

Memorandum

FOR: ARV-17-050, StratosFuel LLC

Date : June 7, 2018

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From : **Matthew Ong**
California Energy Commission
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Subject: California Environmental Quality Act Analysis for ARV-17-050

I am an Air Pollution Specialist in Fuel and Transportation Division, California Energy Commission, and am the Commission's Agreement Manager for proposed Agreement ARV-17-050 ("Agreement"), the Hydrogen Electrolysis Plant, City of Moreno Valley, Riverside County, California (the "Project").

Pursuant to my work in developing the Agreement, including the Scope of Work for the Agreement, I have reviewed the lead agency, the City of Moreno Valley's (the "City"), California Environmental Quality Act ("CEQA") 2010 Initial Study and Negative Declaration, the resolution of the City adopting the Negative Declaration (Resolution No. 2010-07), the City's filed Notice of Determination, Addendum to the Negative Declaration prepared on May 31, 2018, and the scope of work for proposed Agreement ARV-17-050.

The Project will be located in the City of Moreno Valley within the Moreno Valley Industrial [Specific] Plan Area (SP #208) which was originally adopted on June 27, 1989 (Ordinance No. 204). The City prepared a programmatic EIR for the Specific Plan that considered the broad policy alternatives and program-wide mitigation measures at an early stage of planning. In 2010, the City of Moreno Valley prepared and adopted an Initial Study and Negative Declaration for Master Plot Plan PA07-0035, Plot Plan PA07-0039 and Tentative Parcel Map No. 35822 (PA08-0021) which included the development of six industrial buildings ranging in size from 23,700 square feet to 47,160 square feet on six parcels. Recently, the City prepared an Addendum to the Negative Declaration.

The Addendum identifies the modified project as comprising Parcels 1, 2, 3, 4 (APN 0485-230-030 – 033) spanning 8.82 acres of the approved project site within the Moreno Valley Industrial Area [Specific] Plan (SP #208) Master Plot Plan PA07-0035. The applicant proposes to change the use of those parcels from light wholesale, storage and distribution to heavy manufacturing and office, business, and professional in order to facilitate the proposed 100 percent renewable hydrogen electrolysis and steam reformation facility and associated professional office campus. The Agreement involves funding a portion of the project that will be constructed on Parcels 3 and 4.

Under CEQA the lead agency shall prepare an addendum to a previously adopted negative declaration if only minor technical changes or additions to the prior environmental document are necessary and none of the conditions calling for the preparation of a subsequent EIR or negative declaration have occurred under Cal. Code of Regulations sections 15162, 15164. The City evaluated the potential environmental impacts of the modified project and acting as the lead agency, the City has determined that none of the CEQA conditions, requiring the preparation of a subsequent EIR or negative declaration, listed in Section 15162 apply. The City has determined that an Addendum to the prior Negative Declaration is appropriate for the modified project and appropriate for compliance with CEQA as described in the CEQA guidelines (Cal. Code Regs. §§ 15000 et al).

It is my opinion that the work to be performed under the proposed Agreement falls within the scope of the lead agency's documents and the Agreement will not result in any new significant environmental impacts than those already considered by the lead agency. I have not found any new mitigation measures within the Energy Commission's authority that would lessen or further mitigate the Project's impacts. The reasons for my conclusion are as follows:

The Project includes the design, construction, and operation of a 5,000 kilogram per day, 100 percent renewable hydrogen electrolysis plant. The facility will be located at the Moreno Valley Business Park in an industrial zoned area. The hydrogen fuel product will be distributed to the state's public refueling station network and to StratosFuel, Inc.'s car-sharing program. The plant will receive most of its power from StratosFuel's instate wind/solar 30-year power purchase agreement, and water from the Eastern Municipal Water District. There will be no or less than significant emissions generated from the production process and from the transportation of hydrogen. The Project is expected to have the same or substantially similar impacts to land use, biological resources, cultural resources, geology and soils, hazardous material, and water quality as identified in the lead agency's previously adopted Negative Declaration.

Air Quality:

The Project will consist of construction activities and is thus expected to generate short-term air pollutant emissions. In addition, operation of the proposed Project, particularly transportation of the hydrogen product, would generate air emissions over the long-term. However, the hydrogen production and handling equipment will be electrically driven, with the production process only consisting of the electro-chemical splitting of water into hydrogen and oxygen gas, and are therefore expected to generate zero or less than significant emissions.

The nearest sensitive receptors are single-family residential uses adjacent to the east of the project site, as well as the planned StratosFuel, Inc. corporate office campus. The Project is expected to comply with South Coast Air Quality Management District's (SCAQMD) Localized Significance Thresholds, including for receptors less than 82 feet away. Project-specific short-term construction and long-term criteria pollutant emissions would also be less than the emissions thresholds established in the SCAQMD CEQA Air Quality Handbook. The installation of equipment related to electrolysis, and cryogenic liquid hydrogen, or any other stationary equipment proposed as part of the Project would require a permit from the SCAQMD pursuant to Title V of the Clean Air Act and would be subject to SCAQMD regulations.

Although the previously approved project under the adopted Negative Declaration did not include a quantified greenhouse gas (GHG) emissions analysis, current analysis indicates that

GHG emissions from the Project's facility operations would be less than the SCAQMD threshold of 10,000 metric tons per year for industrial uses subject to Title V permitting, and be below the level of emissions for the previously approved land use that was included in the Moreno Valley Energy Efficiency and Climate Action Strategy and Western Riverside Council of Governments Sub-Regional Climate Action Plan.

Biological Resources:

The project site is within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The project site is not located within any MSHCP cellgroup or criteria cell and therefore has no conservation requirements toward building out the MSHCP Reserve. The project site is also not located within any amphibian, owl, criteria area, mammal, or narrow endemic plant survey areas. However, the vacant parcel adjacent to the north is located within a burrowing owl survey area, so it is possible that burrowing owls may be present on the project site. The project site is not located within or adjacent to land use designated as occupied foraging habitats by the Migratory Bird Treaty Act and the California Fish and Game Code. The site-specific conditions prescribed in the adopted Negative Declaration to complete a pre-construction survey for burrowing owls prior to any disturbance of the site would apply to this Project. Impacts to candidate, sensitive, or special status species from development of the Project are expected to be the same or substantially similar to those identified in the previously adopted Negative Declaration.

Cultural Resources:

The Cultural Resources Inventory for the City of Moreno Valley at the California Historical Resources Information System, Eastern Information Center did not reveal evidence of any known archaeological, historical, or paleontological resources on the site. Thus, there is no indication that archaeological, historical, or paleontological resources are present on the project site. However, the Project would be required to comply with all applicable regulations protecting archaeological, historical, and paleontological resources and would be conditioned to cease excavation or construction activities if archaeological, historical, or paleontological resources are identified during execution of the Project. Impacts to archaeological, historical, or paleontological resources from development of the Project would be the same or substantially similar to those identified in the previously adopted Negative Declaration.

Geology and Soils:

The proposed Project would not have a direct impact on creating geologic concerns. The site is currently designated for Industrial uses. The proposed plan does not increase the exposure of residences that might be exposed to ground shaking, since residences are not proposed as part of the plan. The project site is not located within or near a designated Alquist-Priolo Earthquake Fault zone or other designated fault hazard zone. Construction on the project site would be required to comply with applicable provisions of the latest editions of the International Building Code (IBC) and California Building Code (CBC) as well as the City's building regulations. Prior to issuance of a grading permit, the applicant shall provide evidence to the City that all project components have been designed, engineered, and constructed in conformance with the applicable provisions of the IBC and CBC. In accordance with the provisions of the 2016 CBC, the applicant shall also prepare a project specific, design-level geotechnical/soils/geologic investigation report as a condition of approval to build.

The development of the site will likely result in the reduction of erosion with the placement of buildings and landscaping on the site. During construction, there is the potential for less than significant impacts for short-term soil erosion from minimal excavation and gradation. This will

be addressed as part of standard construction, such as water to reduce dust and sandbagging, if required, during raining periods. Since development of the project site includes disturbance of more than one acre, the project applicant will be required to comply with the National Pollutant Discharge Elimination System General Construction Permit, including filing a Notice of Intent with the Santa Ana Regional Water Quality Control Board, preparing a Stormwater Pollution Prevention Plan for implementation during construction, and preparing a Water Quality Management Plan for implementation during operation of the Project. Impacts to geology and soils from the Project would be the same or substantially similar to those identified in the previously adopted Negative Declaration.

Hazards and Hazardous Materials

The Project would involve the production and storage of hazardous materials, namely hydrogen, during operation but shall comply with all applicable federal, state, and local laws and regulations pertaining to the transport, use, disposal, handling, and storage of hazardous waste, including but not limited to the International Fire Code (IFC) for hydrogen applications, the International Building Code (IBC) and California Building Code (Title 24, CBC) for general construction requirements, the International Fuel Gas Code (IFGC), the NFPA 2 Hydrogen Technologies Code, the NFPA 55 for compressed gases and cryogenic fluids, the NFPA 70 for electrical infrastructure, the American Society of Mechanical Engineers (ASME) B31.12 standard on hydrogen piping and pipelines, and Title 49 of the Code of Federal Regulations implemented by Title 13 of the CCR, which describes strict regulations for the safe transportation of hazardous materials.

The Project also proposes to install and operate a hydrogen truck loading component. Hydrogen would be transported from the proposed Project site via trucks designed for the transport of hydrogen gas and in conformance with Hazardous Materials Transportation Act regulations. Hydrogen delivery trucks entering and exiting the project site would be provided specific travel directions to the hydrogen facility and for deliveries to hydrogen refueling stations, primarily utilizing arterial streets and unrestricted highways per the National Hazardous Materials Route Registry. Compliance with all applicable local, state, and federal laws would ensure operation of the proposed Project would implement redundant safeguards such as quality control of engineering, construction, and installation of equipment, leak detection devices, automatic shut-off valves, and 24/7 on-site and remote monitoring of the facility to prevent release of hazardous materials (i.e., hydrogen) into the environment.

Potential hazardous materials such as fuel, paint products, lubricants, solvents, and cleaning products may be used and/or stored on-site during construction of the Project. However, due to the limited quantities of these materials to be used during construction, they are not considered hazardous to the public.

Hydrology and Water Quality:

The Eastern Municipal Water District (EMWD) would provide the proposed Project with water supplies. No direct groundwater withdrawals would be required for the Project.

Pursuant to the requirements of the Santa Ana Regional Water Quality Control Board, a project specific Water Quality Management Plan (WQMP) is required for certain projects involving discretionary approval. This Project requires a WQMP to address pollutants of concern which include nutrients, oxygen demanding substances, and pathogens (bacteria and viruses). Site Design and Source Control best management practices (BMPs) are used throughout the Project. Treatment BMPs must be selected and implemented which are medium to highly

effective in treating pollutants of concern. On-site bioswales will be incorporated into the Project landscaping to ensure stormwater runoff from conversion of permeable surfaces to impermeable surfaces is managed in accordance with applicable regulations. The site-specific BMPs would therefore facilitate groundwater recharge within the EMWD's service territory, where water supply was deemed to be adequate, at a rate that would meet or exceed pre-development conditions.

Additionally, grading activities would temporarily expose soils to wind and water erosion that would contribute to downstream sedimentation. The proposed Project would comply with all permits and development guidelines associated with urban water runoff and discharge set forth by the City of Moreno Valley and the Regional Water Quality Control Board. With the approval of the storm drainage facilities by the City Engineer and Riverside County Flood Control District, as well as complying with all applicable storm water discharge permits, impacts would be less than significant.

Land Use and Planning:

The project site is currently undeveloped, designated as business park/light industrial, and is bounded to the north by vacant land, to the east by residential uses, to the south by a warehouse, and to the west by the March Air Reserve Base. No existing established community is located on the project site. The hydrogen production facility would be constructed in an area that permits "heavy manufacturing" and located in proximity to other industrial uses. StratosFuel, Inc. corporate headquarters office campus would be constructed within the 300-foot Residential Buffer Zone between the proposed hydrogen facility and the residential uses to the east to serve as a physical buffer that would protect residential surrounding areas from hazards, noise, odor, dust, smoke, truck traffic, and other objectionable influences. The proposed project site would be served by improved public streets and other infrastructure and does not involve the subdivision of land or the creation of streets that could alter the existing surrounding pattern of development or established community. The proposed Project is consistent with the site's existing Industrial Zone land use designation within the Moreno Valley Industrial [Specific] Area Plan (SP #208) and the City of Moreno Valley's General Plan. Associated impacts would be the same or substantially similar to those identified in the previously adopted Negative Declaration.

Noise:

The proposed Project, consistent with the previously adopted Negative Declaration, has the potential to impact surrounding sensitive uses associated with short-term construction, long-term off-site traffic, and long-term off-site operations. Although the project site is in a developing industrial district, there are existing residential uses to the east. However, City of Moreno Valley (City) standards require 8-foot-tall walls to screen the Project from view for aesthetic purposes, which would also provide noise attenuation to reduce levels at the nearby residences below the City's exterior standard of 65 decibels. Noise impacts are expected to be the same or substantially similar to those identified in the previously adopted Negative Declaration.

Specifically, noise impacts associated with construction activity are related to the noise generated by heavy construction equipment, location, sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. The Project's short-term noise impacts during construction are considered less than significant through compliance with City Municipal Code limits on construction hours. Additionally, the Project will locate equipment at the farthest location possible from adjacent residences, as well as position stationary construction

equipment so that the emitted noise is directed away from adjacent residences. All construction equipment will be equipped with properly operating and maintained mufflers.

Pertaining to long-term off-site traffic noise impacts, the City of Moreno Valley requires that the exterior active use areas not exceed 65 dBA CNEL, with an accepted significance threshold of 5 decibels. The trip generation associated with the Project would be significantly less than the equivalent trip generation for the project previously approved under the Negative Declaration. Independent analysis concluded that the Project traffic would increase noise levels within 50 feet of the surrounding roadways by only 0.0 to 2.3 decibels.

Finally, for long-term off-site operational noise impacts, the noise associated with normal operations occurs when the compressors located at the transfill station are used to fill delivery trucks, as well as from the trucks themselves. Located approximately 660 feet west of the existing single-family residences, the noise associated with compressor operations would be attenuated down to 39 dBA Leq, and the noise from delivery truck operations would be attenuated down to 53 dBA Lmax. These noise levels are below both the daytime and nighttime standards for residential uses.

Transportation/Traffic:

The proposed Project would generate approximately 25 truck trips per day at full-capacity operations. The trip generation associated with the Project would be significantly less than the equivalent trip generation previously approved under the adopted Negative Declaration, which entailed approximately 730 trips per day with 146 trips attributed to trucks. As is the case with the previously approved project under the adopted Negative Declaration, the project would be conditioned to complete street improvements at Heacock Street and Revere Place to address unacceptable level of LOS at these intersections. In addition, the Project would be conditioned to pay standard development impact fees and Transportation Uniform Mitigation Fees. Project conditions of approval require improvement to the perimeter project streets, the installation of a median along the Project site's frontage, as well as fair share contribution towards the installation of a signal. At this time, no specific development proposal or site plan is available; therefore, specific site access information has not been determined. However, the design of roadways must provide adequate sight distance and traffic control measures in accordance with City standards. Furthermore, none of the roadways in the Project vicinity are included in Riverside County's Congestion Management Program system of roadways and highways.