased or if heat is added.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-5	<p>BayoTech would install two modular steam methane reformers (SMRs), hydrogen pumping equipment, and a central dispensing system, which would produce, store, and distribute gaseous hydrogen. The SMR system reacts natural gas and steam, in the presence of a catalyst, to produce synthesis gas (syngas). Downstream of the SMR, two additional small reactors use the water-gas shift reaction to convert the carbon monoxide (CO) in syngas to carbon dioxide (CO₂). The final step in the process is a purification step, which uses pressure-swing adsorption to produce 99.97% pure hydrogen at a product flow rate of up to 2,000 kg per day (approximately 70 standard cubic feet per day).</p> <p>The details of the proposed hydrogen production and dispensing processes are further described in the Appendix B Air Quality Results and Assumptions which contained a separate report titled "Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Report" prepared by EnSafe and dated December 2022 (pages 148-1233). The production process begins with the removal of sulfur-based chemicals using a desulfurization process involving some "filter" which is "assumed" to require replacement annually.</p> <p>Sulfur in the form of mercaptan sulfur is added by Pacific Gas and Electric to all natural gas (methane) transported as a safety measure, allowing olfactory detection if a leak occurs. Some fraction of the natural gas (methane) supplied to the proposed Project may not be desulfurized before use based on the following information: The SMR produces syngas from natural gas and steam feedstocks and requires heat which is supplied by the combustion of natural gas and process gases. The process gases resulting from the production process is described as desulfurized but the natural gas that would be combusted to produce heating energy may or may not be desulfurized. The required full environmental impact analysis should clarify the process so that decision makers and the public can readily understand the processes that would be occurring at the proposed Project.</p>	<p>All the natural gas used in BayoTech's system, whether as a reactant or as part of the fuel mix for the furnace, will undergo the desulfurization process. The resultant sulfur in the gas stream will be at the parts per billion (ppb) level, which is consistent with what was assumed in the air quality analysis. Therefore, the amount of sulfur was not underestimated in the Draft IS/MND, and no changes are required.</p>
DSG-6	<p>The proposed facility would operate 24 hours per day, 7 days per week, and 350 days a year producing up to 700,000 kilograms of hydrogen annually using two BayoTech's H2-1000 Generation Systems and methane (natural gas) supplied by Pacific Gas and Electric utilizing existing Port of Stockton power infrastructure. According to the BayoTech Initial Study/Mitigated Negative Declaration up to 2,000 kg of hydrogen would be stored on site in fixed storage containers called storage pods. The hydrogen gas is compressed and stored in BayoTech's hydrogen storage pods until being dispensed to transport trailers owned by BayoTech or others. These trailers will transport the produced and compressed hydrogen gas to customers in the area (customers throughout the region). The customer service range was not identified in the BayoTech Initial Study/Mitigated Negative Declaration and should have been described in accordance with the California Environmental Quality Act. The entire hydrogen gas production facility is designed to be operated unattended and monitored remotely from the central control room in Albuquerque, New Mexico. An operator at the Port of Stockton proposed site will primarily assist the truck dispensing operations between the hours of 8:00 AM and 5:00 PM. Elsewhere in the BayoTech Initial Study/Mitigated Negative Declaration states: On-site dispensing operations would take place for up to 16 hours per day, between 6:00 a.m. and 10:00 p.m. based upon customer demand, during which time – at a minimum – one trained and qualified BayoTech technician would be present. Typical on-site staff are expected to include one maintenance person during normal operation and one or two truck drivers picking up and dropping off trailers. During shift changes, safety inspections, maintenance, and other normal operations, additional BayoTech or contractor personnel may also be on site. Based on these conflicting hours needed for dispensing, it is unclear what will happen between the hours of 6:00 to 8:00 AM and 5:00 to 10:00 PM if assistance is needed with dispensing this extremely flammable material or if in fact there will be multiple shifts. Trailer inspections should occur prior to dispensing hydrogen gas, especially since other than BayoTech trailers will be used. Further analysis of the operations is needed, which should be described in the required full environmental impact report analyses.</p>	<p>The comment is incorrect. The customer range (truck travel distance) was included in Section 3.3.3.2 and in Appendix B of the Draft IS/MND.</p> <p>As disclosed in the Draft IS/MND, all trucks are assumed to travel north, south, and east via Interstate 5 (I-5) and west on State Route 4 (SR 4) via Navy Drive connectors. The vehicle fleet travel distance assumptions were estimated at 200 miles per day for 30% of the truck trips, 150 miles per day for 50% of the truck trips, and 50 miles per day for 20% of the truck trips (in accordance with project applicant guidance). These truck lengths were fully assessed in the Draft IS/MND.</p> <p>The facility will not be manned remotely. Remote operations are capable of running the plant (including shutdown) in the event there is no one at the site. However, the facility will be fully staffed on site during the working hours of 8:00 a.m. and 5:00 p.m. There will be one person on site and present while dispensing, even if it is outside operating business hours.</p> <p>The following text has been provided in the Recirculated Draft IS/MND to clarify this point:</p> <p>"The following staff would be present on site to ensure production, storage, filling and deliveries are conducted in the safest manner possible:</p> <ul style="list-style-type: none"> • Operations Technician for local hub maintenance and monitoring • Drivers making deliveries from filled trailers • Fill Technicians responsible for filling trailers to cover the hours provided • Hub Operations Manager to oversee all operations on site <p>Typical on-site staff are expected to include one maintenance person during normal operation and one or two truck drivers picking up and dropping off trailers. During shift changes, safety inspections, maintenance, and other normal operations, additional BayoTech or contractor personnel may also be on site. The production facility would also be remotely monitored and controlled using industry standard control systems and cloud infrastructure from a purpose-built, state-of-the-art control center, located at BayoTech's operational headquarters in Albuquerque, New Mexico. Remote operations are capable of running the plant (including shutdown) in the event there is no one at the site. However, the facility would be fully staffed on site during the working hours of 8:00 a.m. and 5:00 p.m. In addition, there would be one person on site and present while filling, even if it is outside operating business hours.</p> <p>Control Room Operators would be on a rotating schedule to provide 24-hour-a-day/7-day-a-week coverage in the Control Room. An on call Control Room Supervisor would be assigned to provide support at all times."</p>

BayoTech Draft IS/MND Response to Comments

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DSG-7	Information about community hazard analysis was not provided in the BayoTech Initial Study/Mitigated Negative Declaration in the case of communication technology interruptions, whether the trained and qualified BayoTech dispensing operators/maintenance person will be trained to handle emergency responses, or how the remote monitoring will alert Port of Stockton and City of Stockton emergency responders.	<p>As discussed in Sections 2.4 and 3.3.9 of the Draft IS/MND, hydrogen is a nontoxic, lighter-than-air gas, which negates risk from inhalation or pooling. However, the U.S. Department of Energy strictly regulates the production, storage, and delivery of hydrogen at high pressure due to its flammability.</p> <p>Please see response to comment DGS-6. BayoTech’s facility is designed to meet all relevant codes and standards to ensure the safe operation of our hydrogen production plants. BayoTech would maintain and implement an Integrated Control and Safety System (ICSS) for the facility, which would include measures designed to minimize the risk of impacts to persons and the environment from facility operation. The facility ICSS would include constant personnel or technology-based monitoring of the hydrogen production and storage systems, and the production and storage systems would use appropriate systems for processing and storing hydrogen. Federally compliant high-pressure cylinders would be used for truck transport.</p> <p>All procedures developed include potential hazards and mitigation techniques, as well as the requirements to cover each hazard during the pre-job brief prior to performing actions.</p> <p>The following text has been added to the Recirculated Draft IS/MND to clarify the process for communicating with emergency responders and the community in the case of an emergency:</p> <p>There is an emergency shut down procedure in place for BayoTech facilities. Local fire, police, and emergency response agencies would be consulted. A description of all contingency plans to be implemented in response to the occurrence of a fire emergency or a hazardous substance incident would be provided. Emergency procedures for the proposed facility include the following:</p> <ul style="list-style-type: none"> • Develop Alarm and Emergency Response Instruction (CR-AERI-001), which covers abnormal conditions associated with hydrogen production unit operations, as well as immediate and subsequent response actions • Develop Local Emergency Response Plan with point of contact information, muster locations for emergency events, and local actions taken during different events • Provide uninterruptible power supply for the facility that controls the programmable logic controllers (PLC) to ensure an orderly shutdown and use the cellular network to contact first responders. <ul style="list-style-type: none"> – An uninterruptible power supply is located in the Control Room server room in Albuquerque, New Mexico, to provide continued communications in the event of a loss of power to the Albuquerque site. This uninterruptible power supply provides adequate time to safely shut down the plant remotely or to shift operational control to qualified operators locally on site. – An uninterruptible power supply would also be located locally at the Stockton facility site to provide continued power to critical components in the event of a loss of site power. This power supply provides adequate time for a safe and controlled shutdown of the plant prior to a complete loss of power.
DSG-8	The BayoTech Initial Study/Mitigated Negative Declaration, elsewhere described the central control room located in Albuquerque, New Mexico as: “...production would be remotely monitored and controlled using industry standard control systems and cloud infrastructure from a purpose built, state-of the-art control center, located at BayoTech’s operational headquarters in Albuquerque, New Mexico.” No information was provided about the number of monitoring staff at the Albuquerque New Mexico that will be in the central control room or whether the central control room is staffed 24 hours a day. Electrical grid overloads are becoming ever more common, in addition to normal outages related to weather and accidents. How will emergency responders be notified in case of anticipated “malfunctions” if communication technologies are interrupted or there is an electrical outage? Community safety information to mitigate the hazards of hydrogen gas production and handling was not disclosed in the Initial Study/Mitigated Negative Declaration and must be further analyzed in a full environmental impact review analysis.	<p>Please see responses to comments DSG-6 and DSG-7, which provide information on staffing and emergency response. In case an electrical outage happens outside of normal business hours, the facility will have an uninterruptible power supply that controls the programmable logic controllers (PLC) to ensure an orderly shutdown and facility staff will use the cellular network to contact first responders.</p> <p>An uninterruptible power supply is located in the Control Room server room in Albuquerque, New Mexico, to provide continued communications in the event of a loss of power to the Albuquerque site. This uninterruptible power supply provides adequate time to safely shut down the plant remotely or to shift operational control to qualified operators locally on site.</p> <p>An uninterruptible power supply would also be located locally at the Stockton facility site to provide continued power to critical components in the event of a loss of site power. This power supply provides adequate time for a safe and controlled shutdown of the plant prior to a complete loss of power.</p>
DSG-9	The condition of the Port of Stockton gas infrastructure pipelines for conveying methane from Pacific Gas and Electric supply pipelines to the facility was not discussed. Leaking pipelines are hazardous to the community and climate. The BayoTech Initial Study/Mitigated Negative Declaration failed to characterize the existing infrastructure that would be used for conveyance of methane or the new infrastructure that is needed. The BayoTech Initial Study/Mitigate Negative Declaration did not indicate that Pacific Gas and Electric will be delivering natural gas at a pressure higher than standard delivery pressure and what if any impact there would	As discussed in Section 2.4 of the Draft IS/MND, natural gas would be provided from local providers (i.e., PG&E) connecting to existing pipelines and infrastructure within the Port. PG&E’s existing infrastructure would not require any modifications or new infrastructure outside the facility. PG&E will provide its normal floating high-pressure gas service from 47 to 54 pounds per square inch gauge (psig), and then BayoTech will compress to 150 to 175 psig. There is no indication that PG&E’s infrastructure is compromised or not sound. Natural gas pipelines are overseen by both federal and state agencies that mandate regular safety checks and testing. No changes to the IS/MND are required.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
	<p>be relating to infrastructure or natural gas availability. According to Pacific Gas and Electric, "Gas will normally be delivered at PG&E's standard delivery pressure of seven inches of water column." This standard transmission pressures of 7 inches of water converts to 0.25 pounds per square inch.</p>	
DSG-10	<p>The amount of natural gas (methane) used was described in many ways making quantification more difficult as indicated below.</p> <ol style="list-style-type: none"> 1) The total energy input, which is based on the higher heating value of the fuel to be burned, is estimated to be approximately 8,000,000 British thermal units (BTU) per hour. 2) Each one of the steam methane reformers require methane at 7,968 standard cubic foot per hour (between 145 pounds per square inch and 175 pounds per square inch) 3) Maximum hourly heat input per steam methane reformer unit (4 MMBtu/hour) <p>The natural gas flow rate proposed 175 pounds per square inch is significantly higher than Pacific Gas and Electric natural gas flow rates of 0.25 pounds per square inch. Elsewhere, other and even higher natural gas flow rates are described in Table 5 (below) that can be significantly higher than 175 pounds per square inch. Flows up to 291 standard cubic feet per minute, multiplied by 60 minutes/hour yields 17,460 standard cubic feet per hour which is significantly greater than 7,968 standard cubic feet per hour described above. The BayoTech Initial Study/Mitigated Negative Declaration failed to clearly describe the amount of natural gas (methane) that will be used to produce hydrogen gas using the steam methane reformer method in plain language so that decision makers and the public can rapidly understand the proposed Project's impact.</p>	<p>The comment is confusing pressure, energy, and volume.</p> <p>The total energy input is not equivalent to the volume of natural gas. In the "maximum" base case, there would be a rate of 300 standard cubic feet per minute (SCFM) of natural gas being fed to the H₂ generator units (or 150 SCFM per unit). This natural gas is received at the standard utility supply pressure 47 to 54 psig and then compressed to 150 to 175 psig in a feed booster compressor, before being fed to the units. Because the Draft IS/MND refers to standard cubic feet per minute (reference conditions of 68°F, 14.7 pounds per square inch absolute [psia]), can be used to derive the mass flow rate. In the base case, the methane feed to the reformers is 5 SCFM per tube or 8,100 standard cubic feet per hour.</p> <p>A brief description of how the BayoTech H₂-1000 process works is as follows and has been added to the Recirculated Draft IS/MND:</p> <ul style="list-style-type: none"> • Municipal natural gas is compressed to the working pressure (as previously described) and sulfur is removed via the desulfurization process. • Municipal water is cleaned to meet the ASTM International (ASTM) D1193 standard and is used to generate steam. • The steam and natural gas are combined and sent to the steam reformers, where the bulk of the hydrogen is formed. • The reformer product (termed "syngas") is sent to two water gas shift reactors to make additional hydrogen. • The resulting syngas is then sent through Pressure Swing Adsorption (PSA), which results in high purity hydrogen; the leftover components are collected as "tail gas" and sent back to the furnace to recuperate its fuel value.
DSG-11	<p>The BayoTech Initial Study/Mitigated Negative Declaration disclosed how much electricity was used in San Joaquin County as follows: In 2020, total electricity consumption in the County was estimated at 5,736.91 gigawatt hours (CEC 2020b). PG&E has a variety of renewable and non-renewable sources. Utility-provided energy demand in San Joaquin County has steadily increased and is experiencing the fastest growing customer demand in PG&E's Stockton Division due to new residential development and growth in the agriculture and industrial sectors (PG&E 2022). The (PG&E 2022) reference: PG&E, 2022. Company Profile. Accessed October 26, 2022.</p> <p>Available at: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page did not contain any specific San Joaquin Data nor data regarding the Stockton Division.</p> <p>A citation was provided for total natural gas (methane) consumption in San Joaquin County, but the actual amount was not included in the BayoTech Initial Study/Mitigated Negative Declaration: CEC, 2020c. Gas Consumption by County. Accessed August 29, 2022. Available at: http://www.ecdms.energy.ca.gov/gasbycounty.aspx. The following information was obtained from the California Energy Commission website for energy consumption in 2021 for San Joaquin County.</p>	<p>The correct reference for utility-provided energy demand in San Joaquin County is as follows: PG&E, 2016. <i>Northern San Joaquin Power Connect. Fact Sheet</i>. Accessed October 2, 2023, Available at: https://www.pge.com/pge_global/common/pdfs/safety/electrical-safety/safety-initiatives/northern-san-joaquin/PGE-Northern-SanJoaquin-Phase-2-FactSheet.pdf.</p> <p>This has been updated in the Recirculated Draft IS/MND.</p> <p>The total amount of natural gas consumption (96,820,000 therms in 2022 for San Joaquin non-residential users) is provided in the Recirculated Draft IS/MND. The proposed project would generate a maximum annual demand of 1,630,610 therms annually.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-12	<p>The relationship between Therms and British Thermal Units (BTU) is 1 Therm equals 100,000 BTU.</p> <p>Eight million BTU/hour would equate to 80 Therms per hour or 1920 Therms per day or 700,800 Therms per year.</p> <p>The proposed BayoTech Hydrogen Production and Distribution Facility would represent approximately a one percent increase in total natural gas (methane) usage COUNTYWIDE. No evaluation was provided of the relative proportion of natural gas (methane) that will be used to the City of Stockton's use, where the proposed Project is to be located. Whether this increased use is significant or not is not discussed and analysis to determine whether the proposed Project may represent a significant increase in energy usage is required by the California Environmental Quality Act, including possible impacts on the physical environment including infrastructure associated with conveyance of the natural gas through the San Joaquin-Sacramento Delta under increased subsidence and sea level rise conditions associated with Project's analysis of climate change conditions.</p>	<p>Please see response to comments DSG-10 and DSG-11. The comment does not provide any information related to or support for a significant increase in energy use. The total amount of natural gas consumption (96,820,000 therms in 2022 for San Joaquin non-residential users) is provided in the Recirculated Draft IS/MND. The proposed project would generate a maximum annual demand of 1,630,610 therms annually. The natural gas supply needed for operation of the proposed project does not exceed the capacity of local natural gas infrastructure or require new infrastructure investment from the utility. The natural gas used by the proposed project would be conveyed to the site by existing permitted pipeline infrastructure. Therefore, the increased use is not significant, and the findings remain less than significant as identified in the IS/MND.</p>
DSG-13	<p>Hydrogen production emissions occur during two production processes, start-up and operations emission. The expected startup emissions for each steam methane reformer will occur 12 times per year and were quantified as such. These startup events will vent emissions of syngas formed during the steam methane reaction that contain mostly H₂ (hydrogen gas), CH₄ (methane), CO₂ (carbon dioxide), and CO (carbon monoxide). No quantification of emissions resulting from "up-set" conditions, "shut-down," or "malfunction event" conditions was included in the BayoTech Initial Study/Mitigated Negative Declaration, except that the occasions were "rare" which was undefined. "On rare occasions, start-up conditions and up-set conditions would result in syngas releases into a vent dedicated for the control of releases during such start-up, shut-down, and malfunction events." Quantification of this syngas emissions over the 12 hour period when venting during startup operations is described as follows which does not include up-starts, shut-down or malfunction events.</p>	<p>The Draft IS/MND presents a conservative number of start-ups to ensure the assessment captured the worst-case scenario. The air quality analysis assumed annual shutdowns plus an additional 11 venting events to be conservative. However, the units are planned to operate continuously, with only one scheduled shutdown/startup cycle per year. The other 11 calculated venting emissions are included in order to account for any unplanned events. Actual events are expected to be less.</p> <p>Syngas emissions have been calculated for 12 events and are included in the emissions tables (see Table 9 of Appendix B). No changes to the IS/MND are required.</p>
DSG-14	<p>The form of nitrogen that will be vented during startup was not disclosed in the text description of startup operations but was described in tabular form as nitrogen gas (N₂). Ancillary to the steam methane reformer unit is the selective catalytic reduction (SCR) unit which is described as a post-flue gas treatment. The selective catalytic reduction unit uses anhydrous ammonia (NH₃) as a reducing agent which is introduced into the flue gas stream to reduce NO_x emissions to nitrogen gas (N₂) when in contact with a catalyst. The startup emissions were not adequately described to determine whether NO_x will be emitted. Further description of the process is needed.</p>	<p>The composition of the atmosphere is approximately 77% nitrogen. During the start-up process, nitrogen is introduced to remove residual gases and steam from the process piping and equipment. Typically, the nitrogen flows through the reformer process and is then vented prior to lighting the burners. There is no combustion activity during the nitrogen venting activity and nitrogen oxides (NO_x) emissions would not be generated during this process.</p> <p>As part of the emission process, the introduction of natural gas fuel and air into a combustion chamber will generate NO_x and other criteria pollutant emissions, which are provided in Table 8 of the Draft IS/MND.</p> <p>The SCR catalyst has a minimum operating temperature of 450°F. During a short interval when the system is heating up, the SCR will not be online. The flue gas will contain NO_x at <50 parts per million (due to low-NO_x burner operation) until it is hot enough to enter the SCR. This issue is not unique to the BayoTech system; it applies to any combustion system with SCR control.</p>
DSG-15	<p>The operational emissions (flue-gas exhaust) have been estimated using BayoTech 2022 data as 59.7% nitrogen, 3.7% oxygen, 21.9% CO₂, 14.7% water, 5 ppm of NO_x (with SCR), and trace amounts of CO (at 76 ppm), PM (at 7 ppm) and volatile organic compound (VOC) (at 5 ppm) and will be further discussed below.</p> <p>The BayoTech Initial Study/Mitigated Negative Declaration cited the white paper prepared by the University of California Berkeley and the California Board of Forestry and Fire Protection, entitled "Introduction to the Hydrogen Market in California" as the source for the statement "Previous modelling approaches have estimated that hydrogen could play an important role in decarbonization of transportation, as well as buildings and industry sectors." This 2020 memo was a draft for public comment relating to the use of forestry products.</p>	<p>The statement cited from the document was not related to forestry products, but a comment on hydrogen's potential role in the energy landscape of California as a whole. No edits are required.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-16	Atmospheric chemistry of greenhouse gases is an ever-expanding science, as more information has been collected, further interactions have been identified. One such interaction involves hydrogen gas releases to the environment. As stated previously, hydrogen gas is "lighter than air" which is of benefit to ground level atmospheric conditions but creates a source of greenhouse gas at higher atmospheric elevations. Currently, there are no commercially available leak-detection systems for hydrogen that can detect smaller leaks that would have climate warming effects.	Please see the response to comment DSG-4.
DGS-17	The BayoTech Initial Study/Mitigated Negative Declaration described the handling of the transport trailers as followed: A filling operator would hook up returned empty truck trailers and vent any residual H ₂ through the manifold vent stack during the dayshift (between the hours of 8 am and 5 pm) so that truck operators could come in during any hour, connect to an empty trailer, and then safely fill a trailer. The BayoTech Initial Study/Mitigated Negative Declaration failed to include quantification of the "residual H ₂ " that would be vented into the atmosphere.	Hydrogen storage cylinders on the truck-trailer beds are equipped with manifold venting systems for emergency situations. In the case of an emergency (temperature exceeding 100°C), the manifold venting system is designed to safely direct hydrogen gas up and away from the pod. In such cases, the venting would prevent ignition. The manifold vent is also designed to prevent moisture or ice from accumulating in the tubes manifold. Under normal filling and dispensing use, the operator may open a hand valve to empty the filling/dispensing manifold, prior to a loading operation. If so, the operator would release a very small amount of residual hydrogen gas corresponding to the normal leakage rate of the cylinder valves. As noted in comment DGS-4, BayoTech has calculated the maximum combined leakage rate to be no greater than 0.144 kg/year for the proposed project.
DSG-18	The following graphic from "Climate Consequences of Hydrogen Emissions" shows the relationship between hydrogen gas and hydroxide (OH). As H ₂ gas increases, the methane oxidizing hydroxide decreases. With decreased availability of hydroxide to oxidize methane, the methane residence time in the atmosphere and global warming potential increases. The United States Environmental Protection Agency estimates that methane (CH ₄) has a global warming potential (GWP) of 27-30 over a period of 100 years whereas carbon dioxide (CO ₂) has a GWP of 1.18. Methane emissions last in the atmosphere about a decade on average given sufficient oxidation potential, which is much less time than carbon dioxide whose atmospheric lifetime is on the scale of thousands of years. But because methane absorbs much more energy than carbon dioxide, methane has a much higher GWP than carbon dioxide. The methane GWP also accounts for some indirect effects, such as the fact that methane is a precursor to ozone, and ozone is itself a greenhouse gas.	Please see response to comments DGS-4 and DGS-16. Methane emissions were considered as part of the GHG analysis using the IPCC AR4 100-year methane GWP factor, which incorporates both the direct and indirect effects of methane on global warming. No changes to the Draft IS/MND are necessary.
DSG-19	The BayoTech Initial Study/Mitigated Negative Declaration stated that for greenhouse gas emissions analysis, methane is assumed to have a GWP of 21 over a 100 year period. This represents a significant underestimation of the potential effects related to operations involving the use of methane to produce hydrogen gas, between 22% and 30% underestimated. [...] No reference was provided in the BayoTech Initial Study/Mitigated Negative Declaration for the use of a global warming potential of 21 for methane. The December 2022 "Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Report" prepared by EnSafe in the BayoTech Initial Study/Mitigated Negative Declaration Appendix B included the following Table: Total Emission Rates for one H ₂ -1000 unit using BayoTech Data. This table uses 25 for the global warming potential of methane emissions and noted that this data came from the IPCC second and fourth assessment report. The United States Environmental Protection Agency uses 27–30 global warming potential factors over a 100 year period for methane in compliance with international greenhouse gas (GHG) reporting standards under the United Nations Framework Convention on Climate Change (UNFCCC). UNFCCC guidelines now require the use of the GWP values from the IPCC's Fifth Assessment Report (AR5), published in 2013.17	The Draft IS/MND incorrectly referred to the GWP for CH ₄ and N ₂ O as being 21 and 310, respectively. These values have been corrected in the Recirculated Draft IS/MND. Appendix B correctly reports the IPCC AR4 GWP factors of 25 for CH ₄ and 298 for N ₂ O, and these were the values used in all GHG calculations. This information has been added to the IS/MND but does not change any conclusions or require additional mitigation. The CARB <i>Regulation for the Mandatory Reporting of Greenhouse Gas Emissions</i> was originally approved in 2007 and revised in 2010, 2012, 2013, and 2014. Amendments to the Mandatory Reporting of GHG emissions were approved by the Office of Administrative Law on March 29, 2019. The AR5 values are the most recent, but the second assessment report (1995) and fourth assessment report (2007) values are also listed because CARB sometimes used them for GHG inventory and reporting purposes under the <i>Regulation for the Mandatory Reporting of Greenhouse Gas Emissions</i> . As lead agency, the Port chose to use GWPs, which are consistent with California Air Resources Board's (CARB's) practices. CARB has not used the AR5 GWP values (2013) in any of their recent GHG inventory and reports. Also, they have not yet requested facilities report the GHG emissions with the AR5 GWP values. Therefore, the Draft IS/MND used the similar GWP values from the IPCC second and fourth assessment reports
DSG-20	Recently, the United States Environmental Protection Agency published interim guidance in the Federal Register /Vol. 88, No. 5 /Monday, January 9, 2023 /Notices pg1199: "Methane is a potent greenhouse gas over a 100-year period, the emissions of a ton of methane contribute 28 to 36 times as much to global warming as a ton of carbon dioxide. Over a 20-year timeframe, methane is about 84 times as potent as carbon dioxide." Carbon dioxide levels in the atmosphere continue to rise and as of 2021 atmospheric levels of 414.21 ppm were reported. Evidence has long been available showing that hydrogen production from fossil fuels without carbon sequestration is not "clean" because emissions of greenhouse gases occur during production instead of combustion as is the case for fossil fuels. Carbon dioxide is produced during hydrogen gas formation and during the process of energy conversions from methane to hydrogen gas.	Carbon dioxide production from the SMR process is included in the total GHG emissions calculated in Appendix B of the Draft IS/MND. Please see response to comment DSG-19 for a discussion of the methane GWP factor.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DGS-21	<p>As discussed previously, the numbers representing carbon dioxide equivalence for methane emissions are low and no hydrogen gas emissions were included in the greenhouse gas emissions analysis indicating that the level of analysis performed did not fully account for the greenhouse gas production associated with the proposed Project's operations.</p>	<p>Please see response to comments DGS-17, DSG-18, and DSG-19. The analysis followed standard GHG reporting protocols. No changes are required.</p>
DSG-22	<p>The BayoTech Initial Study/Mitigated Negative Declaration characterized correctly that the greenhouse effect keeps the Earth's atmosphere near the surface warmer than without any greenhouse gases that trap heat that would otherwise leave the atmosphere. Without the greenhouse gases Earth would be too cold for water-based organisms, such as exist on our planet.</p> <p>Global warming environmental changes in California include:</p> <ul style="list-style-type: none"> • rising temperatures with an increased number of excessive heat days, • changes in crops relating to higher temperatures with increased evaporation rates, • drought, and • lack of frost days necessary for many fruits. <p>Other local impacts include:</p> <ul style="list-style-type: none"> • worsening air quality problems, • a reduction in municipal water supply due to reduced Sierra snowpack, • sea level rise, and • increases in wildfires relating to drought and changes in terrestrial ecosystems. <p>Public health is also affected by rising temperature, air pollutants, and increased infectious disease rates. These global warming effects were cited in the Initial Study/Mitigated Negative Declaration to have been from the Climate Change Center's California Changing Climate 2018: A summary of the Key Findings from California's Fourth Climate Change Assessment. The Fourth Climate Assessment also included "High Resolution Measurement of Levee Subsidence related to Energy Infrastructure in the Sacramento-San Joaquin Delta." The Delta was "once a great marsh, the Delta now is a network of channels and sunken "islands" that cover— together with Suisun Marsh—about 1,300 square miles. Laid over those islands and channels is the infrastructure of a twenty-first century economy: water supply conduits; major arteries of the state's electrical grid; natural gas fields, storage facilities, and pipelines; highways and railways; and shipping channels, all surrounded by an increasingly urban landscape." Subsidence is the sinking of the ground because of underground material movement and is most often caused by the removal of water, oil, natural gas, or mineral resources out of the ground by pumping, fracking, or mining activities. Due to shallow groundwater and reduced water quality, farmers in the Delta do not typically extract groundwater. The only extraction done in the Delta is natural gas. In addition to natural gas extraction which may or may not affect subsidence rates, microbes oxidize the peat soils, high in organic carbon, when exposed to the atmosphere. This aspect of ground level lowering is thought to be the most important factor. There are important efforts being made to reduce subsidence in the Delta. These efforts to reduce subsidence involve enhanced deposition of vegetation at considerable costs. Reducing subsidence is important for existing natural gas (methane) infrastructure safety.</p>	<p>The comment is beyond the scope of this analysis. The proposed project will only use natural gas from already approved projects.</p>
DGS-23	<p>To meet California's climate goals, use of fossil fuels like natural gas will need to decrease by 80 percent or more by 2050. This means that the source of the natural gas (methane) for hydrogen gas production that is proposed should not be considered to comply with existing plans since natural gas uses will be increased. Hydrogen gas will be an important alternate fuel as described previously and will be produced using renewable energy and the process of electrolysis. Hydrogen produced using natural gas (methane) without carbon sequestration is not renewable, not sustainable, and does not reduce carbon dioxide emissions necessary to meet California's climate goals. During the writing of this comment letter, the Earth experienced the highest average temperature ever recorded relating to natural cycles and increased greenhouse gas emissions.</p>	<p>CARB's 2022 Scoping Plan does not exclude hydrogen produced by SMR; therefore, the proposed project is not inconsistent with applicable plans. As of 2023, neither renewable natural gas (RNG) supply nor renewable electricity are available at the capacity required to meet hydrogen production needs without SMR of pipeline natural gas.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DGS-24	The proposed BayoTech production and filling facility will produce 2000 kg/day of hydrogen gas which correlates to 700,000 kg yearly, if operating 350 days as indicated. This level of production reportedly will result in the production of 12,333 metric tons of carbon dioxide equivalence per year or 12,333,000 kilograms of carbon dioxide equivalence. However, the BayoTech Initial Study/Mitigated Negative Declaration only proposes to mitigate 2,333 metric tons of carbon dioxide equivalence to under level of significance ignoring that the baseline for the proposed site has zero carbon dioxide emissions. This doing business as usual – every project approval – allowing 10,000 metric tons of carbon dioxide equivalence will continue the growth of carbon emissions responsible for climate change effects that are affecting our community and beyond. People are suffering from the effects of increased carbon dioxide and other greenhouse gas emissions in the atmosphere.	CEQA does not require that all GHG emissions be mitigated. A lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account a project’s incremental contribution to climate change. (See CEQA Guidelines, § 15064.4, subd. (c).) The Port used an established threshold upon which to measure the effects and make a significance finding. No changes are necessary.
DSG-25	In making legal findings, the State of California, Court of Appeal, Fourth Appellate District, Division One stated: “To meet legislative GHG emission reduction targets, CARB recommends reducing emissions to six MTCO ₂ e per capita by year 2030 and to two MTCO ₂ e per capita by 2050. This is equivalent to reducing 2014 emissions by 40 percent (by 2030) and 77 percent (by 2050).” Taking up carbon dioxide through sequestration and making changes to the business as usual approach are needed to slow carbon dioxide emissions and reduce use of short-term greenhouse gases with high global warming effects.	In making legal findings, the State of California, Court of Appeal, Fourth Appellate District, Division One stated: “To meet legislative GHG emission reduction targets, CARB recommends reducing emissions to six MTCO ₂ e per capita by year 2030 and to two MTCO ₂ e per capita by 2050. This is equivalent to reducing 2014 emissions by 40 percent (by 2030) and 77 percent (by 2050).” The decision was concerned with approval of a Climate Action Plan. The primary issue was whether a GHG mitigation measure having to do with carbon offsets is valid. It is unclear how this has bearing on the project-level analysis.
DGS-26	The proposal that all of the carbon dioxide produced does not requires mitigation ignores the efforts made at a local level to reduce carbon dioxide emission and imposes a burden on the community to mitigate the full emissions from the proposed BayoTech Project to achieve California’s climate change goals.	CEQA does not require 100% mitigation. The proposed project and mitigation measures combined result in a project that is below the reasonably assigned significance criteria for direct construction and operational GHG emissions. The analysis also presents a discussion of how the proposed project will fit into the state’s broader low carbon fuel plans to provide hydrogen for use in heavy duty trucking applications. As discussed further in responses, the proposed project is consistent with low carbon fuel plans.
DGS-27	Not only did the BayoTech Initial Study/Mitigated Negative Declaration fail to propose to fully mitigate the carbon dioxide emissions but the proposed mitigation measure involved the purchasing of “renewable natural gas using “book and claim” credits in accordance with California LCFS methodology according to the California Air Resources Board.” The low carbon fuel standard (LCFS) includes “book and claim” credit for full term analyses of greenhouse gas emissions from fuel production through tailpipe emissions.	The low carbon fuel standard (LCFS) regulation specifies that, “Indirect accounting may be used for RNG used as a transportation fuel or to produce hydrogen for transportation purposes (including hydrogen that is used in the production of a transportation fuel).” The hydrogen produced using RNG purchased as a GHG mitigation measure does not qualify for sale under the LCFS, as the environmental attributes of the RNG will have been retired already as part of the CEQA mitigation.
DSG-28	Further, the BayoTech Initial Study/Mitigated Negative Declaration included the following statement suggesting that the hydrogen gas produced would be marketable as an eligible fuel for credit purchasing. Hydrogen fuel from steam methane reformation, such as that produced by the proposed Project, is eligible for LCFS credit generation via fuel pathway. Credit values are calculated accounting for the carbon intensity of the mode of production compared to the fuel it would replace; therefore, assigned LCFS credits represent a net reduction in CO ₂ from fuel generated or dispensed in the state.	Hydrogen fuel that is deemed eligible for LCFS credits would be required to be used in the transportation market (per LCFS rules) and would be used predominantly by fuel cell vehicles. According to LCFS methodology, the replacement of a diesel fuel powered heavy duty truck with a hydrogen fuel cell heavy duty truck is 1.9 times more energy efficient, which provides up to 47% reduction in carbon emissions. The use of RNG via book and claim would reduce carbon emissions further.
DGS-29	No energy conversion is 100% efficient. Energy is used and lost during the steam methane reformer process converting natural gas (methane) to hydrogen gas. The LCFS data indicate that the conversion is 72% efficient. Low carbon fuel does not represent greenhouse gas reductions, only a lessening of the greenhouse gases emitted and their subsequent effect on climate change. Any credits related to hydrogen gas under the existing LCFS will be reduced over time and will further be reduced because when credits are assigned, a lifecycle approach is applied. Any plans to sell the credits as if the hydrogen that was produced was “blue” with carbon sequestration will be significantly reduced as only “grey” hydrogen gas will be produced. These low carbon fuel credits do not reduce the requirement for BayoTech to mitigate negative impacts associated with the proposed Project under the California Environmental Quality Act. The BayoTech Initial Study/Mitigated Negative Declaration failed to fully mitigate the carbon dioxide produced, leaving on the debit side global warming potential gases affecting climate.	The hydrogen produced using RNG purchased as a GHG mitigation measure does not qualify for sale under the LCFS, as the environmental attributes of the RNG will have been retired already as part of the CEQA mitigation. The LCFS fuel pathway is supported by an upstream analysis to substantiate the quantities of RNG used in the production. In this way, RNG purchased for the mitigation of CEQA GHG impacts is not double counted, and the mitigation as proposed adequately reduces emissions below significance. No changes are required.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-30	<p>The BayoTech Initial Study/Mitigated Negative Declaration proposed to mitigate greenhouse gas produced, as a result of the production and dispensing of hydrogen gas from natural gas (methane), without carbon sequestration: GHG-MM-1: Renewable Natural Gas (RNG). BayoTech will acquire RNG in sufficient quantity and carbon intensity to reduce the net carbon emissions of the fuel stock used in hydrogen production by an equivalent of 2,334 MT of CO₂e per year, below the threshold of significance. BayoTech will provide the Port with annual reports of RNG purchase records and overall fuel consumption to demonstrate the required carbon emission reduction (2,334 MT per year). The reports must identify the quantity of RNG and traditional natural gas consumed and fully document the availability of RNG. To meet the requirements of this mitigation measure, RNG can be acquired directly or acquired utilizing a certified book and claim accounting methodology in order to meet project demand. The renewable natural gas which is pipeline quality gas produced from a renewable source including livestock waste, landfills, wastewater sludge, food waste, and other organic waste operations. RNG is essentially captured biogas (gas produced from the decomposition of organic matter) that has been processed to purity standards. Typically, a lifecycle approach is used to calculate the GHG emissions associated with RNG, including energy used to convert the organic material or waste to biomethane, and any methane leaks along the supply chain, as well as all avoided emissions resulting from the project. If the biogas is produced from waste rather than crops grown to generate natural gas, RNG avoids more emissions than it generates, leading to a net-negative carbon intensity. Although BayoTech would use natural gas procured from existing physical utility distribution pipelines, the use of RNG would be facilitated using the "Book and Claim" credits, based on the purchased environmental attributes of RNG produced at other locations, in accordance with established California LCFS methodology, according to CARB. These credits may be procured by BayoTech and/or in coordination with suppliers and customers within the hydrogen value chain.</p>	<p>Please see response to comment DSG-29 for discussion of RNG procurement and certification.</p>
DSG-31	<p>The source of these fuels has not been identified nor was a selection hierarchy provided. As a general rule, offsets purchased in the general area of the Project are preferred if onsite mitigations are insufficient as shown in the CARB Scoping Plan GHG Reduction and Mitigation Hierarchy shown on the right.</p>	<p>As disclosed in the Draft IS/MND, BayoTech would follow LCFS methodology. There is no requirement for locally sourced RNG in California's LCFS program. RNG procurement may include a variety of different biogenic sources, including but not limited to dairy, swine, food waste, wastewater treatment, landfill, or municipal waste. The quantity of RNG and the specific, certified carbon intensity of that source will be documented as part of the LCFS pathway development.</p>
DSG-32	<p>No analysis of more defined and feasible mitigation measures was provided to substantially show that the mitigation selected was adequate to mitigate the significant increased energy use and greenhouse gas emissions that have global warming potential. Nor were these "offsets" shown to be additional.</p>	<p>The mitigation measures identified are feasible and will reduce impacts below the level of significance. The LCFS fuel pathway is supported by an upstream analysis to substantiate the quantities of RNG used in the production. In this way, RNG purchased for the mitigation of CEQA GHG impacts is not double counted. This accounting methodology ensures additionality of the offsets. The mitigation as proposed adequately reduces energy and GHG impacts below significance. Therefore, there are no changes to the IS/MND findings as a result of the comment.</p>
DSG-33	<p>The BayoTech Initial Study/Mitigation Negative Declaration failed to adequately characterize the global warming potential of the Project operations providing evidence to support a fair argument of potentially significant environmental impacts triggering a requirement for a full environmental impact analysis under the California Environmental Quality Act.</p>	<p>Please see response to comment DGS-19. The global warming potential of the proposed project was adequately characterized in the GHG and climate change impacts discussion. All sources of GHGs and mitigation measures were disclosed. Additionally, the mitigation as proposed adequately reduces GHG impacts below significance. Therefore, there are no changes to the IS/MND findings as a result of the comment.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-34	<p>As an aside on page 74 of the Initial Study/Mitigated Negative Declaration, BayoTech revealed the following: Additionally, anhydrous ammonia will be used in the SCR unit for abatement of NO_x. Anhydrous ammonia will be delivered by suppliers to storage tanks designed specifically for that purpose. From the tanks, the ammonia will feed directly into the SCR unit. The 10-cubic-foot SCR unit will emit ammonia from the deaerator vent to not exceed the permitted limit of 10 ppm. BayoTech has plans to install two modular steam methane reformers (SMRs), hydrogen pumping equipment, and a central dispensing system, which would produce, store, and distribute gaseous hydrogen. Two SCR units operating simultaneously would double ammonia emissions. According to the Public Health Statement prepared by the United States Center for Disease Control: Ammonia has a very strong odor that is irritating and when in the air is detectable at a level higher than 5 ppm and low levels of ammonia may harm some people with asthma and other sensitive individuals. Without disclosure of other odor producing facilities in the vicinity of the proposed Project the cumulative impacts relating to odor cannot be determined. The regulatory agency that enforces odor impacts, the San Joaquin Valley Air Pollution Control District has not established cumulative significance thresholds regarding odor impacts. Regardless, of whether or not the regulatory agency has established standards for a negative environmental impact, disclosure of those impacts are necessary. The BayoTech Initial Study/Mitigated Negative Declaration stated that "the facility itself would not generate odors during operation." This statement is in direct conflict with statement that ammonia from the deaerator vent that is part of the selective catalytic reduction module (SCR) will be emitted at levels not to exceed 10 ppm. Regardless that the San Joaquin Valley Air Pollution Control District has not developed screening distances for hydrogen fueling facilities, the BayoTech Initial Study/Mitigated Negative Declaration states: "If a project would result in an odor source with sensitive receptors located within 1 — 2 miles screening distances, additional analysis would be required." Sensitive receptors identified by BayoTech include residential houses located 4600 feet to the north and the nearest school is Washington Elementary located 7200 feet, both within 2 miles of the proposed hydrogen production and distribution facility. Thus, according to the BayoTech Initial Study/Mitigated Negative Declaration additional analysis is required.</p> <p>The median asthma incidence across the United States and Territories is 9.6% for adults and 7.4% for children. In California, the incidence is higher with 16.2% for adults and 11.9% for children. In San Joaquin County the asthma incidence is 14.6% for adults and unfortunately 19.5% for children.</p> <p>The CalEnviroScreen 4.0 from the California Office of Environmental Health Hazard Assessment ranks the Census Tract where the proposed Project is located as having a very high pollutant burden and a 96 percentile asthma incidence as shown right.</p> <p>Further analysis and mitigation of impacts associated with the use of anhydrous ammonia and venting of flue gases is necessary to reduce impacts to the neighboring community.</p>	<p>As noted in Appendix B of the Draft IS/MND, the San Joaquin Valley Air Pollution Control District (SJVAPCD) has not developed an odor screening distance level for hydrogen fueling facilities. The SJVAPCD has identified some common types of facilities such as petroleum facilities, chemical manufacturing, wastewater treatment facility, sanitary landfills, etc., that have been known to produce substantial odors. Specifically, feed lots and dairies, which can emit high concentrations of ammonia, are assigned a screening distance of 1 mile. Ammonia slip refers to emissions of unreacted ammonia that result from incomplete reaction of the NO_x and the reagent. Ammonia slip may cause the following: 1) formation of ammonium sulfates, which can plug or corrode downstream components; and 2) ammonia absorption into fly ash, which may affect disposal or reuse of the ash. In the United States, permitted ammonia slip levels are typically 2 to 10 ppm. Ammonia slip at these levels do not result in plume formation or human health hazards.</p> <p>The ammonia slip limit of 10 ppm enforced by the SJVAPCD permit is typical for SCR devices and appropriate for an industrial use. All sensitive receptors are more than 1 mile away and therefore will not be affected by odors consistent with the findings of the Draft IS/MND. No additional analysis is required.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-35	<p>Light/Glare Mitigation Measures: The following mitigation measure would be implemented to reduce potential glare impacts:</p> <p>“AES-MM-1: Use of full cut-off light shields and/or anti-glare lighting. The proposed project will include construction elements that would lessen impacts of light and/or glare, such as full cut-off light shields and/or anti-glare lighting.”</p> <p>The City of Stockton Development Code already requires that “lighting sources shall be shielded to avoid glare in compliance with the Development Code (Light and Glare). To minimize the total number of freestanding light standards, wall mounted lights should be utilized whenever possible.”</p> <p>As the City already requires shielding this should not have been identified as a mitigation measure. City of Stockton building permits are required and will include a review of compliance with the existing development code at the time the building permit application is submitted. The BayoTech Initial Study/Mitigated Negative Declaration states that the proposed Project is expected to create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.</p> <p>No quantitation of the expected amount of substantial light or glare that is anticipated was provided in the BayoTech Initial Study/Mitigated Negative Declaration. The City’s requirements outlined in the proposed mitigation measure AES-MM-1 is not a mitigation measure as it is already required. If additional mitigation measures are needed vegetative barriers should have been proposed to reduce negative impacts to the neighboring community as shown on the cover of the BayoTech Initial Study/Mitigated Negative Declaration, above. Urban darkness has been shown to lessen the effects of artificial light on health outcomes including depression and sleep disorders. Full mitigation of light and glare effects is needed in our community.</p>	<p>The mitigation measure includes some elements required the by the City of Stockton Development Code as well as additional specific measures to further reduce the potential for light and glare.</p> <p>As shown in Figures 1 and 2, the project site is located on the west side of the East Complex and is over a mile away from the closest residences shielded by other port industry. Direct impacts are not expected and therefore no quantification was necessary. The mitigation measure has been modified as shown in this response to further reduce any potential for impacts within the larger port setting.</p> <p>AES-MM-1: Use of full cut-off light shields and/or anti-glare lighting.</p> <p>The proposed project will include construction and design elements that would lessen impacts of light and/or glare, such as full cut-off light shields and/or anti-glare lighting. The following measures shall be required:</p> <ul style="list-style-type: none"> • Any outdoor lighting shall be installed as low as possible to provide light only where necessary. • Outdoor lighting requires use of light shields that focus light downward or inward. • All exterior lighting shall use long-wavelength lights such as amber and red lamps. <p>Regarding vegetative barriers, the site is not immediately adjacent to any residential receptors. Because vegetation will not further shield lighting, it is not required. The Port will provide BayoTech with information on the Port’s Community Benefits Program, which provides for a voluntary program that the company could participate in to provide funding for vegetative barriers in other areas of the Port.</p>
DSG-36	<p>No cumulative impact analysis, related to the effects of past projects, the effects of other current projects, and the effects of probable future projects, was performed because the BayoTech Initial Study/Mitigate Declaration stated:</p> <p>“The proposed project would result in minimal less-than-significant impacts, some of which require mitigation. The proposed project’s operations were specifically designed to avoid significant air quality, GHG, noise, and transportation impacts. Therefore, the proposed project would result in less-than-significant impacts as related to cumulative impacts.” No listing of existing greenhouse gas emitting processes at the Port of Stockton, nor proposed projects was provided to suggest that an adequate cumulative impact analysis was performed. The largest emitters of pollutants and greenhouse gases are related to the Port of Stockton on and off-site including a biomass energy conversion plant. While the Port of Stockton has made efforts to characterize onsite emissions and to take advantage of incentive opportunities to increase use of electric equipment, high carbon emitting projects exist under lease and are proposed.</p>	<p>The document is an IS/MND, which does not require a cumulative project impact analysis. Inherent to the conclusions of an IS/MND, impact findings are not significant and unavoidable and therefore do not contribute to significant cumulative findings. Additionally, the mitigation as proposed adequately reduces GHG and transportation impacts below significance. Therefore, there are no changes to the IS/MND findings as a result of the comment.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
DSG-37	Sierra Club California just signed on to a letter “Scoping Comments on the Reissued Notice of Preparation of a Draft Environmental Impact Report for the Golden State Natural Resources Forest Resiliency Demonstration Project.” The proposed wood pellet production facilities are projected to produce one million metric tons of wood pellets each year (700,000 metric tons/year at the Lassen facility and 300,000 metric tons/year at the Tuolumne facility) – making these two facilities as big as the polluting Enviva facilities in the Eastern United States. The construction and operation of wood pellet storage and handling facilities, along with increased truck and rail traffic through neighborhoods surrounding the Port of Stockton, will be responsible for a massive increase in ocean going vessel traffic, the dirtiest engines in our community. Increased truck, rail, and ocean going vessel travel in the area of the Port of Stockton will increase pollutant exposure of already disproportionate burdened Stocktonians. With these air pollutants come greenhouse gases and with those wood pellet storage and handling facilities comes significant fire risk contributing to the already identified impacts associated with the BayoTech Hydrogen Production and Filling proposed Project. Cumulative impacts must be evaluated in the required environmental impact review.	Please see response to comment DGS-36. CEQA guidelines state that, “Where, prior to the commencement of public review of an environmental document, a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment [...] or would mitigate the significant effect to a point where clearly no significant effect on the environment would occur, a lead agency need not prepare an environmental impact report solely because, without mitigation, the environmental effects at issue would have been significant.” Additionally, the mitigation as proposed adequately reduces GHG impacts below significance. Therefore, there are no changes to the IS/MND findings as a result of the comment.
DSG-37	“I simply want to express my opposition to this project. It is unacceptable that our environmental justice community has been overlooked during the scoping process simply under the pretense of achieving ‘efficiency,’” noted Gloria Alonso Cruz, environmental justice advocacy coordinator with Little Manila Rising in Stockton. “This is particularly critical due to the air pollution threats this project poses, given the already existing air pollution conditions impacting Stockton on a daily basis.”	The Draft IS/MND identified less-than-significant impacts to air quality. The proposed project is not expected to noticeably contribute to local air pollution.
DSG-38	Stockton resident Mary Elizabeth, conservation chair of the Delta-Sierra Group of the Sierra Club, indicated “Increased fire risks associated with stockpiled pellets directly puts Stockton residents at risk,” Elizabeth also said the proposed project will erase the Port’s positive actions and further degrade air with increased pollutant emissions from more truck, rail and marine trips.	The Draft IS/MND identified less-than-significant impacts to air quality. The proposed project is not expected to noticeably contribute to local air pollution. There are no rail or marine trips associated with the proposed project, and truck traffic and emissions were included in the Draft IS/MND analysis.
DSG-44	“Port communities like Richmond and Stockton are already overburdened with severe health risks from toxic air pollution,” said Janet Scoll Johnson, co-coordinator at Sunflower Alliance. “That’s why Richmond said ‘no’ to wood pellet handling and storage at our port. We need sustainable economic development that will preserve the quality of the environment for future generations, not a dirty wood pellet scheme.” Rebuffing GSNR’s claims about the project’s climate benefits, the groups note that “[w]ood pellets are a highly carbon-intensive, polluting, expensive, and inefficient energy source that have no place in a clean energy future.” Biomass power plants emit more CO ₂ . Without carbon sequestration or localized carbon reduction efforts in addition to “book and claim” credits, converting natural gas (methane) into hydrogen gas will not be the cleaner energy as is possible. We request that the Port of Stockton provide emergency response information regarding hazards at the Port of Stockton and flood evacuation and responses in the affected community. A full environmental impact analysis of the BayoTech Hydrogen Production/Dispensing proposed project is necessary to comply with the California Environmental Quality Act. 2 than coal plants per megawatt hour.	An EIR is not necessary in this case because all potentially significant impacts will be mitigated below the level of significance. All GHG and air quality impacts have been disclosed.

BayoTech Draft IS/MND Response to Comments

Center for Biological Diversity

Comment Code	Comment	Response
CBD-1	<p>We disagree with the premise that fossil-gas-generated hydrogen projects should play any role in achieving our state’s goal of reaching near-zero emissions by midcentury in order to limit global warming to 1.5°C. Fossil-gas-generated hydrogen is a false solution that harms the climate and environment, prolongs the use of fossil fuels, and diverts attention and resources from clean renewable energy. Instead of promoting fossil hydrogen, the Port of Stockton (Port) should promote renewable energy projects that phase out fossil fuel use to prevent catastrophic climate change and environmental injustice. If the Port continues to consider the proposed BayoTech project, as explained in detail below, it must adequately define the project and analyze the potential impacts to the environment. Without more information about where the hydrogen in this project will be transported, its end use, or how mitigation measures will be implemented, the community and Port decisionmakers will not be able to assess all of the environmental impacts. Much more detail on potential air emissions, energy use, greenhouse gas emissions, biological resources, environmental justice, and cumulative impacts is required in an Environmental Impact Report (EIR), where these widespread and varied environmental impacts can be fully and appropriately considered.</p>	<p>Please see detailed responses to comments as follows. The environmental impacts evaluated in the Draft IS/MND were shown to be less than significant, precluding the need for an EIR. These impacts were evaluated and communicated as accurately as possible in the Draft IS/MND, as were the destinations, end use, and selected mitigation measures. A CEQA document is not inherently for or against a project; it is an objective environmental analysis of a proposed project to inform decisionmakers of the full range of environmental effects.</p>
CBD-2	<p>The IS-MND for the proposed BayoTech project does not adequately describe essential components of the project and misrepresents the need for the project. CEQA requires that the project description be “accurate, stable, and finite.” Furthermore, the project description cannot be “artificially narrow.” The project need section must “articulate the stated objectives and specify the underlying purpose” of the proposed project in order “to evaluate the project’s impacts on the environment.”</p> <p>The flaws in the initial study (discussed in this section) undermine the IS-MND’s conclusion that the proposed project will not have a significant effect on the environment. The IS-MND premises the “project need” on the assertion that “[h]ydrogen can play an important role in increasing energy security and reducing GHG emissions in California.” IS-MND.</p> <p>However, the IS-MND does not critically evaluate the fuel source for the proposed BayoTech project: fossil gas (methane), also called “natural” gas. Id. At 25. The IS-MND fails to grapple with the fact that utilizing fossil fuel inputs for hydrogen generation entrenches and prolongs dependence on fossil fuels. Investment in fossil hydrogen production locks in existing dirty fossil fuel production and infrastructure, harming the communities of color and low-wealth communities where such fossil fuel infrastructure is disproportionately sited. Investment in fossil hydrogen projects also serves to delay investment in efficiency and electrification solutions— mature energy sources that are more efficient, lower cost, and lower in greenhouse gas emissions than hydrogen.</p>	<p>CARB’s 2022 Scoping Plan calls for accelerating the transition from combustion of fossil fuels to hydrogen. The comment states the commentator’s opinion and does not include any comments on the adequacy of the analysis. The mitigation as proposed adequately reduces GHG impacts below significance, and energy impacts have been determined to be less than significant. Therefore, there are no changes to the IS/MND findings as a result of the comment.</p>
CBD-3	<p>Similarly, the IS-MND deceptively touts that hydrogen generated by the proposed project could be used to fuel “zero-emission [transportation] fleets” even though the project would generate hydrogen solely from fossil fuel inputs. The implication that the hydrogen produced by the proposed project is “clean energy” is promoted by industry to encourage more methane gas use. This is reinforced by the project proponent’s citation to modeling and studies which state only that hydrogen “could” play a role in decarbonizing certain sectors. Id. (emphasis added). And while the CARB’s most recent Advanced Clean Cars program and the Low Carbon Fuel Standard do envision hydrogen as a path for decarbonization, the IS-MND fails to acknowledge that hydrogen generation from renewable energy inputs—not the fossil fuel inputs utilized by the proposed project—is necessary to realize those decarbonization gains. Merely citing CARB’s decarbonization goals does not adequately substantiate the “need” for this project.</p>	<p>The Draft IS/MND fully discloses that the hydrogen would be produced from natural gas and assesses the emissions associated with that use. The comment is referring to Section 2.2 of the Draft IS/MND, which presents a broader discussion of the potential needs that the proposed project could help address. As discussed further in Section 2.2, Executive Order B-48-18 sets a statewide policy goal of developing 200 hydrogen stations to allow the state to satisfy the fueling needs of more than 100,000 light-duty fuel cell electric vehicles (FCEVs). As noted in the Draft IS/MND, small and local hydrogen production, similar to the proposed project, addresses the need for hydrogen to fuel the growing zero-emission fleets in California by reducing transportation costs and emissions associated with importing hydrogen from larger, more distant providers. No changes are necessary.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-4	<p>Furthermore, hydrogen itself is a potent, indirect greenhouse gas with 100 times the warming power of CO₂ over a 10-year period, and 33 times over 20 years. As a small molecule, hydrogen is also more leakage-prone than methane, posing climate risks across the production and supply chains. The IS-MND does not identify these risks, all of which warrant evaluation in a full EIR.</p>	<p>The IPCC does not consider hydrogen to be a GHG because it does not have the inherent property of trapping heat in the atmosphere.</p> <p>Hydrogen production can have <i>indirect</i> implications for GHG emissions. Specifically, hydrogen production through SMR releases CO₂, which is a GHG. CO₂ emissions from SMR were quantified in the Draft IS/MND analysis. Therefore, it is misleading to imply that the indirect GHG impacts from hydrogen production were not considered in the analysis.</p> <p>Both comment letters cite the same reference (Ocko, I., S. Hamburg, 2022. "Climate Consequences of Hydrogen Emissions," <i>Atmospheric Chemistry & Physics</i> 14:9349–9368, DOI: https://doi.org/10.5194/acp-22-9349-2022.) and quote a global warming potential for hydrogen. It is thought that oxidation of hydrogen in the atmosphere can decrease the supply of naturally occurring hydroxyl radical (OH), which acts as a sink for methane. Atmospheric chemistry is extremely complex and research in this area is emerging but often conflicting (other articles exist showing different methodologies that result in other global warming potentials). There is no methodology or consensus from the IPCC, CARB, or USEPA to ensure that analysis would not be speculative and subject to revision with each new technical publication.</p> <p>It is equally important to note that the reference also discusses challenges to assess hydrogen’s warming impacts, which include uncertainties in assessing hydrogen emissions and how warming impacts can be calculated. The comments do not acknowledge these challenges.</p> <p>Therefore, there are no changes to the IS/MND findings as a result of the comment, and an EIR is not required.</p>
CBD-5	<p>The IS-MND states that proposed BayoTech project would generate hydrogen “through a process that extracts hydrogen from natural gas using steam.” However, it does not disclose up-front in the “Project Need” section that this steam-methane reforming process is incredibly energy-intensive and emits carbon and health-harming pollution.</p> <p>Additionally, all forms of hydrogen production use massive amounts of water—much more than solar and wind per unit of energy produced—which will put extra stress on water supplies in areas already suffering from climate crisis-charged drought. Thus, the project description omits discussion of an integral component of the project, rendering the project description and need sections inadequate and flawed.</p>	<p>Section 3.3.19 of the Draft IS/MND (Utilities and Service Systems) discloses the amount of water that will be used in by the proposed project (2,993 to 6,118 gallons per day), calculates the GHG emissions associated with water consumption, and considers the daily water use in terms of supplies.</p>
CBD-6	<p>Finally, while the IS-MND asserts that “small and local hydrogen production” like the proposed project “reduc[es] transportation costs and emissions associated with importing hydrogen from larger, more distant providers,” the IS-MND’s estimation of the proposed project’s operational emissions from mobile sources is flawed because it does not adequately describe or consider where the hydrogen generated by the project will go. See <i>infra</i>, Section II. The IS-MND improperly assumes, without evidence, that the proposed project will create benefits by acting as distributed hydrogen generation within the state’s energy mix, despite insufficient description and no evaluation of the project’s produced hydrogen use. Id. Currently, so-called “gray hydrogen”—like that which would be generated by the proposed BayoTech project—is primarily used for petroleum refining. Despite this reality, the project documents imply that hydrogen generated by the proposed project could be used to benefit decarbonization of the transportation sector. This questionable underlying assumption renders the project description and need sections inadequate and flawed.</p>	<p>Contrary to the comment, the Draft IS/MND describes where the hydrogen will go. The facility will produce hydrogen for the retail market and is targeting truck and equipment fueling in the Stockton region. The site will produce up to 2,000 kg of hydrogen daily, which can fuel up to 50 zero-emission fuel cell trucks each day. BayoTech will distribute hydrogen to customers throughout the region via compact transport trailers. Most of the hydrogen produced will be used within 25 to 100 miles of the Port. Demand around and near the site is high. Hydrogen produced at the site can go as far as 200 to 300 miles. BayoTech will distribute zero-carbon hydrogen to customers throughout the region via compact transport trailers. As disclosed in Draft IS/MND, all trucks are assumed to travel north, south, and east via I-5 and west on SR 4 via Navy Drive connectors. The vehicle fleet travel-distance assumptions were estimated at 200 miles per day for 30% of the truck trips, 150 miles per day for 50% of the truck trips, and 50 miles per day for 20% of the truck trips (in accordance with project applicant guidance). These truck lengths were fully assessed in the Draft IS/MND.</p> <p>Since the release of the Draft IS/MND, BayoTech has reached a commercial agreement to procure and operate zero-emission trucks. Under this agreement, these trucks would be utilized for BayoTech-contracted hydrogen deliveries and transportation needs. Third-party pickup and transport would also occur.</p>
CBD-7	<p>CEQA requires that environmental impacts be adequately described and mitigated. This is because use of an MND presumes any environmental impacts are mitigated in support of the negative declaration. If there is a fair argument that the proposed project may result in environmental impacts, the agency must prepare an EIR. Yet, the IS-MND fails to adequately disclose and mitigate air emissions impacts.</p> <p>The San Joaquin Valley is classified as non-attainment for state particulate matter and ozone (PM10, PM2.5 and O3) standards, and for federal O3 and PM2.5 standards. Though the emissions from the proposed project fall below purported thresholds set by the San Joaquin Valley Air Pollution Control District (SJVAPCD), the emission of any criteria pollutants currently in non-attainment is irresponsible. The proposed project would allow for the emission of PM10, PM2.5 and O3 despite their non-attainment status.</p>	<p>The Draft IS/MND used standard air quality assessments. The thresholds set by the SJVAPCD are reflective of the air district’s attainment goals. Emissions that fall below thresholds are not cumulative impacts. The environmental impacts evaluated in the Draft IS/MND were shown to be less than significant, precluding the need for an EIR. Therefore, there are no changes to the Draft IS/MND findings as a result of the comment, and an EIR is not warranted.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-9	<p>Moreover, even if the set thresholds are assumed valid, inconsistencies in the IS-MND cast doubt on whether the project's emissions fall below them. This potential is most notable with PM10 and its non-permitted sources operational emissions threshold. The SJVAPCD threshold for PM10 is 15 tons per year, while the projected total non-permitted emissions are 12.20 tons per year, or 81% of the threshold. This leaves little room for uncertainty as a small change in the project assumptions could push PM10 beyond the threshold.</p>	<p>The emissions were modeled using standard assessment methodologies and fall below the thresholds. As such, emissions are considered less than significant, and no changes are necessary.</p>
CBD-10	<p>Yet, such uncertainty exists in the reported predictions of daily and annual vehicle traffic at the proposed facility. It is predicted that trailer/truck trips to and from the facility would be 2,100-4,900 per year, and staff vehicle trips would be 1,400-2,100 per year, supposedly corresponding to 8-10 and 2-3 vehicle trips per day, respectively. However, if it is assumed that the proposed project's mobile trips would occur 365 days per year as noted in the IS-MND, then the annual trips per year reported correspond to approximately 6-13 trailer/truck trips and 4-6 staff vehicle trips per day. This discrepancy results in potential daily trailer/truck trips up to 34% higher and staff vehicle trips up to 92% higher than the IS-MND reports. Total vehicle trips, or the sum of trailer/truck and staff vehicle trips, could be up to 48% higher than predicted in the IS-MND. Because the 12.20 tons per year non-permitted operational PM10 emissions are all attributed to mobile sources, an increase in predicted trips of 48% could push PM10 emissions beyond the 15 tons per year threshold, given that the predicted emissions are already 81% of the threshold without considering additional trips.</p>	<p>Please see response to comment CBD-6. Operations would not occur at the same level each day and therefore the annual number cannot simply be divided. Since the release of the Draft IS/MND, BayoTech has reached a commercial agreement to procure and operate zero-emission trucks.</p> <p>Hydrogen transport would be made in part using hydrogen powered fuel cell electric vehicles (HFCEV) trucks—not solely diesel trucks as reported in the Draft IS/MND. Therefore, emissions associated with the number of truck trips would be less than reported. The Recirculated Draft IS/MND has been updated to incorporate this change.</p>
CBD-10	<p>Further, there is uncertainty of vehicle trip lengths, which would also influence estimates of emissions in relation to set thresholds. The IS-MND assumed vehicle trip lengths based on CalEEMod defaults with 200 miles per day for 30% of truck trips, up to 150 miles per day for 50% of truck trips, up to 50 miles per day for 20% of truck trips, and 11.89 miles for passenger vehicle trips, totaling to 4,470 vehicle miles traveled per day. However, this breakdown of miles per day could change with information on the potential destinations for produced hydrogen. Once again considering the slim margin for exceeding the PM10 threshold, a higher proportion of trips than predicted at the upper range of mileage could push emissions over emissions thresholds. Likewise, the potential for more trips overall could push emissions over allowed levels. Without an accurate accounting of both the amount and distance of trips associated with the proposed project, even the inadequate thresholds set by SJVAPCD could be exceeded, making the project untenable as described.</p>	<p>Please see the response to comment DSG-6. The customer range (truck travel distance) was included in Section 3.3.3.2 and in Appendix B of the Draft IS/MND. Estimates were not based on CalEEMod defaults but on information from the applicant.</p> <p>As disclosed in the Draft IS/MND, all trucks are assumed to travel north, south, and east via I-5 and west on SR 4 via Navy Drive connectors. The vehicle fleet travel-distance assumptions were estimated at 200 miles per day for 30% of the truck trips, 150 miles per day for 50% of the truck trips, and 50 miles per day for 20% of the truck trips (in accordance with project applicant guidance). These truck lengths were fully assessed in the Draft IS/MND.</p> <p>Please also see the response to comment CBD-9. Since the release of the Draft IS/MND, BayoTech has reached a commercial agreement to procure and operate zero-emission trucks. Hydrogen transport would be made in part using HFCEV trucks—not solely by diesel trucks as reported in the Draft IS/MND. Therefore, emissions associated with the number of truck trips would be less than reported. Third party pickup and transport would also occur, depending on the contracted offtake from the facility, utilizing vehicles belonging to those third parties. The Recirculated Draft IS/MND has been updated to incorporate this change.</p>
CBD-11	<p>The CEQA Guidelines recognize that wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, may result in a significant environmental impact "If analysis of the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, [an] EIR shall mitigate that energy use. This analysis should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project." The IS-MND does not meet the basic requirements for evaluating and mitigating energy use or utilities impacts because it brushes aside possible significant energy-use-related environmental effects to avoid considering renewable energy sources or other effective mitigation measures. The IS-MND is clear that the project will involve construction of a hydrogen production and filling facility, a warehouse facility with a storage office, an automatic safety gate for entry with cameras, and site lighting for security. However, the utility requirements are aggregated together in one table (Table 5), without any detailed analysis of possible measures to reduce energy use from each of the new facilities.</p>	<p>The energy analysis is not required to perform a separate assessment of every component of an operation. Appendix F of the CEQA Guidelines does not provide or encourage the use of any specific methodology to study energy impacts but instead leaves the question of how to study energy impacts to the sound discretion of the lead agency. Therefore, no additional changes are necessary.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-12	<p>The IS-MND asserts that energy use impacts will be less than significant because “Constructing and operating the proposed project would use equipment that consumes fossil fuels but would not require any unusual or excessive equipment or practices compared to projects of similar type and size.”</p> <p>However, there is no data supporting this statement. The descriptions of several of the measures that could be utilized to reduce energy demand are vague, without any specific commitments:</p> <p>The proposed truck idling mitigation measure applies only “where available,” which is completely undefined. In addition, the measure allows for either shut down in certain, unknown areas when waiting more than two minutes or implementation of unknown programs “such as appointment systems in periods of congestion..” It is especially problematic for idling mitigation to be so indeterminate because there are already challenges enforcing existing anti-idling requirements at the Port of Stockton. The proposed idling mitigation also doesn’t apply to trucks in the truck rack queue, which would reduce toxic diesel pollution. This is problematic because the IS-MND indicates that “[d]ispensing the hydrogen into the trailers may take 19mission 1 and 10 hours”. Truck idling measures must be much better defined and enforceable. They should also be expanded to apply to trucks in the queue and to require infrastructure to reduce idling, like electric plug-ins.</p>	<p>The proposed project includes a full assessment of equipment specifications and usage in Appendix A. The finding is supported by several environmental assessments including the air modeling that found emissions to be less than significant and the energy assessment, which did not find excessive use of energy.</p> <p>The following change has been made to the Recirculated Draft IS/MND:</p> <p>“ENG-MM-1: Truck idling reductions. BayoTech will require trucks to minimize idling time to 2 minutes where available while on terminal. Truckers will be required to shut down trucks while waiting more than 2 minutes while on the terminal or BayoTech will implement programs, such as appointment systems in periods of congestion. Exceptions include vehicles in a queue waiting for work at the truck rack. <u>These requirements will be posted on site and included as a contract provision. BayoTech will design the gate check-in so that the check-in point for trucks is well inside the project site to ensure that there are no trucks queuing outside of the facility.</u>”</p> <p>When trailers are being loaded, trucks would not be sitting at idle. Instead, drivers would enter the site with an empty trailer (to be loaded), drop off an empty trailer (estimated 2 to 3 minutes), and then proceed to the loaded trailer pickup location (estimated 2 to 3 minutes). Trucks entering and leaving the site would be constantly moving and not waste any time idling. Trailers would be moved by zero emission BayoTech equipment from the drop-off area to the loading racks, and from there to the staging area for pick up.</p> <p>This information has been added to the IS/MND but does not change any conclusions or require additional mitigation. Therefore, there are no changes to the IS/MND findings as a result of the comment.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
<p align="center">CBD-13</p>	<p>The proposed clean truck mitigation measure states only that “where possible” the project applicant will “encourage” the use of trucks model year 2017 or newer and that the company will “educate” customers during contract negotiations. The IS-MND asserts without evidence that up to 10 truck trailer trips are expected per day. However, the annual truck trips are said to be up to 4,900, equivalent to 13.4 trips per day (4,900 / 365 = 13.42). This is a large number of truck trips with emissions that can and should be mitigated. Zero-emission trucks are readily available in the open market and the Port should make zero emission trucks a requirement for the project to reduce toxic diesel emissions, including Nox and PM. Instead, the IS-MND makes use of 2017 models or newer completely optional—with no criteria to determine when their use is “possible.” This is inappropriate. Mitigation measures must be enforceable through conditions of approval, contracts or other means that are legally binding. In addition, formulation of mitigation measures cannot be deferred to a later point in time like during future contract negotiations.</p>	<p>While zero-emissions equipment has become more available, there remain commercial availability questions for several classes of equipment, especially heavy-duty equipment. The largest source of criteria pollutant and GHG emissions are from delivery trucks followed by locomotives.</p> <p>There are two main classes of zero-emission trucks: trucks powered by batteries that need to be charged (electric trucks) and trucks powered by fuel cells (fueled by hydrogen). While commercially available, zero-emission trucks are not available at the level needed to fully support operations and the area lacks the necessary infrastructure, including charging stations and hydrogen fueling stations, to support operations. CARB’s recent Advanced Clean Fleets (ACF) rule will require a full transition to zero-emissions drayage truck operations by 2035 and establish zero-emission truck purchase requirements for large commercial, federal, state, and municipal fleets, beginning as early as 2024 and ramping up to a 100% zero-emission fleet requirement in 2045, based on vehicle category. The ACF regulation applies to fleets performing drayage operations (from ports), those owned by state, local, and federal government agencies, and high priority fleets.² Specifically, between now and 2035, regulated entities will need to achieve zero-emissions targets for 50% of long-haul trucks, 75% of work trucks and daily-route heavy trucks, and 100% of box trucks, delivery vans, and yard trucks. After 2036, all new commercial trucks sold in the state must be zero-emissions, and by 2045, all fleets must be emissions-free.</p> <p>In advance of that rule, many large companies in California are considering how best to meet requirements, including whether to invest in electric or hydrogen fuel cell trucks based on battery range, fuel availability, charging infrastructure, and cost. As there are still large questions regarding availability and fueling/charging, companies will need time to transition. The Port supports this statewide approach to transitioning to zero-emission trucks and equipment is working with tenants to facilitate the process and as discussed further in this response, is requiring clean trucks (defined as model year 2017 or newer which are subject to USEPA Phase 1 GHG emissions and fuel economy standards).</p> <p>Since publication of the Draft IS/MND, BayoTech has entered into a commercial agreement to procure and operate zero-emission HFCEV trucks. These fuel cell electric vehicles would produce no emissions other than water vapor and would not contribute to local air quality impacts. These trucks would be utilized for BayoTech contracted H₂ deliveries and transportation needs. However, third party pickup and transport would also occur, depending on the contracted offtake from the facility, utilizing vehicles belonging to those third parties.</p> <p>The following edits have been made to MM-ENG-2 in the Recirculated Draft IS/MND:</p> <p>“ENG-MM-2: Use of clean trucks. BayoTech will encourage the use of clean trucks (defined as model year 2017 or newer) BayoTech will require all cargo trucks entering the site to be model year 2017 or newer and encourage its customers to use zero-emission trucks to transport fuel. BayoTech will educate customers about the SJVAPCD Truck Replacement Program during contract discussions. And CARB’s Advanced Clean Truck Program, including funding opportunities, via direct or electronic mailings. In addition, BayoTech will require all trucks be in compliance with CARB air quality regulations for on-road trucks, including CARB’s Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program (PSIP), and the Statewide Truck and Bus Regulation. BayoTech will post a copy of the SJVAPCD Truck Replacement Program information currently available at http://valleyair.org/grants/truck-replacement.htm and applicable CARB regulations at the terminal. These requirements will be posted on site and included as a contract provision.”</p>
<p align="center">CBD-14</p>	<p>The proposed energy/waste audit mitigation measure includes no criteria for what constitutes “less-efficient” lighting that will be replaced and no criteria for how waste from single-use products will be reduced. There is also no explanation as to why an energy audit is necessary as many as two years after the project is constructed to evaluate lighting efficiency. The project should be as efficient as possible from the time of new construction.</p>	<p>Mitigation measures MM-ENG-3 has been modified as follows in the Recirculated Draft IS/MND:</p> <p>“ENG-MM-3: Energy/waste audit. Within 6 months of the effective date of the new lease, BayoTech will conduct an energy audit to determine if there are additional energy saving features that can be implemented as part of construction and operations. Based on the findings of the audit, BayoTech will develop a plan for reducing overall energy use at its terminal. The plan must be submitted to the Port for review and approval. The plan will incorporate the following measures at a minimum:</p> <ul style="list-style-type: none"> • Replace less-efficient bulbs with energy-efficient <u>LED</u> light bulbs, where applicable and safe. • Lighting within the interior of buildings on the premises and outdoor lighting will be replaced with <u>be required to use</u> LED lighting or a technology with similar energy-saving capabilities within 2 years after the effective date of a new lease. • Identify areas for waste reduction, including reductions in single use products in buildings. • Install ENERGY STAR qualified HVAC equipment and variable frequency drives. When installing new equipment, ensure that the system is not over-sized for the building’s heating and cooling needs.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-15	<p>o The IS-MND states that: “Over time, the proposed project is also anticipated to transition to a mixture of natural gas and renewable natural gas (RNG), a purified form of biogas generated by the decomposition of waste. This would reduce the fossil fuel demand of the hydrogen production units relative to the fraction of natural gas replaced by RNG.” There is no commitment to transition to RNG and no criteria to even assess whether RNG would reduce fossil fuel demand. As explained in the next section, this technology consistently over-inflates emission reduction potential and has many environmentally devastating consequences.</p>	<p>The analysis did not assume any future reduction in emissions from use of renewable gas. No changes are necessary.</p>
CBD-16	<p>The IS-MND also states that “[b]ecause the proposed project would be designed and constructed to comply with CALGreen and would comply with other state and local plans and policies, the energy consumption from the proposed project would not be wasteful, inefficient, or unnecessary and thus would be less than significant.” However, an environmental review document should not rely solely on compliance with Title 24 standards to mitigate operational and construction energy impacts. There was no assessment here of any of these factors, including the size of the facilities or whether they can be powered by renewable energy.</p>	<p>Please see response to comment CBD-11. The Draft IS/MND assessed the proposed project against required standards, plans, and policies, including CALGreen, and found that the required measures would adequately control for wasteful, inefficient, or unnecessary use of energy. No additional mitigation is warranted, and the finding in the Draft IS/MND remains unchanged as a result of the comment.</p>
CBD-17	<p>Finally, the IS-MND states that the Port has a renewable portfolio standard procurement program. There are two problems with reliance on this procurement program to make energy use impacts less than significant. First, the procurement program does not actually commit the Port to purchasing renewable energy to power port operations. Instead, the program appears to rely entirely on the purchase of Renewable Energy Certificates (RECs). There is no discussion of how the Port ensures that the RECs result in real, permanent, quantifiable, verifiable, enforceable, and additional emissions reductions beyond what would otherwise occur. The procurement program does not even address what the Port’s implementation plan is post-2020: “For the Compliance Period 2021-2030, the Port will continue to monitor and participate in development of the regulations until the state regulators have completed their efforts to codify the new [Renewable Portfolio Standard] laws.</p> <p>“Second, it is improper to rely on “mitigation measures adopted under the rubric of reducing greenhouse gas emissions that “would likely have the collateral effect of substantial energy-saving effects.” “Although there is likely to be a high correlation between reducing greenhouse emissions and energy savings, [courts] cannot assume the overlap is sufficient under CEQA’s study and mitigation requirements.”</p>	<p>The Draft IS/MND does not rely on the Port’s renewable portfolio standard procurement program for any analysis findings. The discussion of the Port’s renewable portfolio standard procurement is in the background setting section of the Draft IS/MND and is presented as background information. No additional changes are needed.</p>
CBD-18	<p>For all of these reasons, the IS-MND cannot assume that the project’s energy use will be less than significant. There is not sufficient information to support that assessment. Moreover, the mitigation measures described to reduce energy use cannot be relied upon to assert that project impacts are less than significant in other impact areas like greenhouse gas emissions, as discussed in the next section.</p>	<p>Please see responses to comments CBD-11 through CBD-17. There are no changes to the IS/MND findings as a result of the comment.</p>
CBD-19	<p>CEQA recognizes that evaluation and mitigation of greenhouse gas emissions is critical because “the accumulation of these emissions in the atmosphere over time is already causing the climate to change – with more significant changes to come.” To analyze greenhouse gas emissions, lead agencies need to consider consistency with the State’s long-term climate goals and strategies and need to support their decision to utilize a particular methodology.</p> <p>In the IS-MND, the Port has inexplicably decided to apply a 10,000 MT of CO₂e/year threshold of significance from an air district in another area of the state and then preceded to minimize emissions and prematurely negate certain emissions to arrive at a conclusion that the project will have less-than-significant greenhouse gas emissions impacts. The Port’s analysis is not supported by substantial evidence. The emissions from the project are significant and should be analyzed in greater detail and mitigated.</p>	<p>There has indeed been a shift from relying on bright-line thresholds to consistency with plans and policies intended to reduce GHGs in the past year. However, a lead agency has discretion under CEQA to adopt and set thresholds of their choosing. Per CEQA:</p> <p>“Lead Agencies can set thresholds on a project-by-project basis, or they can informally or formally adopt thresholds to be consistently applied to all projects. For the Lead Agency, having clearly established thresholds promotes predictability and consistency (over time and across reviewers) in the environmental review process, can bolster the defensibility of significance determinations in the Agency’s documents, and can focus the analysis on impacts expected to be significant rather than impacts that are simply controversial. However, CEQA does not require that a Lead Agency use the same significance threshold for different CEQA document.</p> <p>The development and use of thresholds of significance are not required by CEQA. However, it is good and accepted practice to do so in both Initial Studies and EIRs because it allows readers to more easily understand the chain of facts and logic that led the Lead Agency to their significance conclusion.”</p> <p>The Port has used this threshold for several recent projects and disclosed the reasoning behind use of the threshold, as well as the South Coast Air Quality Management District’s (SCAQMD’s) use of the threshold consistent with the requirements of CEQA. Therefore, there are no changes to the IS/MND findings as a result of the comment.</p>

² High priority fleets are entities that own, operate, or direct at least one vehicle in California and that have either \$50 million or more in gross annual revenues or that own, operate, or have common ownership or control of a total of 50 or more vehicles (excluding light-duty package delivery vehicles). The regulation affects medium- and heavy-duty on-road vehicles with a gross vehicle weight rating greater than 8,500 pounds, off-road yard tractors, and light-duty mail and package delivery vehicles.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-20	<p>Although agencies may use significance thresholds to assess greenhouse gas (GHG) emissions impacts, agencies are required to support their decision to use a threshold with evidence in the record, which the Port did not do here. Evidentiary support is particularly important where commenters raise concerns about the relevance or outdatedness of the threshold. It is inappropriate to utilize the South Coast Air Quality Management District (SCAQMD) threshold because that threshold was developed with specific reference to the emissions within the South Coast district. The South Coast threshold should be used only for projects where SCAQMD is the lead agency or should at least be limited to projects within the district. SCAQMD set its threshold based on the emissions from industrial projects it anticipated considering as lead agency. Specifically, staff analyzed projects permitted in 2006-2007 to determine the 90th percentile of cumulative natural gas usage for all permitted facilities. The top 10% of facilities consumed more than 90% of the gas, which corresponds to the 10,000 metric tons (MT) of CO₂e annually emissions threshold. There is no evidence that a similar breakdown of facility emissions exists within the San Joaquin Valley Air Pollution Control District (SJVAPCD).</p>	<p>Please see response to comment CBD-19. A lead agency has discretion under CEQA to adopt and set thresholds based on sound reasoning, which was fully presented in Section 3.3.8.1.3 of the Draft IS/MND.</p>
CBD-21	<p>It is also inappropriate to use a threshold adopted in 2008—fifteen years ago — when so much has changed to increase the urgency of reducing GHG emissions. Since 2008, the California Air Resources Board has updated its Scoping Plan several times, most recently in 2022. The 2022 Scoping Plan focuses on actions necessary to “achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279.” Assembly Bill was not yet law in 2008. Indeed, the SCAQMD threshold is based on the Executive Order S-3-05, which set a goal of reducing GHG emissions 80% below 1990 levels or 90% below current levels by 2050. There have since been several additional Executive Orders and legislative actions since then as well (e.g., Assembly Bill 1279 and Senate Bill 32, which requires CARB to reduce greenhouse gas emissions to 40% below the 1990 levels by 2030) that demand a more stringent standard. The SCAQMD threshold should not be used until it is updated.</p>	<p>Please see response to comments CBD-19 and CBD-20.</p>
CBD-22	<p>Finally, the CEQA Guidelines place emphasis on the process for adopting significance thresholds—agencies are encouraged to publish thresholds and thresholds adopted for general use need to be developed through a “public review process.”</p> <p>“The Port’s decision to randomly select the SCAQMD threshold for assessing the significance of GHG emissions completely thwarts this goal of public participation and review. Community groups commenting on a project in Stockton cannot be expected to have been able to anticipate that a process fifteen years ago in another air basin would possibly impact the analysis.</p>	<p>Please see response to comments CBD-19 and CBD-20. The development and use of thresholds of significance are not required by CEQA. The Port is using a threshold that was adopted by another lead agency through a public process. No additional changes are necessary.</p>
CBD-23	<p>Even if the SCAQMD 10,000 MT/year CO₂e threshold was appropriate for assessing the significance of GHG emissions, the IS-MND underestimates the emissions so that they are below this threshold. It is particularly suspicious that emissions are said to be mitigated by 2,334 MT/year—from 12,333 to 9999 MT/year, which is just one less MT than the threshold.</p>	<p>Please see response to comment CBD-9. Emissions following mitigation were found to be below set thresholds and therefore were considered less than significant consistent with standard CEQA assessment methodologies. No additional changes are necessary.</p>
CBD-24	<p>Certain details about large categories of emissions are not explained. For example, the mobile source emissions category is said to contribute 2,328 MT CO₂e/year. Elsewhere in the IS-MND, the Port notes that vehicle trip lengths were assumed to be “up to 200 miles per day for 30% of the truck trips, up to 150 miles per day for 50% of the truck trips, and up to 50 miles per day for 20% of the truck trips and 11.89 miles for passenger vehicle trips (CalEEMod default) for the proposed project.</p> <p>“There is no basis for this breakdown and there is no explanation of what model years were assumed in this analysis. As noted above, the mitigation measure related to clean trucks is weak and compliance is voluntary. There is no recognition in the IS-MND that the trucks may be old and inefficient. Similarly, there is no analysis of the composition of the energy consumption emissions category. Emerging research indicates that hydrogen and methane leaks are an important component of emissions for hydrogen projects, but there appears to be no estimate as to how much leakage is expected from the project.</p>	<p>Please see Appendix A of the Recirculated Draft IS/MND, which presents all the details regarding the air quality analysis including what model years were assumed in the truck assessment.</p> <p>Please see response to comment DGS-4 which addresses hydrogen leaks and detection.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-25	The GHG emissions analysis also depends on renewable natural gas (RNG) as a mitigation measure to reduce GHG emissions below the threshold of significance, even though the mitigation is unproven and there is no commitment to actually utilizing RNG at the project site. By incorporating RNG, the operator claims that emissions would be reduced by 2,334 MT of CO ₂ e per year—conveniently 1 MT below the threshold. However, the carbon intensity of RNG is likely drastically underestimated, which casts doubt on RNG as a viable mitigation measure. RNG is also responsible for many other environmental harms like volatile organic compound emissions and nitrogen runoff.	The comment does not present any evidence that the RNG is drastically underestimated. Therefore, no response is warranted.
CBD-26	The proposed project intends to rely on RNG in accordance with California’s Low Carbon Fuel Standard (LCFS) methodology. But CARB’s methodology for determining the lifecycle emissions of RNG, or factory farm gas, fails to account for the leakage of farm gas during all stages of production, transport, and refining. For example, a study of methane leakage from biogas plants found that leaked methane can be as high as 14.9% of total methane production. Importantly, one recent study concluded that renewable natural gas from intentionally produced methane—as is the case with factory farm methane—is always a net greenhouse gas emitter unless total system leakage is zero. Furthermore, CARB’s factory farm gas calculations ignore upstream feed production and transport, enteric emissions, and downstream emissions from digestate handling, use, and disposal. In failing to consider these components of the full lifecycle of RNG, it cannot serve as an effective mitigation measure.	CARB’s methodology is an established methodology and therefore is adequate for the assessment. No additional changes are necessary.
CBD-27	Moreover, though proposed as a mitigation measure, there is no commitment to using RNG at the facility. Instead, the proposal is to use the “Book and Claim” mechanism under the LCFS. With this mechanism, credits would be purchased for the use of RNG elsewhere, but the supposed emissions reductions would be claimed by the proposed facility. Thus, even if RNG were a viable mitigation measure, this would be contingent on a dubious measure akin to carbon pricing or offsets—measures which are notorious for their ineffectiveness in reducing both emissions and other environmental harms.	The LCFS regulation specifies that, “Indirect accounting may be used for RNG used as a transportation fuel or to produce hydrogen for transportation purposes (including hydrogen that is used in the production of a transportation fuel).” The hydrogen produced using RNG purchased as a GHG mitigation measure does not qualify for sale under the LCFS, as the environmental attributes of the RNG will have been retired already as part of the CEQA mitigation. No additional changes are necessary.
CBD-28	In any case, there is no commitment to use RNG at facility. This is problematic. First, the SCAQMD guidance that the IS-MND relies upon states that “[a]ny offsite mitigation measures that include purchase of offsets would require the project proponent provide offsets for the life of the project, which is defined as 30 years.” There is no such 30-year commitment in the IS-MND. Second, California courts have clarified that offset credits need to be “real, permanent, quantifiable, verifiable, enforceable, and additional to any GHG emission reduction otherwise required by law or regulation, and any other GHG emission reduction that otherwise would occur.” Offsets onsite and in the surrounding County should be prioritized, and there must be mechanisms to ensure that mitigation is not improperly deferred. Both RNG and the “Book and Claim” method of using it are inadequate for producing provable emissions reductions.	Please see responses to comments DGS-27, DSG-28, and DSG-29.
CBD-29	The CEQA Guidelines allow the use of a MND only where potentially significant effects on the environment are identified and mitigated. The IS-MND does not adequately disclose or mitigate potential adverse impacts to biological resources, such as the San Joaquin River, historic wetlands, and special status wildlife and plant species located within and near the project area. Despite acknowledging that the river is located “approximately 485 feet west of the project site,” the IS-MND does not critically evaluate whether the proposed BayoTech gray hydrogen project could enable drainage and runoff to the river. The IS-MND uncritically assumes that stormwater and runoff at the site would be properly captured by drains and swales and diverted to the local stormwater system. Id. But the stormwater system currently allows pumping to the San Joaquin River, which is already impaired, in years where the retention Basin reaches a high level. Similarly, the IS-MND does not disclose or discuss the proposed project’s increase in local truck traffic and concomitant impacts on biological resources.	The Draft IS/MND fully discloses that all runoff will be collected and transferred to the retention basin immediately west of Navy Drive. All stormwater runoff from the East Complex is conveyed via a system of drainage ditches and channels before being pumped into the Navy Drive stormwater retention basin. During years when the retention basin reaches a high level, stormwater is pumped to the San Joaquin River. The Port actively monitors stormwater for compliance with applicable plans and regulations. The comment does not provide any evidence that increases in local truck traffic will cause concomitant impacts to biological resources. Therefore, there are no changes to the IS/MND findings as a result of the comment.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-30	<p>The IS-MND also uncritically assumes that the proposed project would have no impact on migrating birds; however, it fails to identify or evaluate the impact of installing permanent lighting at the facility. Despite disclosing that the proposed project would include security lighting and be operational throughout the night, the IS-MND only evaluates potential impacts to aesthetics. The mitigation measures to reduce aesthetic lighting impacts are limited only to addressing “glare impacts” and do not mitigate potential impacts to wildlife, like migratory birds. Artificial lighting, like that used at the site, attracts migratory birds and can cause confusion, disorientation and exhaustion, directly impacting migration. Especially since the proposed project is sited within the Pacific Flyway migratory corridor, full analysis of the impacts to migratory birds is warranted in an EIR.</p>	<p>The proposed project is in a highly urbanized and developed area surrounded by existing lighting. The mitigation measure will require the proposed project to use light shields or anti-glare lighting to reduce its effects on excess lighting. The aesthetics mitigation measure has been modified in the Recirculated Draft IS/MND to further reduce any potential for impacts.</p> <p>AES-MM-1: Use of full cut-off light shields and/or anti-glare lighting.</p> <p>The proposed project will include construction <i>and design elements</i> that would lessen impacts of light and/or glare, such as full cut-off light shields and/or anti-glare lighting. The following measures shall be required:</p> <ul style="list-style-type: none"> • Any outdoor lighting shall be installed as low as possible to provide only the light where necessary. • Outdoor lighting requires use of light shields that focus light downward or inward. • All exterior lighting shall use long-wavelength lights such as amber and red lamps. <p>This information has been added to the IS/MND but does not change the findings of the IS/MND or result in a new significant impact. Therefore, an EIR is not warranted.</p> <p>Regarding vegetative barriers, the site is not immediately adjacent to any residential receptors. Because vegetation will not further shield lighting, it is not required. The Port will provide BayoTech with information on opportunities for constructing vegetative barriers in other areas of the Port for consideration in developing the CBA.</p>
CBD-31	<p>Finally, the IS-MND fails to consider at all the potential risks to biological resources (such as the San Joaquin River, wildlife, plants, etc.) or people from potential leaks or explosions at the proposed project. For example, in 2007, an explosion occurred at the Muskingum River Power Plant in Ohio during a routine delivery of hydrogen by tanker delivery truck when a hydrogen relief device failed, allowing for a leak and ignition of the hydrogen tank by an unknown source. One employee was killed and an additional eight were injured by the explosion. The explosion was felt nearly half a mile away. The IS-MND fails to identify or evaluate the potential for such risks at the proposed facility, and their adverse impacts on nearby biological resources, such as the San Joaquin River and special-status wildlife and plant species and their habitat.</p>	<p>Please see the response to comment DSG-7. BayoTech’s facility is designed to meet all relevant codes and standards to ensure the safe operation of hydrogen production plants.</p>
CBD-32	<p>The CEQA analysis for the proposed project should include any potential environmental justice impacts. Environmental justice guarantees that all people, regardless of race, color, national origin, or income, have equitable access to a clean and healthy environment. Lead agencies are encouraged to complete an environmental justice analysis for projects that are likely to have a significant and disproportionate effect on vulnerable populations. Further, CEQA and its Guidelines instruct lead agencies to consider how the environmental and public health burdens of a project might disproportionately impact vulnerable communities. The IS-MND contains no such consideration. The project is proposed at the Port of Stockton, which is located in a predominantly Latino community that is exposed to severe episodic air pollution impacts. The census tract where the project is located is designated as a “disadvantaged” community by the California EPA because it falls within CalEnviroScreen’s highest-scoring 25 percent of census tracts—the higher the score the higher the level of pollution burden and community vulnerability factors relative to other California census tracts. Stockton consistently scores in the top CalEnviroScreen percentiles due to extreme concentration of heavy industry, with high levels of cumulative impacts to air, water, and soil contamination. The following CalEnviroScreen map shows that the total pollution burden (99th percentile), diesel particulate matter (91st percentile), groundwater threats (97th percentile), impaired waterways (99th percentile), and asthma (96th percentile) near the project site are among the highest in the state. Census Tract: 6077000801 (Population: 7,624) - The results for each indicator range from 0-100 and represent the percentile ranking of census tract 6077000801 relative to other census tracts.</p>	<p>CEQA does not require an environmental justice assessment as part of an IS/MND. However, the Draft IS/MND did consider the potential for the proposed project to affect human health in several sections, including using air and noise thresholds that were developed based on human health standards and a health risk assessment. Impacts were found to be less than significant for all receptors and therefore no additional analysis is required.</p>
CBD-33	<p>The environmental justice implications of the project should have been included in the environmental analysis in three key ways. First, they should have been considered when evaluating the significance of project impacts. It is well established that “[t]he significance of an activity depends upon the setting.” For example, as the State of California, Department of Justice environmental justice fact sheet notes, “a proposed project’s particulate emissions might not be significant if the project will be located in a sparsely populated area, but may be significant if the project will be located in the air shed of a community whose residents may be particularly sensitive to this type of pollution, or already are experiencing higher-than-average asthma rates. A lead agency therefore should take special care to determine whether the project will expose ‘sensitive receptors’ to pollution (see, e.g., CEQA Guidelines, App. G); if it</p>	<p>Please see response to comment CBD-32.</p>

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
	will, the impacts of that pollution are more likely to be significant. "The IS-MND should not have applied universal air pollution significance thresholds to evaluate significance given the localized impacts to neighboring communities.	
CBD-34	Second, CEQA requires a lead agency to consider whether a project's effects, while they might appear limited on their own, are "cumulatively considerable" and therefore significant. As discussed in the next section, the IS-MND does not include an adequate cumulative impacts analysis.	Please see response to comment DSG-36.
CBD-35	<p>Third, the IS-MND must address any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans. This includes applicable environmental justice policies to address the negative environmental impacts and health/ hazards. Yet the IS-MND fails to adequately discuss the project's potential inconsistencies with the air district's Community Emissions Reduction Program (CERP) for the Stockton area, which includes the site of the proposed project. The SJAPCD CERP sets forth goals relating to the community's demands to decrease air pollution, lower toxic emissions, reduce vehicle traffic, and limit industrial development. There is a specific emphasis within the CERP on reducing heavy truck pollution, with resources dedicated to studying alternate routes for trucks, incentives to replace trucks with zero and near-zero technology, development of heavy-duty electric vehicle charging infrastructure, incentivizing truck idling plug-ins, and increased enforcement of anti-idling regulation.</p> <p>This dedication of funding demonstrates that similar mitigation measures at the project level are feasible and would reduce air pollution impacts. Yet the project does not consider or implement any of these measures. Instead, the project will impede progress toward the CERP goals by creating a new source of heavy-duty truck traffic and stationary source pollution in an already-burdened community. The IS-MND should examine potential strategies to ensure the project does not have disproportionate impacts on environmental justice communities and to more closely align the project with the CERP policies to reduce air pollution.</p>	Please see response to comment CBD-32, which addresses potential impacts on the community. Please also see response to comment CBD-13, which addresses clean trucks.
QCBD-36	<p>The IS-MND fails to disclose and evaluate the cumulative impacts of the proposed project. CEQA requires an evaluation of "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects."63 Here, however, the IS-MND fails to evaluate the cumulative impacts of the proposed BayoTech project when added to other closely related projects.</p> <p>In support of its finding that the proposed project would result in "less-than-significant impacts as related to cumulative impacts," the IS-MND states that "[t]he proposed project's operations were specifically designed to avoid significant air quality, GHG, noise, and transportation impacts." IS-MND at 125. However, it fails to even name any of the "closely related past, present, and reasonably foreseeable probable future projects" to which the proposed project's impacts would be added.64 Even if the proposed project's impacts "are individually limited," by failing to identify the baseline, the IS-MND cannot evaluate whether the proposed project has any "cumulatively considerable" effects. IS-MND at 124. Thus, the IS-MND ignores the fundamental purpose of evaluating cumulative impacts by failing to disclose and evaluate the additive effect of the proposed project in the context of existing "closely related past, present, and reasonably foreseeable probable future projects." For example, the IS-MND fails to identify and evaluate impacts from existing projects, such as the adjacently sited Pelican Renewables, LLC site. The Pelican Renewables site includes a proposed carbon capture and sequestration (CCS) project with carbon from a corn-based ethanol biofuel production plant, transportation of supercritical CO₂ by barge and then injection into two Class VI wells. The Pelican Renewables CCS project is "closely related" to the proposed BayoTech project because it is "probable and sufficiently certain to allow for meaningful cumulative impacts analysis." Furthermore, both the close proximity of the proposed Pelican Renewables CCS project to the proposed BayoTech hydrogen project as well as the similarity of environmental impacts make analysis of cumulative effects necessary. CCS projects such as the Pelican Renewables proposal carry vast environmental impacts. CCS not only entrenches the fossil fuel and biomass/biofuels industries, along with their existing health and safety harms to frontline communities, but also creates new pollution and safety hazards. Additionally, the carbon injection industry has a long history of leaks and explosions from storage wells, pipelines and other facilities. Underground CO₂ plumes can stretch for miles beneath homes, schools, and oil and gas fields, endangering communities and workers. The IS-MND fails to identify or consider the cumulative impacts of the proposed project in conjunction with the environmental impacts associated with the proposed Pelican Renewables CCS project, or any other "closely related past, present, and reasonably foreseeable probable future projects."</p>	CEQA does not require a cumulative impact analysis as part of an IS/MND, because there are no significant and unavoidable impacts.

BayoTech Draft IS/MND Response to Comments

Comment Code	Comment	Response
CBD-37	As explained throughout these comments, the IS-MND for this project presents an inadequate assessment of its environmental impacts. There is more than a fair argument that many of the project's potential environmental impacts are significant. Consequently, the Port of Stockton must prepare an EIR to properly evaluate the environmental impacts of this project. We offer a few observations about any EIR that is prepared for this project.	The IS/MND is adequate, and the comments provided do not support a move to an EIR. There are no changes to the IS/MND findings as a result of the comment.
CBD-38	In preparing an EIR, a lead agency must evaluate a "No Project" alternative, which reflects a scenario in which the project is not implemented. ⁷¹ In addition, the EIR must include an assessment of location alternatives and a reasonable range of project alternatives that meet the Project's goals. ⁷² Here, the project's primary goal appears to be to provide alternative transportation fuels. Achieving that goal does not require construction of a new fossil-gas powered hydrogen production facility. An EIR for this project should examine project alternatives that truly advance California's decarbonization goals. For instance, it is unclear from the IS-MND why a hydrogen fueling project is necessary at all rather than an electric charging station that could power an expanding portion of the truck fleet servicing the Port. The IS-MND also does not give any consideration to hydrogen production methods that use renewable energy to fuel electrolysis. "Green" hydrogen production technology, using truly renewable sources like wind and solar instead of fossil fuels or gas from factory farms, has been proposed in several locations as a strategy to reduce emissions in specific sectors like shipping, aviation, high-heat industrial processes, and long-distance trucking. ⁷³ In an EIR, the Port must either explain why these alternatives are not viable or fully evaluate them.	Please see response to comment CBD-37.
CBD-39	As explained above, the IS-MND fails to adequately consider the environmental justice impacts of this project on neighboring communities. An EIR must consider the potential environmental impacts of the proposed project in the context of existing environmental burdens in the region. The Port of Stockton is already one of the largest sources of pollution in the region. The communities surrounding the Port experience disproportionate exposure to pollution and severe cumulative health impacts. The welfare of these communities has historically been deprioritized. Thus, it is vital that an EIR carefully consider each of the project's impacts on neighboring communities.	Please see response to comment CBD-32. Impacts were found to be less than significant for all receptors, and, therefore, no additional analysis is required. There are no changes to the IS/MND findings as a result of the comment, and an EIR is not required.
CBD-40	Our comments highlight the significant and far-reaching impacts of the proposed BayoTech Hydrogen Project. Rather than identify and examine these impacts, the IS-MND ignores some of them and minimizes others. That does not satisfy CEQA. The Port must prepare a comprehensive EIR that addresses this expansion and thoroughly analyzes the project's significant environmental impacts. We appreciate the opportunity to comment on this IS-MND.	Please see response to comments BCD-37 and DGS-36. CEQA guidelines state that, "Where, prior to the commencement of public review of an environmental document, a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment [...] or would mitigate the significant effect to a point where clearly no significant effect on the environment would occur, a lead agency need not prepare an environmental impact report solely because, without mitigation, the environmental effects at issue would have been significant." Therefore, there are no changes to the IS/MND findings as a result of the comment, and an EIR is not warranted.

BayoTech Draft IS/MND Response to Comments

Pacific Environment

Comment Code	Comment	Response
PE-1	The Mitigated Negative Declaration is not adequate for the scope of the project, and we urge the Port of Stockton to require an Environmental Impact Statement (EIS) instead.	Thank you for your comment. Please see responses to comments PE-2 and PE-3. The project was adequately assessed and an IS/MND is the appropriate CEQA document.
PE-2	<p>Pacific Environment is a 501(c)(3) non-profit organization based in California, with offices in Alaska and China. We hold a permanent consultative status at the International Maritime Organization (IMO), the United Nations' entity responsible for setting international shipping law. We are co-founders and leaders of a global coalition of environmental, environmental justice and ocean conservancy organizations working to accelerate the shipping industry's zero-emission transition on a 1.5 degree Celsius-aligned timeline.</p> <p>Our Ports for People campaign is working with local communities, allies and partners to transform ports from hotspots of fossil fuel pollution to thriving hubs of sustainable economic development and environmental protection. Our goals are to stop ports' fossil fuel build-out, put ships on mandatory zero-emission pathways, and create zero-emission trade routes. Our Ports Playbook for Zero-Emission Shipping calls on ports to take action on commitments, policy and progress to end port pollution.</p> <p>Green hydrogen will be a key energy source to decarbonize hard-to-electrify sectors like shipping and aviation. Unfortunately, the project as proposed by BayoTech is not green hydrogen, but instead feedstock will be a combination of fossil natural gas and 30% RNG. In a decade of climate emergency, we cannot be continuing on fossil fuel and we urge the Port of Stockton to require the project developers to ensure this is a green hydrogen facility.</p>	Thank you for your comment. The Draft IS/MND fully discloses that the proposed project will use natural gas as a feedstock. A CEQA document is not inherently supportive or dismissive of a proposed project; a CEQA document's goal is to present a project and analyze the potential environmental effects to inform decisionmakers.
PE-3	<ul style="list-style-type: none"> • Robust Community protections: Potential harms must be proactively identified, avoided, and mitigated for every aspect of hydrogen development in California (production, transportation, storage, use) to ensure that no additional burdens are experienced by any frontline communities. Any proposed projects must assess the impacts of hydrogen, and these analyses should be conducted with robust community engagement. 	The IS/MND adequately analyzes the proposed project. No additional analysis is required.
PE-4	<ul style="list-style-type: none"> • Transportation and Storage: All pipelines and storage should be designed to safely deliver 100% hydrogen, no blending with fossil gas. Hydrogen pipelines, storage, and end use should be located sagely away from neighborhoods and all pipeline buildouts must involve vigorous, community-inclusive hydrogen leakage monitoring provisions consistent with the best emerging science and guidelines to avoid hydrogen leakage. 	Please see response to comment DGS-6, which discusses the proposed project's safety plans. The proposed BayoTech facility is not located adjacent to any residences.
PE-5	We also want to align our comments with the local frontline organization coalition letter submitted today from Little Manila, et al.	Thank you for your comment. Your request is noted.

BayoTech Draft IS/MND Response to Comments

Ballard Power Systems

Comment Code	Comment	Response
BPS-1	<p>I am writing to voice Ballard’s support for BayoTech’s hydrogen production facility in Stockton, California. As the world leader in heavy duty fuel cells, with vehicles on the road in California for over 25 years, we have seen a tremendous increase in demand for hydrogen in California’s northern Central Valley. Projects such as the Sierra Northern Railway fuel cell locomotive at the Port of West Sacramento, the UPS fuel cell truck fleet in Sacramento, SacRT’s interest in fuel cell electric transit buses, and fuel cell powered freight trucks from projects at the Port of Oakland and across the I-80 will all need clean hydrogen, starting as early as this fall.</p> <p>It is our hope that the Port of Stockton can work with BayoTech to make this much-needed resource available, to help improve the air quality for Northern California and to progress the decarbonization of our energy systems. I am available for any questions or concerns you may have about these projects or our business in fuel cell mobility.</p>	Thank you for your comment.

BayoTech Draft IS/MND Response to Comments

Shell Hydrogen

Comment Code	Comment	Response
SH-1	<p>This letter confirms that Equilon Enterprises LLC (dba Shell Oil Products US, hereinafter, "Shell Hydrogen") has entered into a hydrogen off-take agreement with BayoTech, Inc. ("BayoTech") for the purpose of hydrogen supply to Shell Hydrogen refueling stations in California. Shell Hydrogen is pleased to offer this letter of support for the Port of Stockton Hydrogen Project led by BayoTech in response to the California's goal of increasing the utilization of hydrogen in transportation fuels.</p> <p>Development of hydrogen production and distribution facilities, such as that proposed by BayoTech, are critical in supporting communities and companies during the transition from fossil fuels to new forms of clean energy. Hydrogen produced locally at the Port of Stockton can fuel zero-emission drayage trucks, shore power (electricity for ships while docked), and cargo equipment. These applications offer the potential to reduce greenhouse gas emissions with improvement to air quality in surrounding communities of concern.</p> <p>As an off-taker for this project, Shell Hydrogen has contracted to purchase the hydrogen produced "Ex Works" (EXW) at the production facility and is then responsible for transportation of the hydrogen to Shell Hydrogen refueling stations. Shell Hydrogen expects to have access to the hydrogen from the Port of Stockton Hydrogen Project sometime in 2024. The Port of Stockton Hydrogen Project will provide important progress enabled by innovations in California policy and the hydrogen industry. Innovations improving the gaseous hydrogen approach by companies like Shell Hydrogen – including high-pressure high-capacity tube trailers that triple capacity while halving cost and refueling stations that enable up to 95% usable fraction – enable a market for distributed hydrogen production with significant benefits for the safety, environment, and economy in California.</p> <ul style="list-style-type: none"> • New hydrogen production facilities can be built by a wide range of innovative companies, deploying technologies and production pathways that make the very best use of resources in California. New hydrogen production facilities can be built in California, close to market, making use of local resources and creating local employment and economic development. • Hydrogen supply for mobility can become reliable and resilient most quickly, with rapid increase in the number and diversity of production facilities and in the aggregate hydrogen storage capacity in the system. 	Thank you for your comment.

BayoTech Draft IS/MND Response to Comments

United States Hydrogen Alliance

Comment Code	Comment	Response
USHA-1	I am contacting you on behalf of the United States Hydrogen Alliance (USHA) to voice support for Bayotech’s hydrogen production and filling facility project. USHA is comprised of original equipment manufacturers, technology providers, and public entities that are focused on the accelerated deployment of hydrogen and fuel cell technologies in the commercial and industrial sectors, including fuel cell electric vehicles in hard-to-electrify applications like trucking, busing, locomotive, aviation, maritime, and off-road equipment. Our organization assists states in developing impactful hydrogen and fuel cell policies across the country.	Thank you for your comment.
USHA-2	In an effort to decarbonize the global economy, policymakers worldwide recognize the need to complement electrification strategies with fuels like hydrogen. The U.S. Department of Energy named hydrogen as a key component of a comprehensive portfolio of solutions to achieve a sustainable and equitable clean energy future. The State of California has been a global leader in the development of the hydrogen industry, with projects ranging from production through end use since 1990 when fuel cell electric vehicles were deemed as one path to decarbonizing the passenger vehicle sector. USHA can attest to these activities, especially due to our policy advocacy in the state. Specifically, our organization successfully ran Senate Bill 643 (Archuleta, 2021), which requires a statewide assessment of the fuel cell electric vehicle fueling infrastructure and fuel production needed to support the adoption of zero emission trucks, buses, and off-road vehicles. The Port of Stockton would be in complete alignment with the State’s direction, as indicated by statewide measures such as SB 643, Advanced Clean Trucks Rule, the State Implementation Plan, and other policies that intend to mitigate emissions, especially in non-attainment areas like the San Joaquin Valley air basin.	Thank you for your comment.
USHA-3	Development of hydrogen production and distribution facilities, such as that proposed by BayoTech, are critical in supporting communities and companies during the transition from fossil fuels to new forms of clean energy. Hydrogen produced locally at the Port of Stockton can fuel zero-emission drayage trucks, shore power (electricity for ships while docked), and cargo equipment. These applications offer the potential to reduce greenhouse gas emissions with improvement to air quality in surrounding communities of concern.	Thank you for your comment.
USHA-4	Hydrogen infrastructure projects such as this also offer economic benefits, by establishing local hydrogen production. BayoTech is providing a valuable resource to attract new sustainability-focused companies to the community. Hydrogen infrastructure projects like this also create jobs – including good-paying union jobs. BayoTech’s project will provide opportunities for workers transitioning away from carbon-intensive sectors, leveraging existing skills while developing new skills.	Thank you for your comment.
USHA-5	Hydrogen has been safely produced and used in the U.S. industrial sector for more than half a century. It is subject to the same codes and standards as other fuels to ensure its safe handling and use.	Thank you for your comment.