



COMMUNITY
DEVELOPMENT

City of Lancaster Initial Study

- 1. Project title and File Number:** Conditional Use Permit No. 22-11
Heliogen R&D Facility
- 2. Lead agency name and address:** City of Lancaster
Development Services Department
Community Development Division
44933 Fern Avenue
Lancaster, California 93534
- 3. Contact person and phone number:** Jocelyn Swain, Senior Planner
City of Lancaster
Development Services Department
(661) 723-6100
- 4. Location:** 431 East Avenue K-4
(APNs: 3126-031-901, 3126-031-902)
(see Figure 1)
- 5. Applicant name and address:** Heliogen, Inc.
130 West Union Street
Pasadena, CA 91103
- 6. General Plan designation:** Specific Plan/Light Industrial
- 7. Zoning:** Specific Plan No. 80-02 (Business Park
Specific Plan – Phase I & II)
- 8. Description of project:**

The proposed project consists of the expansion of the existing Heliogen Research & Development facility at 431 East Avenue K-4 to include additional testing operations; commercial hydrogen production would not occur on the project site. Specifically, the project would include expanding the uses at the project site to include the following:

- Hydrogen production, processing, storing, and dispensing;
- Electricity production using a photovoltaic field; and
- Synthetic fuel production and storage.

In order to support this additional research and development, the following equipment would be installed at the southern end of the subject property as shown in Figure 2:

- An additional 55-foot tower and receiver;
- 100 kilowatt (kW) photovoltaic solar field (approximately 400 panels);
- Stationary electrolyzer cell power system (used for hydrogen production) comprised of a telemetry cabinet and four modules: 1) power module; 2) generation module; 3) rectifier module; and 4) steam flow module;
- Six 300 cubic foot (volume) hydrogen gas cylinders;
- Hydrogen transfer line
- Hydrogen compression/storage/dispensing unit;
- Thermal reactor for synthetic fuel production; and
- Fischer Tropsch reactor for synthetic fuel production

Additional information regarding each of the activities and equipment is provided below.

Tower

A 55-foot tower would be installed on the project site adjacent to the existing on-site tower. The tower would support the expanded R&D uses on the site would be similar in appearance to the existing tower.

Photovoltaic Solar Field

Approximately 400 photovoltaic (PV) solar panels would be integrated into the existing heliostat fields to generate 100 kW of power. The purpose of the PV solar panels is to test various PV components, including storage, panels, frames, etc., for solar thermal application.

Hydrogen Production, Processing, Storage, and Dispensing

Hydrogen production capabilities would be tested at the project site including storage (compressed/solid state), water capture, power generation from hydrogen, and hydrogen venting/dispensing. Hydrogen production would take place using a stationary electrolyzer cell power system energized by the concentrated solar power (CSP) produced from the solar field as well as grid power. Once the hydrogen is produced, it would be 1) used for production of synthetic fuels, or 2) transferred via a hydrogen transfer line into the compression/storage unit. This storage unit would consist of a hydrogen drying unit and compression and/or solid-state storage system. Approximately 500 kg of hydrogen would be produced a day, and the storage unit volume would be approximately 1,000 kg of hydrogen. Hydrogen venting/dispensing would occur onsite consistent with federal, state, and local regulations. Hydrogen produced on site would be for project use only and not available to the public.

Synthetic Fuel Production and Storage

Synthetic crude would be produced using the following process:

1. Carbon dioxide (CO₂) is captured from the air or from point sources.
2. Hydrogen produced from the processes described above is fed along with the carbon dioxide into a proprietary thermal reactor, which produces the synthetic fuel precursor called “Syngas”. The thermal reactor can be heated by electricity or by a combination of electricity and high quality solar industrial process heat.
3. The Syngas is converted into hydrocarbons using a Fischer Tropsch reactor.
4. The hydrocarbons are processed and isomerized into whichever fuel or chemical is desired (note that step 4 would *not* be completed at the project site; rather, the hydrocarbon crude produced at the project site would be transported to other locations for further refinement).

Approximately 20-40 gallons of crude would be produced per day at the project site. The materials would all be generated, tested, and stored in compliance with federal, state, and local regulations.

Construction

Construction would occur over a 3 month period with approximately 12 construction workers. No demolition and minimal, if any, grading of the project site would be required.

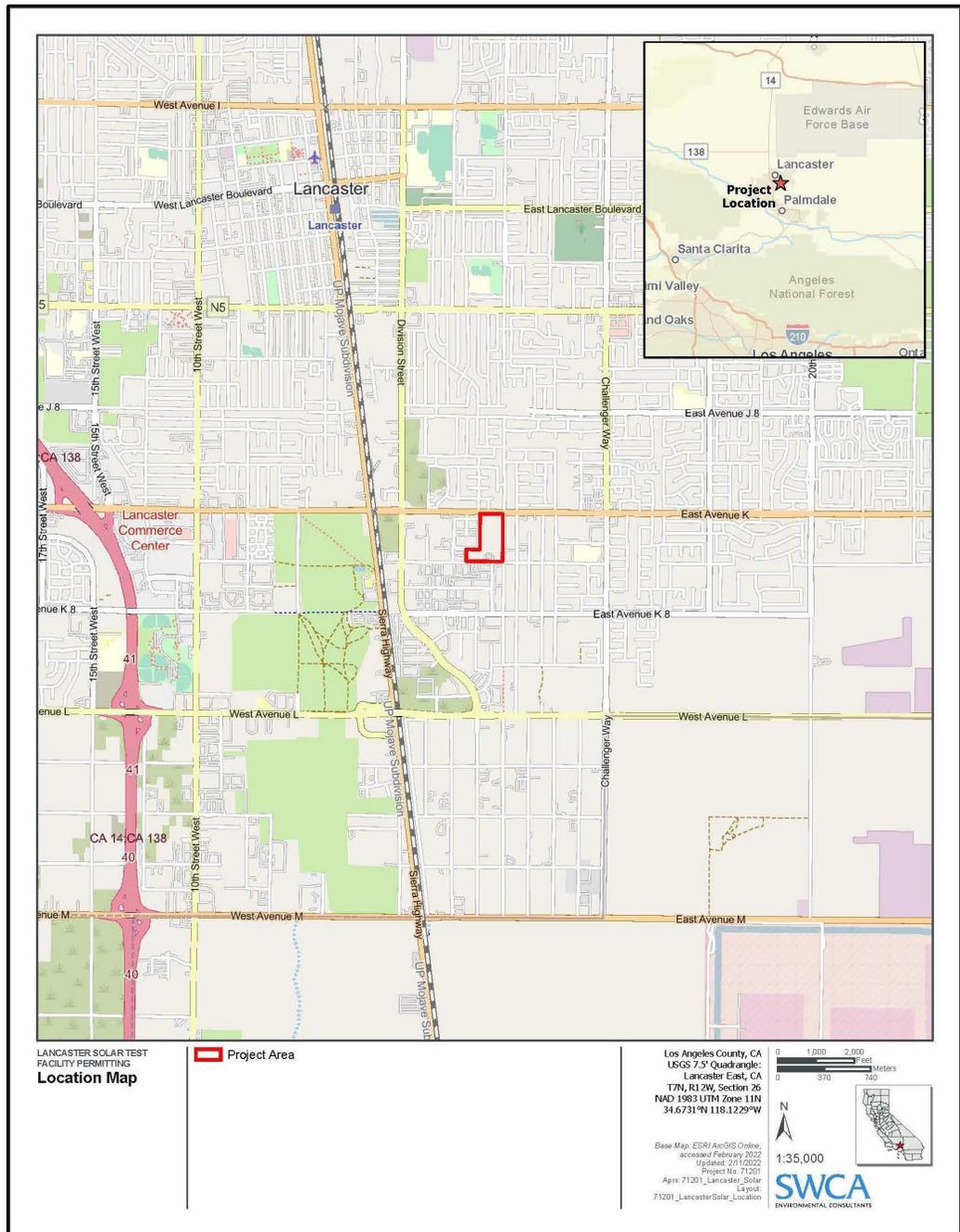


Figure 1, Project Location Map

9. Surrounding land uses and setting:

The project site is located at 431 East Avenue K-4 which is within the boundaries of the City’s Business Park. The project site is the former location of the City’s Golf Center and Driving Range. This area of the business park contains a variety of industrial, commercial and residential uses. The iLead Lancaster Charter School is located to the east along Avenue K-4 and there is an apartment complex directly east of the northern half of the project site. South of the project site, along Avenue K-6 are all of the Los Angeles County offices including the County Assessor and the Department of Public Social Services.

**Table 1
Zoning/Land Use Information**

Direction	Zoning		Land Use
	City	County	
North	R-7,000	N/A	Single family residential subdivision, vacant land
East	R-7,000/ C	N/A	Single family residences, small retail center, vacant land
South	SP 80-02	N/A	Multi-family residential apartment complex, commercial/industrial buildings
West	SP 80-02	N/A	Industrial buildings with a variety of commercial and industrial uses

10. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement.)

Approvals from other public agencies for the proposed project include, but are not limited to, the following:

- Los Angeles County Fire Department
- Los Angeles County Sanitation District #14
- Los Angeles County Waterworks #40
- Southern California Edison
- Southern California Gas
- Antelope Valley Air Quality Management District

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

In accordance with Assembly Bill (AB) 52, consultation letters for the proposed project were sent to three individuals associated with three tribes identified who have requested to be included in the process. These letters were mailed on December 22, 2022 via certified return receipt mail. Table 2 identifies the tribes, the person to whom the letter was directed, and the date the letter was received.

**Table 2
Tribal Notification**

Tribe	Person/Title	Date Received
Gabrieleno Band of Mission Indians – Kizh Nation	Andrew Salas, Chairman	December 29, 2022
Yuhaaviatam of San Manuel Nation	Ryan Nordness, Cultural Resource Analyst	December 29, 2022
Fernandeno Tataviam Band of Mission Indians	Sarah Brunzell, Manager Cultural Resources Management Division	December 30, 2022

A response was received from the Fernandeno Tataviam Band of Mission Indians. The response indicated that as there is no proposed grading or demolition associated with the proposed project, they had no concerns and would not be requesting consultation. No other tribes responded to the letter.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Energy
<input type="checkbox"/>	Geology/Soils	<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards & Hazardous Materials
<input type="checkbox"/>	Hydrology/Water Quality	<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources
<input type="checkbox"/>	Noise	<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input type="checkbox"/>	Transportation	<input type="checkbox"/>	Tribal Cultural Resources
<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Wildfire	<input type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION: On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jocelyn Swain

 Jocelyn Swain, Senior Planner

February 7, 2023

 Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Use. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less Than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
I. <u>AESTHETICS</u> . Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings with a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality or public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area?			X	

- a. The City of Lancaster General Plan identifies five scenic areas in the City and immediately surrounding area (LMEA Figure 12.0-1). Views of these scenic areas are not visible from the project site or the immediately surrounding roadways as the project site is located in the urban core; specifically, within the City’s Business Park. However, some views of the mountains surrounding the Antelope Valley may be available from the project site and nearby roadways (Division Street, Avenue K, Avenue K-4, 5th Street East). The proposed project consists of a small expansion to the research and development activities at the existing Heliogen facility at 431 East Avenue K-4. This expansion would be similar in appearance to the existing, operating facility. Specifically, the installation of an additional 55-tower. As the facility is fenced and screened, it is unlikely that the other components would be immediately visible. With implementation of the proposed project, the any existing views would not change and would continue to be available from the roadways and project site. Therefore, no impacts would occur.
- b. The project site is not located along any designated State Scenic Highways. There are no State designated scenic routes or highways within the City of Lancaster. The project site currently contains some buildings and perimeter trees. These buildings and trees would remain. There are no rock outcroppings on the site. Therefore, no impacts would occur.
- c. The proposed project is consistent with the zoning code and general plan designation for the project site. The project site is located within the boundaries of Specific Plan No. 80-02

(Lancaster Business Park, Phases I & II) and has an underlying zoning of Light Industrial. The proposed project would also be in conformance with the City's Design Guidelines which were adopted on December 8, 2009 (updated on March 30, 2010). These guidelines provide the basis to achieve quality design for all development within the City. The proposed project would continue to utilize the existing buildings on the site; no other buildings would be constructed. Therefore, impacts would be less than significant.

- d. The ambient lighting in the vicinity of the project site is moderate to high due to the project site's location in the central portion of the City and within the City's Business Park. Primary sources of lighting are due to street lights, vehicle headlights, security lighting, and residential/commercial/industrial lighting from the land uses surrounding the project site. Light and glare would be generated from the proposed project in the form of additional project site/security lighting and the installation of the additional solar field. Parking lot and building lighting would remain the same. Therefore, impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
<p>II. <u>AGRICULTURE AND FORESTRY RESOURCES.</u> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>				
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>				X
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>				X
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?</p>				X
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>				X
<p>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>				X

- a. The California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program (FMMP), tracks and categorizes land with respect to agricultural resources. Land is designated as one of the following and each has a specific definition: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-Up Land, Other Land, and Water.

The maps for each county are updated every two years. The Los Angeles County Farmland Map was last updated in 2018. Based on these maps, the project site is designated as Urban and Built-Up Land. Urban and Built-Up Land is land which is “occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.” As the project site is not designated as farmland of importance by the State nor is it currently utilized for agricultural purposes, no impacts to agricultural resources would occur.

- b. The project site is zoned as SP 80-02 (Specific Plan – Lancaster Business Park) with an underlying zoning of Light Industrial (LI) which does not allow for agricultural uses. The surrounding properties are zone a mix of R-7,000, Commercial (C), and SP 80-02 and also do not allow for agricultural uses. The project site is not under agricultural production and none of the surrounding properties are under agricultural production. Additionally, the project site and surrounding area are not subject to a Williamson Act contract. Therefore, no impacts would occur.
- c-d. According to the City of Lancaster’s General Plan, there are no forests or timberlands located within the City of Lancaster. Therefore, the proposed project would not result in the rezoning of forest or timberland and would not cause the loss of forest land or the conversion of forest land to non-forest land. Therefore, no impacts would occur.
- e. See responses to Items IIa-d.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
III. <u>AIR QUALITY</u> . Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?		X		
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				X

- a. Development proposed under the City’s General Plan would not create air emissions that exceed the Air Quality Management Plan (GPEIR pgs. 5.5-21 to 5.5-22). The proposed project is consistent with the General Plan and Zoning Code. Additionally, air emissions generated by the proposed project would be less than the established thresholds (see III.b) and the proposed project would comply with all Antelope Valley Air Quality Management District (AVAQMD) Rules and Regulations. Therefore, the proposed project would not conflict with or obstruct implementation of the Air Quality Management Plan and no impacts would occur.
- b. An air quality analysis was prepared for the proposed project by SWCA Environmental Consultants and documented in a report entitled “Air Quality and Greenhouse Gas Technical Report, Lancaster Solar R&D, Los Angeles County, California” and dated September 2022. This report documents both the construction and operational emissions associated with the proposed project.

As part of this study the anticipate construction and operational air emissions were calculated and compared to the thresholds established by the AVAQMD. These thresholds are shown in Table 3.

Table 3
AVAQMD Air Quality Thresholds

Criteria Pollutant	Daily Threshold (Pounds)	Annual Threshold (Tons)
Oxides of Nitrogen (NO _x)	137	25
Volatile Organic Compounds (VOC)	137	25
Oxides of Sulfur (SO _x)	137	25
Particulate Matter (PM ₁₀)	82	15
Particulate Matter (PM _{2.5})	65	12
Hydrogen Sulfide (H ₂ S)	54	10
Lead (Pb)	3	0.6

It is anticipated that construction of the proposed project would take approximately 65 days and utilize a variety of construction equipment. Construction would occur a maximum of 5 days a week over an eight hour period. During operations, no additional employees would be required beyond the current employees at the project site for operations and routine maintenance. Additional assumptions regarding construction and operation, including the specific types of equipment, can be found in Appendix A to the Air Quality Report. Tables 4 and 5 provided the anticipated construction and operational emissions, respectively. As shown, these emissions would be less than significant and no mitigation measures would be required.

In addition, all equipment utilized on-site is required to have any necessary operational permits, including those issued by the AVAQMD. This would also ensure that emissions are not generated above levels which are permissible.

Table 4
Unmitigated Construction Emissions Summary

Construction Phase	ROGs	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂
Pollutant Emissions (pounds per day)						
2023	2.81	25.7	27.0	1.71	1.10	0.04
Significance Threshold	137	137	548	82	65	137
Threshold Exceeded?	No	No	No	No	No	No
Pollutant Emissions (tons per year)						
2023	0.09	0.83	0.88	0.06	0.04	<0.005
Significance Threshold	25	25	100	15	12	25
Threshold Exceeded?	No	No	No	No	No	No
Source: Air Quality and Greenhouse Gas Technical Report						

**Table 5
 Unmitigated Operational Emissions Summary**

Operation Phase	ROGs	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂
Pollutant Emissions (pounds per day)						
2023	0.09	1.01	1.18	0.4	0.04	<0.005
Significance Threshold	137	137	548	82	65	137
Threshold Exceeded?	No	No	No	No	No	No
Pollutant Emissions (tons per year)						
2023	0.01	0.13	0.15	0.01	0.01	<0.005
Significance Threshold	25	25	100	15	12	25
Threshold Exceeded?	No	No	No	No	No	No
Source: Air Quality and Greenhouse Gas Technical Report						

- c. The closest sensitive receptor to the project site is the apartment complex located immediately west of the northern half of the property. As discussed in Item III.b, the proposed project would generate air emissions during both construction and operation. However, these air emissions would not exceed the thresholds established by the AVAQMD nor would the traffic generated by the proposed project impact nearby roadways or intersections.

The project would occur in a region that is in nonattainment for O₃ (ozone) and PM₁₀. Concurrent construction of other projects in proximity to project activities could result in increased air quality impacts during simultaneous construction activities. However, all projects would be required to comply with AVAQMD rules and regulations, including those pertaining to dust control. Construction related O₃ precursors would not be at a cumulatively considerable level. With implementation of applicable AVAQMD best available control measures, the project would not result in a cumulatively considerable net increase of any criteria pollutants. Operational emissions would result from potential on-site, off-road equipment and routine clearing of mirrors. These emission levels are below AVAQMD thresholds and would not result in a cumulatively considerable net increase of any criteria pollutants. Therefore, impacts would be less than significant.

However, since the construction of the proposed project would result in the disturbance of the soil, it is possible individuals could be exposed to Valley Fever. Valley Fever or coccidioidomycosis, is primarily a disease of the lungs caused by the spores of the *Coccidioides immitis* fungus. The spores are found in soils, become airborne when the soil is disturbed, and are subsequently inhaled into the lungs. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever is not contagious, and therefore, cannot be passed on from person to person. Most of those who are infected would recover without treatment within six months and would have a life-long immunity to the fungal spores. In severe cases, especially in those patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used.

Nearby sensitive receptors as well as workers at the project site could be exposed to Valley Fever from fugitive dust generated during construction. There is the potential that cocci spores would be stirred up during excavation, grading, and earth-moving activities, exposing construction workers and nearby sensitive receptors to these spores and thereby to the potential of contracting Valley Fever. However, implementation of Mitigation Measures 2 (see Geology and Soils) which requires the project operator to implement dust control measures in compliance with AVAQMD Rule 403, and implementation of Mitigation Measure 1, below, which would provide personal protective respiratory equipment to construction workers and provide information to all construction personnel and visitors about Valley Fever, the risk of exposure to Valley Fever would be minimized to a less than significant level.

Mitigation Measures

1. Prior to ground disturbance activities, the project operator shall provide evidence to the Development Services Director that the project operator and/or construction manager has developed a “Valley Fever Training Handout”, training, and schedule of sessions for education to be provided to all construction personnel. All evidence of the training session materials, handout(s) and schedule shall be submitted to the Development Services Director within 24 hours of the first training session. Multiple training sessions may be conducted if different work crews will come to the site for different stages of construction; however, all construction personnel shall be provided training prior to beginning work. The evidence submitted to the Development Services Director regarding the “Valley Fever Training Handout” and Session(s) shall include the following:
 - A sign-in sheet (to include the printed employee names, signature, and date) for all employees who attended the training session.
 - Distribution of a written flier or brochure that includes educational information regarding the health effects of exposure to criteria pollutant emissions and Valley Fever.
 - Training on methods that may help prevent Valley Fever infection.
 - A demonstration to employees on how to use personal protective equipment, such as respiratory equipment (masks), to reduce exposure to pollutants and facilitate recognition of symptoms and earlier treatment of Valley Fever. Where respirators are required, the equipment shall be readily available and shall be provided to employees for use during work. Proof that the demonstration is included in the training shall be submitted to the county. This proof can be via printed training materials/agenda, DVD, digital media files, or photographs.

The project operator also shall consult with the Los Angeles County Public Health to develop a Valley Fever Dust Management Plan that addresses the potential presence of the *Coccidioides* spore and mitigates for the potential for *Coccidioidomycosis* (Valley Fever). Prior to issuance of permits, the project operator shall submit the Plan to the Los Angeles County Public Health for review and comment. The Plan shall include a program to evaluate the potential for exposure to Valley Fever from construction activities and to identify appropriate safety procedures that shall be implemented, as needed, to minimize

personnel and public exposure to potential *Coccidioides* spores. Measures in the Plan shall include the following:

- Provide HEP-filters for heavy equipment equipped with factory enclosed cabs capable of accepting the filters. Cause contractors utilizing applicable heavy equipment to furnish proof of worker training on proper use of applicable heavy equipment cabs, such as turning on air conditioning prior to using the equipment.
- Provide communication methods, such as two-way radios, for use in enclosed cabs.
- Require National Institute for Occupational Safety and Health (NIOSH)-approved half-face respirators equipped with minimum N-95 protection factor for use during worker collocation with surface disturbance activities, as required per the hazard assessment process.
- Cause employees to be medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable Cal/OSHA Respiratory Protection Standard (8 CCR 5144).
- Provide separate, clean eating areas with hand-washing facilities.
- Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off-site.
- Train workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor.
- Work with a medical professional to develop a protocol to medically evaluate employees who develop symptoms of Valley Fever.
- Work with a medical professional, in consultation with the Los Angeles County Public Health, to develop an educational handout for on-site workers and surrounding residents within three miles of the project site, and include the following information on Valley Fever: what are the potential sources/ causes, what are the common symptoms, what are the options or remedies available should someone be experiencing these symptoms, and where testing for exposure is available. Prior to construction permit issuance, this handout shall have been created by the project operator and reviewed by the project operator and reviewed by the Development Services Director. No less than 30 days prior to any work commencing, this handout shall be mailed to all existing residences within a specified radius of the project boundaries as determined by the Development Services Director. The radius shall not exceed three miles and is dependent upon the location of the project site.
- When possible, position workers upwind or crosswind when digging a trench or performing other soil-disturbing tasks.
- Prohibit smoking at the worksite outside of designated smoking areas; designated smoking areas will be equipped with handwashing facilities.
- Post warnings on-site and consider limiting access to visitors, especially those without adequate training and respiratory protection.

- Audit and enforce compliance with relevant Cal OSHA health and safety standards on the job site.
- d. Construction of the proposed project is not anticipated to produce significant objectionable odors. Construction equipment may generate some odors, but these odors would be similar to those produced by vehicles traveling along Avenue K, Avenue K-4, Division Street, and 5th Street East. Operation of the proposed project does not include any component with the potential to generate odorous emissions. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
IV. <u>BIOLOGICAL RESOURCES</u> . Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

- a. The project site was previously developed with the City’s Golf Center and Driving Range. This facility has not been in operation for some time and was ultimately leased to Heliogen by the City. Additionally, the project site is located in the urban core and is completely surrounded by development. There is no longer any grass at the facility although there are perimeter trees and landscaping around the existing buildings. The project site does not provide any habitat for sensitive plant or animal species though it does provide habitat for nesting birds in the perimeter

trees. These trees would remain and not be disturbed by project construction or operation. Therefore, no impacts to biological resources would occur.

- b. The project site does not contain any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service. Therefore, no impact would occur.
- c. There are no State or federally protected wetlands on the project site as defined by Section 404 of the Clean Water Act. Therefore, no impacts would occur.
- d. The project site is not part of an established migratory wildlife corridor. Therefore, no impacts would occur.
- e. The proposed project would not conflict with any local policies or ordinances, such as a tree preservation policy, protecting biological resources. The proposed project would be subject to the requirements of Ordinance No. 848, Biological Impact Fee, which requires the payment of \$770/acre to help offset the cumulative loss of biological resources in the Antelope Valley as a result of development. This fee is required of all projects occurring on previously undeveloped land regardless of the biological resources present and is utilized to enhance biological resources through education programs and the acquisition of property for conservation. Therefore, no impacts would occur.
- f. There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans which are applicable to the project site. The West Mojave Coordinated Habitat Conservation Plan only applies to federal land, specifically land owned by the Bureau of Land Management. In conjunction with the Coordinated Management Plan, a Habitat Conservation Plan (HCP) was proposed which would have applied to all private properties within the Plan Area. However, this HCP was never approved by the California Department of Fish and Wildlife nor was it adopted by the local agencies (counties and cities) within the Plan Area. As such, there is no HCP that is applicable to the project site and no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
V. <u>CULTURAL RESOURCES</u> . Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to §15064.5?				X
c) Disturb any human remains, including those interred outside of dedicated cemeteries?				X

a-c. The project site was previously developed with the City’s Golf Center and Driving Range. This facility has not been in operation for some time and was ultimately leased to Heliogen by the City. Additionally, the project site is located in the urban core and is completely surrounded by development. The proposed project involves an expansion to the existing R&D operations at the facility. An additional solar field will be installed (approximately 400 panels), a second tower of approximately 55 feet, and additional equipment. Minimal, if any grading would be required and all existing facilities would remain in place. As the site was previously developed, there are no known cultural resources on the project site. No human remains, including those interred outside of formal cemeteries, were identified on the project site. Therefore, no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VI. <u>ENERGY</u> . Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				X
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficient?				X

a. Project construction would require energy consumption during the 3-month period to operate construction vehicles and equipment. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption.

Project operation would require some energy resources in order to run existing buildings and equipment. This consumption is already occurring. The expansion would generate power from the additional solar field and the energy required for the expanded R&D operations will test processes ultimately to be utilized to generate cleaner fuel. As such, no impacts to energy resources would occur.

The project would adhere to all applicable Federal, State, and local requirements for energy efficiency, including the Title 24 standards, as well as the project's design features and as such the project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Therefore, no impacts would occur.

b. The proposed project is an expansion of an existing R&D facility for the generation of hydrogen fuel. This facility utilizes power from the grid for the existing building and generates power on-site through the existing and proposed photovoltaic solar arrays. These arrays generate power that is used in the R&D processes. As such, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the proposed project would have no impact.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VII. <u>GEOLOGY AND SOILS</u> . Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X

a. The project site is not identified as being in or in proximity to a fault rupture zone (LMEA Figure 2-5). According to the Seismic Hazard Evaluation of the Lancaster East and West Quadrangles, the project site may be subject to intense seismic shaking (LMEA pg. 2-16). However, the

proposed project would be constructed in accordance with the seismic requirements of the Uniform Building Code (UBC) adopted by the City, which would render any potential impacts to a less than significant level. The site is generally level and is not subject to landslides (SSHZ).

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other events. This phenomenon occurs in saturated soils that undergo intense seismic shaking typically associated with an earthquake. There are three specific conditions that need to be in place for liquefaction to occur: loose granular soils, shallow groundwater (usually less than 50 feet below ground surface) and intense seismic shaking. In April 2019, the California Geologic Survey updated the Seismic Hazard Zones Map for Lancaster (SSHZ) (<https://maps.conservation.ca.gov/cgs/EQZApp/app/>). Based on these maps, the project site is not located in an area at risk for liquefaction. No impacts would occur.

- b. The project site is rated as having a low risk for soil erosion (USDA SCS Maps) when cultivated or cleared of vegetation. As such, there remains a potential for water and wind erosion during construction. The proposed project would be required, under the provisions of the Lancaster Municipal Code (LMC) Chapter 8.16, to adequately wet or seal the soil to prevent wind erosion. Additionally, the following mitigation measure shall be required to control dust/wind erosion.

Water erosion controls must be provided as part of the proposed project's grading plans to be reviewed and approved by the Capital Engineering Division. These provisions, which are a part of the proposed project, would reduce any impacts to less than significant levels.

Mitigation Measure

2. The applicant shall submit the required Construction Excavation Fee to the Antelope Valley Air Quality Management District (AVAQMD) prior to the issuance of any grading and/or construction permits. This includes compliance with all prerequisites outlined in District Rule 403, Fugitive Dust, including submission and approval of a Dust Control Plan, installation of signage and the completion of a successful onsite compliance inspection by an AVAQMD field inspector. Proof of compliance shall be submitted to the City.
- c. Subsidence is the sinking of the soil caused by the extraction of water, petroleum, etc. Subsidence can result in geologic hazards known as fissures. Fissures are typically associated with faults or groundwater withdrawal, which results in the cracking of the ground surface. According to Figure 2-3 of the City of Lancaster's Master Environmental Assessment, the project site is not known to be within an area subject to fissuring, sinkholes, or subsidence or any other form of geologic unit or soil instability. The closest sinkholes and fissures are located along Lancaster Boulevard and 20th Street West approximately 2.5 miles northwest of the project site. For a discussion of potential impacts regarding liquefaction, please refer to Section Item VII.a. Therefore, no impacts would occur.
 - d. The soil on the project site is characterized by a low shrink/swell potential (LMEA Figure 2-3). A soils report for the proposed project shall be submitted to the City by the project developer prior to any grading and the recommendations of the report shall be incorporated into the development of the proposed project. Therefore, impacts would be less than significant.

- e. The project site (existing buildings) is already connected to the sanitary sewer system and no additional sewer connections would be required. No septic or alternative means of waste water disposal are part of the proposed project. Therefore, no impacts would occur.
- f. The proposed project would not directly or indirectly destroy a unique paleontological resource, site, or geologic feature. Therefore, no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VIII. <u>GREENHOUSE GAS EMISSIONS</u> . Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

- a. An air quality and greenhouse gas analysis was prepared for the proposed project by SWCA Environmental Consultants and documented in a report entitled “Air Quality and Greenhouse Gas Technical Report, Lancaster Solar R&D, Los Angeles County, California” and dated September 2022. This report documents both the construction and operational greenhouse emissions associated with the proposed project.

Construction of the project would result in greenhouse gas emissions from construction equipment and off-site motor vehicle trips carrying workers and materials. Operations and maintenance of the project would result in low levels of greenhouse gas emissions from the on-site, off-road equipment and water use during routine cleaning of the mirrors. The total estimate greenhouse gas emissions for both construction and operation are provided in Table 6. As show in this table, the greenhouse gas emissions generated by the proposed project during construction and operation would be less than significant.

- b. The City of Lancaster Final Climate Action Plan was adopted in March 2017. As part of the Climate Action Plan (CAP), a greenhouse gas emissions inventory for the City was developed which consisted of both community-wide emissions and emissions from government operations for future years based on demographic growth. The CAP also identified projects that would enhance the City’s ability to further reduce greenhouse gas (GHG) emissions. A total of 61 projects/measures across eight sectors were identified, which include: 1) transportation; 2) energy; 3) municipal operations; 4) water; 5) waste; 6) built environment; 7) community; and 8) land use. The forecasts do not account for any new federal, State, regional or local policies that may be implemented after 2015, nor does it assume that any policies in place in 2015 will become more stringent. Forecasts for both community and government operations were prepared for 2020, 2030, 2040, and 2050. Under all scenarios assessed, the City meets the 2020 target and makes substantial progress towards achieving post-2020 reductions.

The proposed project would also be in compliance with GHG emissions goals and policies identified in the City of Lancaster’ General Plan (pgs. 2-19 to 2-24) and with the City’s Climate Action Plan.

**Table 6
Greenhouse Gas Emissions Summary**

Emissions Source	GHG Emissions (lbs/day)
Construction	4,738
Significance Threshold	548,000
Threshold Exceeded?	No
Operations	189
Significance Threshold	548,000
Threshold Exceeded?	No
Emissions Source	GHG Emissions (MT CO₂e/yr)
Construction	140
Significance Threshold ¹	101,605
Threshold Exceeded?	No
Operations	22
Significance Threshold ¹	101,605
Threshold Exceeded?	No
1. 100,000 tons/year = 101,605 MT/yr	

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
IX. <u>HAZARDS AND HAZARDOUS MATERIALS.</u> Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

a-b. Project construction would require typical construction materials to install the solar array, tower, and ancillary equipment for the expansion of the R&D activities. No new buildings would be constructed and no demolition of existing buildings would be required. Therefore, the proposed project would not expose individuals or the environment to asbestos containing materials or lead-based paint.

Project operation would require the routine transport, use, and disposal of hazardous materials as part of the R&D operations. The project site would have approximately six, 300-cubic foot cylinders of hydrogen gas and one 1,000 kg cubic foot storage unit in addition to approximately 50 gallons of synthetic crude on site at any given time. The use of these materials and the routine activities on the project site would be conducted in compliance with all applicable regulations to minimize potential hazards to the public and to the environment.

The facility would also be equipped with any required/necessary safety mechanisms, which could include fire protection and sprinkler systems, dust suppression systems, detectors/alarms, shutdown systems, and temperature monitoring and controls. These safety mechanisms would be determined as part of the engineering design. Additionally, the project would require coordination with, and approval by, the Los Angeles County Fire Department for fire access, life safety equipment, and hazardous materials permitting. These requirements have been identified in the mitigation measures below. With implementation of the mitigation measures, impacts would be less than significant.

Mitigation Measures

3. The use, storage, and transport of hazardous materials associated with the operation of the proposed R&D facility shall be in compliance with all applicable regulations. Any necessary permits shall be obtained from the Los Angeles County Fire Department, Antelope Valley Air Quality Management District, or other applicable agency.
 4. Disposal of any hazardous material shall be done in accordance with all applicable regulations and associated with an EPA HazWaste ID number issued for the project site.
- c. The project site is located within a mile of an existing or proposed school. The closest school to the project site is the iLead Lancaster Charter School located at 254 East Avenue K-4, approximately 0.2 miles to the west of the project site. While a school is located within 0.2 miles of the project site, the proposed project would not generate hazardous emissions or handle hazardous/acutely hazardous materials. The proposed project would generate hydrogen fuel and synthetic crude as part of hydrogen fuel R&D activities. All hazardous materials would be transported, stored, and utilized in accordance with all application rules and regulations. As such, impacts would be less than significant.
- d. A Phase I Environmental Site Assessment was prepared for the proposed project by SWCA Environmental Consulting. The results of the study are documented in a report entitled "Phase I Environmental Site Assessment for the Heliogen Lancaster Test Site in Los Angeles County, California" and dated August 2022.

As part of the environmental site assessment, a site visit was conducted on July 27, 2022. The subject site is vacant and no buildings are on the subject site. The subject property is mostly vacant in the north and west, where it was formerly a golf driving range and a chip and putt golf course. It has a developed area and a stormwater spillway in the south and southeast. The developed area consists of a storage building and two larger workspace buildings. A linear covered area for the driving range is east of the buildings. A metal cage for compressed gas storage is next to the storage building with a nearby rack for metal and plastic tubing storage. The covered section to the east is currently used for storage of metal pipes and equipment. The

channel spillway is dry, but some wind-borne trash was in the southern portion. The north of the subject property is empty, but there are a fence and some wooden posts dividing it into a west and east side, both of which have some piles of wooden debris throughout. The southwest side of the subject property is mostly vacant graded land, but one area is covered with an array of reflective panels and a metal tower. No evidence of leaks, spills, or potential sources of contamination was noted on or adjoining the subject property during the site visit.

In addition to the site visit, a regulatory records review was conducted for the project site. The project site is not located in any hazardous materials databases. Three sites were identified on properties in the vicinity of the project site. However, due to status, location or type they are not considered an environmental concern for the project site. Therefore, no impacts would occur.

- e. The proposed project is not located within an airport land use plan. The nearest airfield, U.S. Air Force Plant 42, is located approximately 4 miles south of the project site. There are no circumstances related to this proximity that could be expected to result in a safety hazard for people residing in the project area, therefore no impacts would occur.
- f. The traffic generated by the proposed project would be minimal and is not expected to block the roadways. All roadways in the vicinity of the proposed project have already been improved. Therefore, the proposed project would not impair or physically block any identified evacuation routes and would not interfere with any adopted emergency response plan. Impacts would not occur.
- g. With the exception of project site that would remain undeveloped, the surrounding properties are developed with a mix of commercial, residential and industrial uses. It is possible that the undeveloped portion of the project site could be subject to grass fires and the surrounding uses could have structure fires. The project site is also located approximately 1.4 miles from Los Angeles County Fire Station No. 129, located at 42110 6th Street West, which would serve the project site in the event of a fire. Therefore, potential impacts from wildland fires would be less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
X. <u>HYDROLOGY AND WATER QUALITY.</u> Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site			X	
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site			X	
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff			X	
iv) Impede or redirect flood flows			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

- a. The project site is not located in an area with an open body of water or in an aquifer recharge area. The proposed project would be required to comply with all applicable provisions of the National Pollutant Discharge Elimination System (NPDES) program. The NPDES program establishes a comprehensive storm water quality program to manage urban storm water and

minimize pollution of the environment to the maximum extent practicable. The reduction of pollutants in urban storm water discharge through the use of structural and nonstructural Best Management Practices (BMPs) is one of the primary objectives of the water quality regulations. BMPs that are typically used to management runoff water quality include controlling roadway and parking lot contaminants by installing oil and grease separators at storm drain inlets, cleaning parking lots on a regular basis, incorporating peak-flow reduction and infiltration features (grass swales, infiltration trenches and grass filter strips) into landscaping and implementing educational programs. The proposed project would incorporate appropriate BMPs during construction, as determined by the City of Lancaster Development Services Department. Therefore, impacts would be less than significant.

The proposed project consists of the expansion of an existing R&D facility. The existing buildings are already connected to sewer and the wastewater does not violate water quality standards or exceeds waste discharge requirements. The expansion consists of a new photovoltaic solar array, new 55-foot tower, and ancillary equipment. These uses would not be connected to the sewer and do no generate wastewater. Therefore, impacts would be less than significant.

- b. The proposed project would not include any groundwater wells or pumping activities. All water supplied to the proposed project would be obtained from Los Angeles County Waterworks District No. 40. Therefore, impacts would be less than significant.
- c. Development the proposed project may increase the amount of surface runoff as a result of impervious surfaces associated with the additional equipment/tower and solar array on the site. The proposed project would be designed, on the basis of a hydrology study, to accept current flows entering the property and to handle the additional incremental runoff from the developed site. Therefore, impacts from drainage and runoff would be less than significant.

Portions of the project site are designated as Flood Zone X-Shaded and portions of the site are designated as Flood Zone A per LOMR 04-09-0375P (5/20/05) and LOMR 08-09-1958P (9/28/08) (FEMA Flood Map Service Center). Flood Zone X-Shaded is located outside of the 100-year flood zone but within the 500-year flood zone. Zone A is located within a flood zone. However, no occupied buildings or structures are proposed on the project site and all structures (e.g., solar panels, tower, etc.) will be elevated so that they are out of the flood zone in accordance with applicable regulations. Therefore, impacts would be less than significant.

- d. The project site is not located within a coastal zone. Therefore, tsunamis are not a potential hazard. The project site is relatively flat and does not contain any enclosed bodies of water and is not located in close proximity to any other large bodies of water. Therefore, the proposed project would not be subject to inundation by seiches or mudflows. No impacts would occur.
- e. The proposed project would not conflict or obstruct the implementation of the applicable water quality control plan or sustainable groundwater management plan. For additional information see responses X.a through X.c. Impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XI. <u>LAND USE AND PLANNING</u> . Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

- a. The proposed project consists of the expansion of R&D operations at an existing facility located at 431 East Avenue K-4 within the City’s Business Park. The proposed project would not block a public street, trail, other access route, or result in a physical barrier that would divide the community. Therefore, no impacts would occur.
- b. With implementation of mitigation measures listed throughout this document, the proposed project is consistent with the City’s General Plan, Specific Plan No. 80-02 (Lancaster Business Park) and must be in conformance with the Lancaster Municipal Code. Table 6 provides a consistency analysis of the proposed project with respect to the relevant policies of the General Plan. The proposed project would be in compliance with the City-adopted Uniform Building Code (UBC) and erosion control requirements. Additionally, as noted in Section IV.f., the project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan. As the proposed project does not involve the provision of housing nor is housing permitted within the SP 80-02 zone except on limited parcels, a consistency analysis with the Housing Element was not conducted.

In addition to the City’s General Plan, the Southern California Association of Governments (SCAG) adopts a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) every five years. On May 7, 2020 SCAG adopted the 2020-2045 RTP/SCS, known as Connect SoCal, for federal transportation conformity purposes only. On September 3, 2020, SCAG adopted Connect SoCal for all other purposes. The RTP/SCS identifies ten regional goals; these goals are identified in Table 7 along with the project’s consistency with these goals.

**Table 6
General Plan Consistency Analysis**

Policies	Consistency Analysis
Policy 3.1.1: Ensure that development does not adversely affect the groundwater basin.	Consistent. The proposed project would not result in the pumping of groundwater as all water would be supplied by District 40 and is currently being supplied.
Policy 3.2.1: Promote the use of water conservation measures in the landscape plans of new developments. Policy 3.2.5: Promote the use of water conservation measures in the design of new developments.	Consistent. No additional landscaping is proposed at the project site. Landscaping has already been installed around the existing buildings, parking lot and perimeter. This landscaping was installed utilizing native and drought tolerant plants or relies on plants that were previously planted and are well established.
Policy 3.3.1: Minimize the amount of vehicular miles traveled.	Consistent. The proposed project would generate minimal trips per day associated with the existing employees on the project site. No additional employees would be required for the proposed project and no increase in VMT would occur.
Policy 3.3.3: Minimize air pollutant emissions generated by new and existing development.	Consistent. The construction and operation of the proposed project would generate minimal air emissions as identified in Section III. These emissions are well below the thresholds established by the AVAQMD.
Policy 3.4.4: Ensure that development proposals, including City sponsored projects, are analyzed for short- and long-term impacts to biological resources and that appropriate mitigation measures are implemented.	Consistent. The project site was previously developed and does not contain any habitat for sensitive or special status plant or animal species. The trees surrounding the project site would remain and continue to provide habitat for nesting birds. No mitigation measures are necessary.
Policy 3.6.4: Support state and federal legislation that would eliminate wasteful energy consumption in an appropriate manner.	Consistent. The proposed project would work to develop processes for developing clean hydrogen fuel and would support state and federal goals regarding energy.
Policy 4.3.1: Ensure that noise-sensitive land uses and noise generators are located and designed in such a manner that City noise objectives will be achieved.	Consistent. A noise study was prepared for the proposed project which determined that construction and operational noise levels would be less than significant. Additionally, best management practices for construction have been identified to ensure that noise levels during construction are as low as possible.
Policy 4.3.2: Wherever feasible, manage the generation of single event noise levels (SENL) from motor vehicles, trains, aircraft, commercial, industrial, construction, and other activities such that SENL levels are no greater than 15 dBA above the noise objectives included in the Plan for Public Health and Safety.	Consistent. The noise levels associated with construction and operation of the proposed project are consistent with the standards identified in the City’s General Plan.

Policy 4.3.3: Ensure that the provision of noise attenuation does not create significant negative visual impacts.	Consistent. No noise attenuation is required for the proposed project. The site is currently fenced with perimeter trees which would remain with implementation of the proposed project.
Policy 4.5.1: Ensure that activities within the City of Lancaster transport, use, store, and dispose of hazardous materials in a responsible manner which protects the public health and safety.	Consistent. The proposed project would use, store, transport and dispose of all hazardous materials and waste in accordance with all applicable rules and regulations.
Policy 4.7.2: Ensure that the design of new development minimizes the potential for fire.	Consistent. The proposed project will comply with all regulations to minimize fire during construction and operation. Additionally, the project site is within the service boundaries of a Station No. 129 which will provide response in the event of a fire.
Policy 16.1.1: Promote a jobs/housing balance that places an emphasis on the attraction of high paying jobs which will enable the local workforce to achieve the standard of living necessary to both live and work within the community.	Consistent. While the proposed project would not create any new jobs associated with its expansion; the development of processes for the production of hydrogen fuel will assist in the creation of a new local industry with new high paying jobs.
Policy 16.6.1: Require new development to construct and/or pay for new on-site capital improvements necessitated by their project, consistent with performance criteria identified in Objective 15.1.	Consistent. The proposed project would be required to pay for all on site improvements. No off-site improvements are necessary as the project site is located in the urban core and surrounded by existing development.

**Table 7
Connect SoCal Consistency Analysis**

Policies	Consistency Analysis
Goal 1: Encourage regional economic prosperity and global competitiveness	Consistent. The proposed project would help support regional economic prosperity by working to develop processes to create hydrogen fuel.
Goal 2: Improve mobility, accessibility, reliability and travel safety for people and goods	Consistent. The project site is located in close proximity to the Antelope Valley Freeway which will facilitate the movement of employees to the project site and the shipment of goods to and from the site.
Goal 3: Enhance the preservation, security, and resilience of the regional transportation system.	Not Applicable. This goal is not applicable to the proposed project.
Goal 4: Increase person and goods movement and travel choices within the transportation system.	Not Applicable. This goal is not applicable to the proposed project.
Goal 5: Reduce greenhouse gas emissions and improve air quality.	Consistent. The R&D activities associated with the proposed project will assist in developing the creation of hydrogen fuels which will ultimately reduce greenhouse gas emissions and improve air quality.
Goal 6: Support health and equitable communities.	Not Applicable. This goal is not applicable to the proposed project.

<p>Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.</p>	<p>Consistent. The project would help to develop technologies to create low carbon transportation fuel. The goal of supporting an integrated regional development pattern and transportation network is not applicable to the proposed project.</p>
<p>Goal 8: Leverage new transportation technologies and data-driven solutions that result in more efficient travel.</p>	<p>Not Applicable. This goal is not applicable to the proposed project.</p>
<p>Goal 9: Encourage development of diverse housing types in areas that are supported by multiple transportation options.</p>	<p>Not Applicable. There is no housing associated with the proposed project. This goal is not applicable to the proposed project.</p>
<p>Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats.</p>	<p>Not Applicable. This goal is not applicable to the proposed project.</p>

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XII. <u>MINERAL RESOURCES</u> . Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

a-b. The project site does not contain any mining or recovery operations for mineral resources and no such activities have occurred on the project site in the past. According to the LMEA (Figure 2-4 and page 2-8), the project site is not designated as Mineral Reserve 3 (contains potential but presently unproven resources). Additionally, it is not considered likely that the Lancaster area has large, valuable mineral and aggregate deposits. Therefore, no impacts to mineral resources would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIII. <u>NOISE</u> . Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

- a. A noise study was prepared for the proposed project by SWCA Environmental Consultants and documented in a report entitled “Noise and Ground Vibration Technical Report, Lancaster Solar R&D Project, Los Angeles County, California” and dated November 2022. This noise study analyzed the construction and operational noise levels associated with the proposed project in addition to the potential for vibration noise impacts. The assumptions for the noise levels are contained within the noise study.

Estimates of construction noise were based on the maximum of construction equipment used on a given day. The approximate noise generated by the construction equipment used at the facility was conservatively calculated and does not consider further attenuation due to atmospheric interference or intervening structures.

Construction is transient in nature and noise levels vary depending on the activity in progress. Noise impacts to residents in the vicinity of the site due to the construction of the proposed project would be temporary and intermittent. Additionally, the noise levels were estimated to present a conservative impact analysis, assuming all pieces of equipment operate simultaneously. Furthermore, the model assumes that construction noise is constant when construction activities are periodic and change throughout the day. Estimated noise levels from construction activities at the closest sensitive receptor from the center of the construction site were estimated to be approximately 74.1 dBA Leq and 76.8 dBA Lmax. Therefore, without mitigation, noise impacts associated with the construction activities for the project would be less than significant.

However, best management practices have been identified in order to reduce construction noise as much as possible.

During operation, the primary noise sources would be the heliostat trackers, blowers, and the hydrogen storage/dispensing system. All equipment sound levels were estimated based on available data from the equipment manufacturers or obtained from other sources. The calculated noise levels emitted by the project would be below the City of Lancaster General Plan noise restrictions for residential uses (e.g., 65 dBA) at all residential receptors. Noise contributions to the surrounding environment are low and estimated at 49.3 dBA Leq at the nearest sensitive receptor. Therefore, operational noise levels would be less than significant.

Mitigation Measures

5. Construction operations shall not occur between 8 p.m. and 7 a.m. on weekdays or Saturday or at any time on Sunday. The hours of any construction-related activities shall be restricted to periods and days permitted by local ordinance.
 6. The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to the owner shall be established prior to construction commencement that will allow for resolution of noise problems that cannot be immediately solved by the site supervisor.
 7. Electrically powered equipment shall be used instead of pneumatic or internal combustion powered equipment, where feasible.
 8. Material stockpiles and mobile equipment staging, parking and maintenance areas shall be located as far away as practicable from noise-sensitive receptors.
 9. The use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only.
 10. No project-related public address or music system shall be audible at any adjacent receptor. All noise producing construction equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factor specifications. Mobile or fixed "package" equipment (e.g., arc-welders, air compressors, etc.) shall be equipped with shrouds and noise control features that are readily available for the type of equipment.
- b. The noise and vibration study referenced in XIII.a, also included a vibration analysis for both building damage and human annoyance during construction. The significance threshold for building damage ranged between 0.2 and 0.3 inches per second depending upon the type of building construction. Five off-site buildings ranging from 228 to 840 feet away from the project site were analyzed. The estimated vibration velocity at these buildings ranged from 0.0009 to 0.0032 inches per second. These levels are well below the threshold and impacts would be less than significant.

With respect to human annoyance, the significance is 80 VdB. The same off-site receptors that were utilized for the building damage analysis were utilized for the human annoyance analysis. The annoyance levels at these receptors ranged from 41 to 58 VdB, which is also below the significance threshold. As such, all vibration impacts from construction would be less than significant.

- c. The project site is not in proximity to an airport or a frequent overflight area and would not experience noise from these sources. Therefore, no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIV. <u>POPULATION AND HOUSING.</u> Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

- a. The proposed project is not anticipated to result in an incremental increase in population growth; however, any potential increase was anticipated in both the City's General Plan and in the Southern California Association of Government's (SCAG's) most recent Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Additionally, while it is unlikely that individuals involved in the construction of the proposed project would come from the Antelope Valley any increase in population would contribute, on an incremental basis, to the population of the City. As such, impacts would be less than significant.
- b. The project site is currently vacant. No housing or people would be displaced necessitating the construction of replacement housing elsewhere. Therefore, no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire Protection?			X	
Police Protection?			X	
Schools?			X	
Parks?			X	
Other Public Facilities?			X	

a. The proposed project may increase the need for fire and police services during construction and operation; however, the project site is within the current service area of both these agencies and the additional time and cost to service the sites is minimal. The proposed project would not induce substantial population growth and therefore, would not increase the demand on parks or other public facilities. Therefore, impacts would be less than significant.

Construction of the proposed project is not likely to result in an incremental increase in population (see Item XIII) as no increase in the number of employees would occur. However, if an increase in the number of students were to occur as a result of the proposed project in the Lancaster School District and Antelope Valley Union High School District. Proposition 1A, which governs the way in which school funding is carried out, predetermines by statute that payment of developer fees is adequate mitigation for school impacts. Therefore, impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVI. <u>RECREATION</u> . Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

a-b. The proposed project would not generate additional population growth and would not contribute on an incremental basis to the use of the existing park and recreational facilities as no new jobs would be created during operation and it is not likely that individuals would move to the Antelope Valley for the construction of a small project. Additionally, the applicant would be required to pay park fees which would offset the impacts of the existing parks. The development of the proposed project would not require the construction of new recreational facilities or the expansion of existing ones. Therefore, no impacts to recreation would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVII. <u>TRANSPORTATION</u> . Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X

a. The proposed project would not conflict with or impede any of the General Plan policies or specific actions related to alternative modes of transportation (Lancaster General Plan pgs. 5-18 to 5-24.) Therefore, no impacts would occur.

b. In July 2020, the City of Lancaster adopted standards and thresholds for analyzing projects with respect to vehicle miles traveled (VMT). A series of screening criteria were adopted and if a project meets one of these criteria, a VMT analysis is not required. These criteria are: 1) project site - generates fewer than 110 trips per day; 2) locally serving retail - commercial developments of 50,000 square feet or smaller; 3) project located in a low VMT area- 15% below baseline; 4) transit proximity; 5) affordable housing; and 6) transportation facilities.

The proposed project is anticipated to generate minimal trips per day from the current employees on the site. These trips are already occurring and no new jobs would be created as a result of the proposed project. As no new trips would be generated, and there are only a handful of employees on site, the trips generated per day would be is below the screening threshold of 110 trips per day. As such, a VMT analysis is not required and impacts would be less than significant.

c. The roadways in the vicinity of the project site are already improved and can adequately handle any traffic generated by the project. No roadway improvements are necessary and no hazardous roadway conditions would be by the proposed project. Therefore, no impacts would occur.

d. The project site would have adequate emergency access from Division Street, Avenue K-4, Avenue K, and 5th Street East. Therefore, no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVIII. <u>TRIBAL CULTURAL RESOURCES</u> . Would the project:				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or				X
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set for in subdivision (c) of Public Resources Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				X

- a. No cultural resources are present on the site and no tribal cultural resources were identified during the AB 52 process. One tribe responded to the AB 52 letters and stated that they would not be requesting consultation. Therefore, no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction or new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impact the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

- a. The proposed project is already connected into the existing utilities such as electricity, natural gas, water, wastewater, telecommunications, etc. Any additional connections necessary would occur on the project site or within existing roadways or right-of-way. Connections to these utilities are assumed as part of the proposed project and impacts to environmental resources have been discussed throughout the document. As such, impacts would be less than significant.
- b. The Los Angeles County Waterworks District No. 40 has not indicated any problems in supplying water to the proposed project from existing facilities. No new construction of water treatment or new or expanded entitlements would be required. Therefore, water impacts would be less than significant.
- c. The existing buildings on the project site are already connected to the sanitary sewer and are receiving service from the Los Angeles County Sanitation Districts. No additional sewer

connections would be required and no additional wastewater would be generated. As such, no impacts would occur.

- d-e. Solid waste generated within the City limits is generally disposed of at the Lancaster Landfill located at 600 East Avenue F. This landfill is a Class III landfill which accepts agricultural, nonfriable asbestos, construction/demolition waste, contaminated soil, green materials, industrial, inert, mixed municipal, sludge, and waste tires. It does not accept hazardous materials. Assembly Bill (AB) 939 was adopted in 1989 and required a 25% diversion of solid waste from landfills by 1995 and a 50% diversion by 2005. In 2011, AB 341 was passed which requires the State to achieve a 75% reduction in solid waste by 2030. The City of Lancaster also requires all developments to have trash collection services in accordance with City contracts with waste haulers over the life of the proposed project. These collection services would also collect recyclable materials and organics. The trash haulers are required to be in compliance with applicable regulations on solid waste transport and disposal, including waste stream reduction mandated under AB 341.

The proposed project would generate solid waste during construction and operation, which would contribute to an overall impact on landfill service (GPEIR pgs. 5.9-20 to 21); although the project's contribution is considered minimal. However, the existing landfill has capacity to handle the waste generated by the project. Additionally, the proposed project would be in compliance with all State and local regulations regulating solid waste disposal. Therefore, impact would be less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XX. <u>WILDFIRE</u> . If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impact an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildlife risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

a. See Item IX.f.

b-d. The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The project site is located within the service boundaries of Fire Station No. 129, located at 42110 6th Street West, which can adequately serve the project site. Other fire stations are also located in close proximity to the project site which can provide service if needed. Therefore, no impacts would occur.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulative considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

- a. The proposed project consists of the expansion of the existing R&D operations at the Heliogen facility located at 431 East Avenue K-4 in the SP 80-02 zone. Other projects have been submitted within approximately one mile of the project site (Table 8). These projects are also required to be in accordance with the City's zoning code and General Plan. Cumulative impacts are 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 projects.

The proposed project would not create any impacts with respect to: Agriculture and Forestry Resources, Biological Resources, Cultural Resources, Energy Resources, Land Use and Planning, Mineral Resources, Recreation, Tribal Resources and Wildfire. The project would create impacts to other resource areas and mitigation measures have identified for Air Quality, Geology and Soils, Hazards and Hazardous Materials, and Noise. Many of the impacts generated by projects are site specific and generally do not influence the impacts on another site. All projects undergo environmental review and have required mitigation measures to reduce impacts when warranted. These mitigation measures reduce environmental impacts to less than significant levels whenever possible. All impacts associated with the proposed project are less than significant with the exception of air quality, geology and soils (soil erosion), hazards and hazardous materials, and

noise. Impacts associated with these issues are less than significant with the incorporation of the identified mitigation measures. Therefore, the project's contribution to cumulative impacts would not be cumulatively considerable.

**Table 8
Related Projects List**

Case No.	Location	APNs	Description	Status
CUP 20-04	Forbes St & Enterprise Parkway	3128-008-025	Cannabis facility	Approved
SPR 21-01	Bounded by 6th St W, 4th St W, Ave L-8, and Ave M	3128-013-012, -001, 002, -004, -013, -014; 3128-010-026	6 MW photovoltaic solar facility	Approved
SPR 20-07	NWC Division & Ave L-9	3128-012-004	7,000 sf warehouse, 2,000 sf office	Approved
SPR 19-04	Valleyline Road, north of Avenue L-12	3126-019-034	22,000 sf cannabis manufacturing and cultivation	In Review
CUP 18-27	742 & 752 Ave L; 42650 8th St W	3128-009-006, -083, -084, -100	Cannabis cultivation and manufacturing facility	Approved
SPR 22-02	South of Ave L, 600 west of Sierra Highway	3128-007-034, -039	28,895 sf warehouse facility	In Review
SPR 22-03	SWC Sierra Highway & Ave L	3128-007-030, 3128-007-038	93,465 sf self-storage facility	In Review
SPR 22-07	6th Street West, south of Avenue L-8	3128-020-015	2 steel buildings for multi-tenant use	In Review
SPR 22-11/ TPM 83994	Forbes St & Market St	3128-008-009	2 industrial bldgs totaling 229,500 sf	In Review
SPR 22-14	Avenue L-4 & Wall Street	3128-007-015, -024	217,700 sf tilt up industrial bldg	In Review
SPR 22-16	6th Street West and Avenue L-8	3128-020-014	15,000 sf industrial bldg.	In Review
CUP 22-16	Market and Enterprise	3128-008-017	11,296 sf cannabis facility	In Review

List of Referenced Documents and Available Locations*:

AIR:	Air Quality and Greenhouse Gas Technical Report, Lancaster Solar R&D Project, Los Angeles County, California, SWCA Environmental Consultants, September 2022	DSD
ESA:	Phase I Environmental Site Assessment for the Heliogen Lancaster Test Site in Los Angeles County, California, SWCA Environmental Consultants, August 2022	DSD
FIRM:	Flood Insurance Rate Map	DSD
GPEIR:	Lancaster General Plan Environmental Impact Report	DSD
LGP:	Lancaster General Plan	DSD
LMC:	Lancaster Municipal Code	DSD
LMEA:	Lancaster Master Environmental Assessment	DSD
NOI:	Noise and Ground Vibration Technical Report, Lancaster Solar R&D Project, Los Angeles County, California, SWCA Environmental Consultants, November 2022	DSD
SSHZ:	State Seismic Hazard Zone Maps	DSD
USGS:	United States Geological Survey Maps	DSD
USDA SCS:	United States Department of Agriculture Soil Conservation Service Maps	DSD

* DSD: Development Services Department
Community Development Division
Lancaster City Hall
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Lancaster, California 93534