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March 9, 2023

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Via Email and Overnight Mail

Re: <u>Heliogen R&D Facility: Conditional Use Permit No. 22-11 Initial</u> <u>Study/Mitigated Negative Declaration</u>

Dear Ms. Swain and Mr. Hogan:

On behalf of Citizens for Responsible Industry ("Citizens"), we submit these comments regarding the Initial Study/Mitigated Negative Declaration ("MND") prepared for the Heliogen R&D Facility Project (CUP No. 22-11, SCH No. 2023020184) ("Project"), proposed by Heliogen, Inc. ("Applicant").

The Project consists of expansion of the existing Heliogen Research & Development facility at 431 East Avenue K4.¹ The Project proposes installation of an additional 55-foot tower and receiver; a 100-kilowatt (kW) photovoltaic ("PV") solar field (approximately 400 panels); a stationary electrolyzer cell power system; six 300 cubic foot (volume) hydrogen gas cylinders; a hydrogen transfer line; a hydrogen compression/storage/dispensing unit; a Thermal reactor for synthetic fuel production; and a Fischer Tropsch reactor for synthetic fuel production. The Project site is zoned Specific Plan 80-02 (SP80-02), which is the Lancaster Business Park Specific Plan, and designated as Light Industrial in the City of Lancaster General Plan Land Use Map. The Project site is bounded by E Ave K and E Ave K4 to the north and south, respectively, and 5th Street E and the Sienna Heights Apartment Homes to the east and west, respectively. The Applicant is requesting a Conditional

¹ City of Lancaster, Community Development, Initial Study/Mitigated Negative Declaration, Conditional Use Permit No. 22-11, Heliogen R&D Facility https://www.cityoflancasterca.org/home/showpublisheddocument/45067/638115454600670000.

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Use Permit ("CUP") from the City of Lancaster ("City") for the Project which proposes uses beyond those that the City's Development Services Department Community Development Division approved in the Director's Review No. 19-57 on June 14, 2019.

Our review of the MND demonstrates that the MND fails to comply with CEQA. As explained more fully below, the MND fails to accurately disclose the extent of the Project's potentially significant impacts on air quality, public health, hazards, biological resources, and noise. There is more than a fair argument that the Project will result in significant, unmitigated impacts in each of these areas. The City may not approve the Project until the City prepares an Environmental Impact Report ("EIR") that adequately analyzes the Project's potentially significant impacts and incorporates all feasible mitigation measures to avoid or minimize these impacts.

For the reasons discussed herein, and in the attached expert comments, Citizens urges the City to remedy the deficiencies in the MND by preparing a legally adequate EIR and circulating it for public review and comment.² Citizens and their expert consultants have identified numerous potentially significant impacts that the MND either mischaracterizes, underestimates, or fails to identify. Moreover, many of the mitigation measures described in the MND will not, in fact, mitigate impacts to the extent claimed.

We prepared these comments with the assistance of air quality and hazards expert Dr. Phyllis Fox, Ph.D.; expert conservation biologist and wildlife ecologist Scott Cashen, and noise and acoustical expert Ani Toncheva. Dr. Phyllis Fox's technical comments and curriculum vitae are attached hereto as Exhibit A.³ Mr. Cashen's technical comments and curriculum vitae are attached hereto as Exhibit B.⁴ Ms. Toncheva's technical comments and curriculum vitae are attached hereto as Exhibit C.⁵ The comment letters and all attachments thereto are incorporated by reference as if fully set forth herein. The attached expert comments require

² We reserve the right to supplement these comments at later hearings on this Project. Gov. Code § 65009(b); PRC § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal.App.4th 1184, 1199–1203; *see Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal.App.4th 1109, 1121.

³ See **Exhibit A,** Phyllis Fox, Ph.D., P.E., Comments on the Initial Study/Mitigated Negative Declaration for the Heliogen, Inc. Research & Development Facility (Fox Comments").

⁴ See **Exhibit B,** Scott Cashen, M.S., Comments on the Initial Study and Mitigated Negative Declaration for Heliogen R&D Facility Project ("Cashen Comments").

⁵ See **Exhibit C,** Ani Toncheva, Heliogen R&D Facility Project, City of Lancaster, California, Review and Comment on Initial Study ("Toncheva Comments").

separate responses under CEQA.⁶ We reserve the right to supplement these comments at later hearings and proceedings related to the Project.⁷

I. STATEMENT OF INTEREST

Citizens is an unincorporated association of individuals and labor organizations whose members encourage sustainable development of California's energy and natural resources. The association includes California Unions for Reliable Energy ("CURE") and its local affiliates, the affiliates' members and their families, as well as other individuals who live, recreate, work, and raise families in Los Angeles County and in communities near the Project site. Thus, Citizens, its participating organizations, and its individual members stand to be directly affected by the Project's impacts.

CURE supports the development of renewable energy and the critical role it plays in the effort to reduce greenhouse gas emissions. Since its founding in 1997, CURE has been committed to building a strong economy and healthier environment and it works to construct, operate, and maintain renewable energy power plants and other facilities throughout California. CURE supports the development of clean, renewable energy technology, including solar power generation, where properly analyzed and carefully planned to minimize impacts on public health and the environment. Development of all projects subject to CEQA should take all feasible steps to ensure unavoidable impacts are mitigated to the maximum extent feasible. Only by maintaining the highest standards can energy produced from the development of new solar installations truly be sustainable.

The individual members of Citizens would be directly affected by the Project and may also work constructing the Project itself. They would therefore be first in line to be exposed to any health and safety hazards that may be present on the Project site. The coalition includes members who live, recreate, work, and raise families in Los Angeles County and in communities near the Project site. They each have a personal stake in protecting the Project area from unnecessary, adverse environmental and public health and safety impacts. Citizens, its participating organizations, and their members stand to be directly affected by the Project's impacts.

⁶ 14 CCR § 15088(a), (c).

⁷ Gov. Code § 65009(b); PRC § 21177(a); Bakersfield Citizens for Local Control v. Bakersfield (2004) 124 Cal. App. 4th 1184, 1199-1203; see Galante Vineyards v. Monterey Water Dist. (1997) 60 Cal. App. 4th 1109, 1121.

Finally, the organizational members of Citizens are concerned with projects that can result in serious environmental harm without providing countervailing economic benefits. CEQA provides a balancing process whereby economic benefits are weighed against significant impacts to the environment. It is in this spirit we offer these comments.

II. LEGAL BACKGROUND

CEQA is designed to inform decision-makers and the public about the potential, significant environmental effects of a project.⁸ "CEQA's fundamental goal [is] fostering informed decision-making."⁹ "The purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind."¹⁰

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an EIR, except in certain limited circumstances.¹¹ The EIR is the very heart of CEQA.¹² The EIR acts like an "environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return."¹³ The EIR aids an agency in identifying, analyzing, disclosing, and, to the extent possible, avoiding a project's significant environmental effects through implementing feasible mitigation measures.¹⁴ The EIR also serves "to demonstrate to an apprehensive citizenry that the [agency] has analyzed and considered the ecological implications of its action."¹⁵ Thus, an EIR "protects not only the environment but also informed self-government."¹⁶

An EIR is required if "there is substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment."¹⁷ The EIR aids an agency in identifying, analyzing, disclosing, and, to the extent possible, avoiding a project's significant environmental effects through

⁸ 14 Cal. Code Regs. ("CEQA Guidelines") § 15002, subd. (a)(1).

 ⁹ Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 402.
 ¹⁰ Bozung v. LAFCO (1975) 13 Cal.3d 263, 283.

¹¹ See, e.g., Pub. Resources Code, § 21100.

¹² Dunn-Edwards v. Bay Area Air Quality Management Dist. (1992) 9 Cal.App.4th 644, 652.

¹³ Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1220.

¹⁴ Pub. Resources Code § 21002.1(a); CEQA Guidelines § 15002(a), (f).

¹⁵ No Oil, Inc. v. City of Richmond (1974) 13 Cal.3d 68, 86.

¹⁶ Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553, 564.

¹⁷ Pub. Resources Code, § 21080, subd. (d) (emphasis added); CEQA Guidelines, § 15064; see also *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 927; *Mejia v. City of Richmond* (2005) 13 Cal.App.4th 322.

implementing feasible mitigation measures.¹⁸ In very limited circumstances, an agency may avoid preparing an EIR by issuing a negative declaration, a written statement briefly indicating that a project will have no significant impact. Because "[t]he adoption of a negative declaration . . . has a terminal effect on the environmental review process" by allowing the agency to dispense with the duty to prepare an EIR, negative declarations are allowed only in cases where there is not even a "fair argument" that the project will have a significant environmental effect.¹⁹

Under the fair argument standard, a lead agency "shall" prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.²⁰ The phrase "significant effect on the environment" is defined as "a substantial, or potentially substantial, adverse change in the environment."²¹ In certain circumstances, a project with potentially significant impacts can be modified by the adoption of mitigation measures to reduce the impacts to a level of insignificance. In such cases, an agency may satisfy its CEQA obligation by preparing a mitigated negative declaration.²² A mitigated negative declaration, however, is also subject to the fair argument standard. Thus, an MND is also inadequate, and an EIR is required, whenever substantial evidence in the record supports a "fair argument" that significant impacts may occur, even with the imposition of mitigation measures.

The "fair argument" standard is an exceptionally "low threshold" favoring environmental review in an EIR rather than a negative declaration.²³ The "fair argument" standard requires the preparation of an EIR if any substantial evidence in the record indicates that a project may have an adverse environmental effect.²⁴ As a matter of law, substantial evidence includes both expert and lay opinion.²⁵ Even if other substantial evidence supports the opposite conclusion, the agency

 ¹⁸ Pub. Resources Code, § 21002.1, subd. (a); CEQA Guidelines, § 15002, subd. (a) & (f).
 ¹⁹ Citizens of Lake Murray v. San Diego (1989) 129 Cal.App.3d 436, 440; Pub. Resources Code,
 §§ 21100, 21064.

²⁰ Pub. Res. Code §§21080(d), 21082.2(d); 14 Cal. Code Reg. §§ 15002(k)(3), 15064(f)(1), (h)(1); Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal. (1993) 6 Cal.4th 1112, 1123; No Oil, Inc. v. City of Richmond (1974) 13 Cal.3d 68, 75, 82; Stanislaus Audubon Society, Inc. v. County of Stanislaus (1995) 33 Cal.App.4th 144, 150-151; Quail Botanical Gardens Found., Inc. v. City of Encinitas (1994) 29 Cal.App.4th 1597, 1601-1602.

²¹ Pub. Resources Code, § 21068.

²² Pub. Resources Code, § 21064.5; CEQA Guidelines, § 15064, subd. (f)(2).

²³ Pocket Protectors v. City of Sacramento (2004) 124 Cal.App.4th 903, 928.

²⁴ CEQA Guidelines, § 15064, subd. (f)(1); *Pocket Protectors v. City of Sacramento, supra*, 124 Cal.App.4th at 931.

²⁵ Pub. Resources Code, § 21080, subd. (e)(1); CEQA Guidelines, § 15064, subd. (f)(5).

nevertheless must prepare an EIR.²⁶ Under the "fair argument" test, CEQA always resolves the benefit of the doubt in favor of the public and the environment.

With respect to this Project, the MND fails to satisfy the basic purposes of CEQA. The MND fails to adequately disclose, investigate, and analyze the Project's potentially significant impacts, and fails to provide substantial evidence to conclude that impacts will be mitigated to a less than significant level. Because the MND lacks basic information regarding the Project's potentially significant impacts, the MND's conclusion that the Project will have a less than significant impact on the environment is unsupported.²⁷ Moreover, substantial evidence shows that the Project may result in potentially significant impacts. Therefore, a fair argument can be made that the Project may cause significant impacts requiring the preparation of an EIR.

III. THE MND FAILS TO PROVIDE A COMPLETE PROJECT DESCRIPTION

CEQA requires that an Initial Study include a description of the project and an identification of the environmental setting.²⁸ "An accurate and complete project description is necessary for an intelligent evaluation of the potential environmental impacts of the agency's action."²⁹ Accordingly, a lead agency may not hide behind its failure to obtain a complete and accurate project description.³⁰ Further, "[a]n accurate and complete project description is necessary for an intelligent evaluation of the potential environmental impacts of the agency's action... Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal ... and weigh other alternatives in the balance."³¹ Without a complete project description, the environmental analysis under CEQA is impermissibly limited, thus minimizing the project's impacts and undermining meaningful public review.³²

CEQA Guidelines section 15378 defines "project" to mean "the whole of an action, which has a potential for resulting in either a direct physical change in the

²⁶ Arviv Enterprises v. South Valley Area Planning Comm. (2002) 101 Cal.App.4th 1333, 1346; Stanislaus Audubon v. County of Stanislaus (1995) 33 Cal.App.4th 144, 150-151; Quail Botanical Gardens v. City of Encinitas (1994) 29 Cal.App.4th 1597.

 $^{^{27}}$ PRC § 21064.5.

²⁸ CEQA Guidelines, § 15063, subd. (d).

²⁹ County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 192-193.

³⁰ Sundstrom v. County of Mendocino (1988) 202 Cal.App.3d 296, 311 ("Sundstrom").

³¹ County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 192-193.

³² See, e.g., Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal. (1988) 47 Cal.3d 376.

environment, or a reasonably foreseeable indirect physical change in the environment."³³ CEQA Guidelines Section 15071 further requires that an MND accurately describe the project and its location and boundaries, preferably on a map.³⁴ "The term "project" refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term project does not mean each separate governmental approval."³⁵ Courts have explained that a complete description of a project must "address not only the immediate environmental consequences of going forward with the project, but also all "*reasonably foreseeable* consequence[s] of the initial project."³⁶ "If a[n]...[agency] ...does not adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project, informed decision-making cannot occur under CEQA and the [environmental review document] is inadequate as a matter of law."³⁷

A. The MND Fails to Identify Reasonably Foreseeable Uses of the Project Site

An MND is required to "adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project," otherwise, informed decision-making is precluded and the MND may be deemed inadequate as a matter of law.³⁸ An MND must include an analysis of the environmental effects of a proposed future use or action at a project site if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects.³⁹ A failure to describe anticipated project operations can result in a flawed impact analysis, in violation of CEQA.⁴⁰

Here, the MND provides only a vague Project Description which does not provide the public with sufficient information to adequately weigh the environmental consequences of the Project. The MND provides that

³³ CEQA Guidelines § 15378.

³⁴ CEQA Guidelines § 15071(a), (b).

³⁵ Id., § 15378(c).

³⁶ Laurel Heights I, 47 Cal. 3d 376, 398 (emphasis added); see also Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal. 4th 412, 449-50.

³⁷ Riverwatch v. Olivenhain Municipal Water Dist. (2009) 170 Cal. App. 4th 1186, 1201.

³⁸ San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713,

^{722;} City of Santee v. County of San Diego (1989) 214 Cal.App.3d 1438, 1454-1455.

³⁹ Laurel Heights I, 47 Cal. 3d 376, 396.

⁴⁰ See San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal.App.4th 713, 722.

"[a]pproximately 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."⁴¹ Also, 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."⁴²

The MND is unclear as to whether the tower would be used to collect concentrated light from the existing heliostat field or the proposed solar field, or whether it would be used for some other purpose. It also is unclear how the proposed tower would differ from the existing tower (aside from height, location, and appearance).⁴³ The intended us of the tower is critical information necessary to analyze the scope of the Project's environmental impacts. As Mr. Cashen explains, there are multiple types of photovoltaic thermal collectors (e.g., based on design variables, the type of heat transfer fluid, and presence of a device to concentrate solar irradiation, among other variables), each of which may have unique implications on the Project's environmental impacts.⁴⁴ Concentrated solar power facilities generate an additional hazard because aerial species are often killed (or injured) when they fly into the zone of solar flux.⁴⁵ Absent clear information about the purpose and proposed uses of the tower, neither the City nor the public can determine the full scope of the Project's impacts on the environment, and cannot fully understand the true nature of the Project and its components.

The MND provides only a vague explanation as to the purpose of the solar PV panels, "to test various PV components, including storage, panels, frames, etc., for solar thermal application."⁴⁶ Citizens' expert Scott Cashen concludes that it appears the Applicant is proposing a project that would use photovoltaic thermal collectors or hybrid solar collectors.⁴⁷ The MND's failure to clarify the type of solar thermal components that will be utilized renders the MND's project description inadequate as a matter of law. The failure to include any information on the Project's proposed solar thermal components results in unsupported calculations of the severity of potential biological resource impacts, air emissions, health risk impacts, and greenhouse gas emissions. In particular, Mr. Cashen concludes that the MND's failure to provide an adequate Project description impairs the ability to

 44 Id.

⁴¹ MND, p. 2.

 $^{^{42}}$ Id.

 $^{^{\}rm 43}$ Cashen Comments, p. 2.

⁴⁵ *Id*. at p. 3.

⁴⁶ MND, p. 2.

⁴⁷ Cashen Comments, p. 4.

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assess the potential magnitude of bird mortality at the Project site.⁴⁸ Dr. Fox concludes that the vague Project description results in inaccurate calculation of PM2.5 and PM10 emissions, and fugitive dust emissions.⁴⁹ In particular, Dr. Fox concludes that the failure to clarify how frequently the heliostats' mirrors will be washed renders the emissions calculations unsupported by substantial evidence.⁵⁰ Washing the heliostats' mirrors would generate fugitive PM2.5 and PM10 emissions and NOx, ROG, PM10, PM2.5, CO, and GHG emissions from the washing vehicle.⁵¹ But, without the frequency of washing described in the Project description, these emissions calculations in the MND are unsupported. The City must prepare an EIR which accurately analyzes the Project's components and their resultant environmental impacts.

B. The MND's Project Description is Inadequate Because of Impermissible Piecemealing

CEQA forbids piecemealed review of the significant environmental impacts of a project.⁵² Agencies cannot allow "environmental considerations [to] become submerged by chopping a large project into many little ones-each with a minimal potential impact on the environment-which cumulatively may have disastrous consequences."⁵³ The CEQA Guidelines provide "Where an individual project is a necessary precedent for action on a larger project, or commits the Lead Agency to a larger project, with significant environmental effect, an EIR must address itself to the scope of the larger project."⁵⁴

Further, CEQA prohibits a project proponent from seeking approval of a large project in smaller pieces in order to take advantage of environmental exemptions or lesser CEQA review for smaller projects.⁵⁵ This "segmenting" violates CEQA, as it inhibits the full disclosure, analysis and mitigation of impacts, and discussion of alternatives.⁵⁶ CEQA prohibits such a piecemeal approach and requires review of a

⁴⁸ Cashen Comments, p. 4.

⁴⁹ Fox Comments, p. 12.

⁵⁰ *Id.* at 29.

⁵¹ Fox Comments, p. 29.

⁵² 14 CCR § 15165; Banning Ranch Conservancy v. City of Newport Beach (2012) 211 Cal.App.4th 1209, 1222; Berkeley Jets, 91 Cal.App.4th at 1358.

⁵³ Bozung v. Local Agency Formation Com. (1975) 13 Cal.3d 263, 283-284.

^{54 14} CCR § 15165.

⁵⁵ Arviv Enterprises, Inc. v. South Valley Area Planning Com., 101 Cal. App. 4th 1337, 1340 (2002). ⁵⁶ E.g., Pub. Resources Code, §21002, 210021.1(a); CEQA Guidelines, §§ 151363, 15121, 15140, 15151 (An EIR is informational document whose purpose is to disclose and mitigate impacts, analyze a reasonable range of alternatives, and select as the project any alternative which can achieve project ^{4918-007acp}

Project's impacts as a whole.⁵⁷ "Project" is defined as "the whole of an action," which has the potential to result in a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.⁵⁸ CEQA mandates "that environmental considerations do not become submerged by chopping a large project into many little ones—each with a minimal potential impact on the environment—which cumulatively may have disastrous consequences."⁵⁹ Before undertaking a project, the lead agency must assess the environmental impacts of all reasonably foreseeable phases of a project.⁶⁰

Courts have found improper piecemealing where a lead agency conducts separate CEQA reviews for related activities proposed by the same applicant in the same vicinity. In *Plan for Arcadia v. City Council of Arcadia*, a developer submitted two applications for developments on a 400-acre property, first a 72-acre shopping center and then a parking lot to serve a racetrack on the property.⁶¹ A site plan showed that the owner had plans to redevelop the entire property.⁶² Although both projects were exempt from CEQA because they predated CEQA's effective date, it was "clear" to the court that they were "related to each other and that in assessing their environmental impact they should be regarded as a single project under [CEQA]."⁶³

In Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora, the court articulated "general principles" for determining whether two actions are one CEQA project, including "how closely related the acts are to the overall objective of the project," and how closely related they are in *time*, *physical location*, and *the entity undertaking the action*.⁶⁴ The court rejected arguments that a shopping center and nearby road alignment were "separate and independent" projects, and

objectives, but is more protective of the environment, consistent with CEQA's substantive mandate); CEQA Guidelines, § 15378 (project description must include all project components).

⁵⁷ 14 Cal. Code Reg. § 15378, subd. (a); *Burbank- Glendale-Pasadena Airport Authority v. Hensler* (1991) 233 Cal.App.3d 577, 592.

⁵⁸ 14 Cal. Code Reg., § 15378.

⁵⁹ Los Angeles Department of Water and Power v. County of Inyo ("LADWP v Inyo") (Cal. Ct. App., Aug. 17, 2021, No. F081389) 2021 WL 3629227, at *9; *Bozung v. LAFCO* (1975) 13 Cal.3d 263, 283-84; *City of Santee v. County of San Diego*, (1989) 214 Cal.App.3d 1438, 1452.

⁶⁰ Laurel Heights Improvement Assoc. v. Regents of the Univ. of Calif. (1988) 47 Cal.3d 376, 396-97, 253 Cal.Rptr. 426) (EIR held inadequate for failure to assess impacts of second phase of pharmacy school's occupancy of a new medical research facility).

⁶¹ Plan for Arcadia v. City Council of Arcadia (1974) 42 Cal.App.3d 712, 718, 721.

⁶² Id. at 719.

⁶³ Id. at 723, 726.

⁶⁴ Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora (2007) 155 Cal.App.4th 1214, 1226-1227 ("Tuolumne").

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held that (1) separate approvals do not sever the connections between two activities; (2) the broad definition of a CEQA "project" extends beyond situations where a future activity is "necessitated by" an earlier one (noting that when actions "actually will be taken," the appropriate inquiry is whether they are related to one another, i.e. they comprise the "whole of an action" or "coordinated endeavor"); and (3) the applicable standard is not always whether two actions "could be implemented independently of each other."⁶⁵

More persuasive, the court found, is whether the "relationship between the particular act and the remainder of the project is sufficiently close when the proposed physical act is among the various steps which taken together obtain an objective."⁶⁶ The question of whether two actions are part of the same project can be answered by determining whether one act is a "step taken toward the achievement of an objective—that is, whether the act is part of a coordinated endeavor."⁶⁷

Here, the Project consists of expansion of the research and development ("R&D") activities at the existing Heliogen facility, including the installation of an additional solar field (approximately 400 panels), a second tower of approximately 55 feet, and additional equipment.⁶⁸ Neither the MND, nor the City's responses to Citizens' record requests pursuant to the California Public Records Act, ⁶⁹ provide any information regarding the environmental review conducted for the construction of the initial R&D facility. The existing facility includes a heliostat field, tower-mounted heliostat control equipment, and solar flux measurement devices.⁷⁰ In addition, the site was graded during Phase 1.⁷¹ In November 2021, Heliogen and Bloom Energy successfully generated green hydrogen at the Lancaster facility.⁷² Further, in 2022, Heliogen completed installation of fourth generation heliostats at the Lancaster demonstration facility and began testing the autonomous cleaning

⁶⁵ *Id.* at 1228-1230 (citing 14 Cal. Code Reg. § 15378(c) and analyzing *Sierra Club v. W. Side Irr. Dist.* (2005) 128 Cal.App.4th 690, 698-700).

⁶⁶ *Id.*, p. 1226.

⁶⁷ *Id.*, p. 1228.

⁶⁸ MND, p. 23.

 ⁶⁹ Citizens' member CURE filed a request for immediate access to documents referenced and relied upon in the MND and Public Records Act requests with the City related to the Project.
 ⁷⁰ Heliogen Conditional Use Civil Plans, Sheet 3.

⁷¹ SWCA Environmental Consultants, Project Description for the Lancaster Solar Test Facility, September 2022, Section 1.1, pdf 7.

⁷² Advanced Biofuels USA, Heliogen Awarded Exclusive Right to Lease Brenda Solar Energy Zone for Green Hydrogen Production, February 9, 2022; <u>https://advancedbiofuelsusa.info/heliogenawarded-exclusive-right-to-lease-brenda-solar-energy-zone-for-green-hydrogen-production/.</u> 4918-007acp

vehicle.⁷³ In fact, Heliogen videos suggest the Project is fully constructed.⁷⁴ The proposed Project and the 2019 through 2022 approvals and construction of elements on the Project site are inextricably linked to the proposed Project. The expansion of the facility for this Project are part of the same overall facility Project. CEQA defines a "Project" as the "whole of an action."⁷⁵ Here, the whole of the action for the proposed Project includes the prior construction of the Project site, but the review and approvals were impermissibly piecemealed. The impermissible piecemealing of the proposed Project from prior elements violates CEQA.

Dr. Fox concludes that the existing facility construction Phase 1 and on-going work at the Project site has and continues to result in significant air quality impacts that have not been and currently are not being mitigated, and were not analyzed in the MND. The Project description fails to encompass the whole of the action, as required by CEQA. The applicant has improperly segmented the Project to artificially reduce environmental impacts subject to CEQA review. The Phase 1 construction of the existing facility and the proposed Project are so related to each other that in assessing their environmental impact they should be regarded as a single project under CEQA.⁷⁶

In the Site Plan on page 5 of the MND, Item 23 is labeled as "Existing 48,000 SQ Ft. Heliostat Field."⁷⁷ A Google Map search reveals that the existing Project includes the Heliostat Field on the right, but not the Heliostat Field on the lefthand side. The City failed to analyze the environmental impacts of the construction of the second heliostat field and attempts to piecemeal that development from this proposed Project in violation of CEQA. These deficiencies must be remedied in an EIR before the Project can be approved.

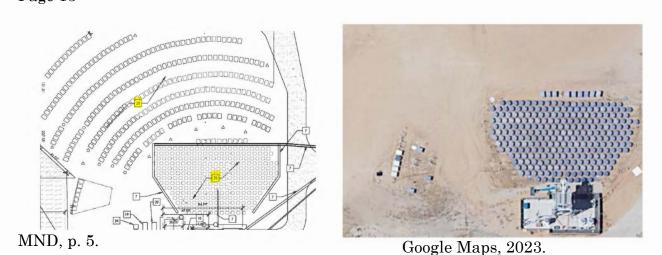
⁷³ Heliogen, Second Quarter 2022, Earnings Presentation, 2022, pdf 5; https://s29.q4cdn.com/873331823/files/doc_financials/2022/q2/HLGN-2Q22-earningspresentation.pdf.

⁷⁴ Heliogen, Heliogen Heliostat Field – Lancaster, CA; https://www.youtube.com/watch?v=7fTwnKV8KKI.

⁷⁵ County of Mono v. City of Los Angeles (2022) 81 Cal.App.5th 657. 671.

 ⁷⁶ Plan for Arcadia v. City Council of Arcadia (1974) 42 Cal.App.3d 712, 723, 726.
 ⁷⁷ Id.

⁴⁹¹⁸⁻⁰⁰⁷acp



The City must circulate an EIR which properly considers the whole of the action, as required by CEQA.

IV. THE MND FAILS TO PROVIDE AN ADEQUATE DESCRIPTION OF THE ENVIRONMENTAL SETTING

The MND fails to adequately describe the environmental setting against which the Project's environmental impacts are to be measured for several critical aspects of the Project. This contravenes the fundamental purpose of the environmental review process, which is to determine whether there is a potentially substantial, adverse change compared to the existing setting. ⁷⁸ CEQA requires that a lead agency include a description of the physical environmental conditions, or "baseline," in the vicinity of the project as they exist at the time environmental review commences.⁷⁹ As the courts have repeatedly held, the impacts of a project must be measured against the "real conditions on the ground."⁸⁰ The description of the environmental setting constitutes the "baseline" physical conditions against which the lead agency assesses the significance of a project's impacts.⁸¹ An Environmental Setting is required "to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely nearterm and long-term impacts.⁸²

⁷⁸ CEQA Guidelines, § 15063, subd. (d).

⁷⁹ CEQA Guidelines, § 15125(a); Communities for a Better Environment v. South Coast Air Quality Management Dist. (2010) 48 Cal. 4th 310, 321 ("CBE v. SCAQMD").

⁸⁰ CBE v. SCAQMD, 48 Cal. 4th at 321; Save Our Peninsula Com. v. Monterey County Bd. of Supervisors (2001) 87 Cal.App.4th 99, 121-22; City of Carmel-by-the-Sea v. Bd. of Supervisors of Monterey County (1986) 183 Cal.App.3d 229, 246.

⁸¹ CEQA Guidelines, § 15125(a); CBE v. SCAQMD, 48 Cal. 4th at 321.

82 14 CCR § 15125(a).

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A. The MND Fails to Provide an Accurate Analysis of the Environmental Setting With Respect to Noise

The MND concludes, absent substantial evidence, that the Project will not result in significant impacts from temporary or permanent increase in ambient noise levels in the vicinity of the Project.⁸³ The MND does not provide an accurate baseline for determining the ambient noise level in the Project vicinity to make this determination.⁸⁴ Additionally, the MND does not identify all sensitive land uses in the project area.⁸⁵ Ms. Toncheva concludes that the MND does not provide substantial evidence to assess if the measurements fully capture fluctuations in traffic and other existing sound sources.⁸⁶ There is no explanation, for example, as to why the short-term measurements ST-2 and ST-6 are more than 10 dB lower than the average hourly Leq at LT-1.87 In fact, substantial evidence supports a fair argument that ambient noise levels will be impacted more than estimated in the MND. Ms. Toncheva calculates that excavators, dozers, and loaders alone would produce – on average – levels 12 dBA above existing daytime noise levels and pile driving would – on average – be 15 dB above the existing levels.⁸⁸ Ms. Toncheva explains that based on actual average noise levels at the project site, Project construction and operation are likely to result in an exceedance of the ambient noise level by 10 dB, resulting in a significant impact to neighboring residents.⁸⁹ As a result, the MND's baseline analysis is not supported by substantial evidence and cannot be used to determine Project impacts to ambient noise levels at all sensitive receptors within the vicinity of the Project site.

Absent an accurate baseline analysis, the public and the City cannot fully determine "the conditions of the environment that preceded the project [as] the baseline against which to measure the adverse environmental change."⁹⁰ The MND is inadequate as a matter of law for failure to provide an accurate baseline against which to measure project impacts. An EIR must be prepared which adequately analyzes the Project's baseline noise levels.

⁸³ MND, p. 40.

⁸⁴ Toncheva Comments, p. 6.

⁸⁵ Id.

 $^{^{86}}$ Id.

⁸⁷ Id.

⁸⁸ *Id.* at 4.

 $^{^{89}}$ Id.

⁹⁰ Fat v. County of Sacramento (2002) 97 Cal.App4th 1270, 1279, quoting Lewis v. Seventeenth Dist. Agricultural Assn. (1985) 165 Cal.App.3d 823, 836. 4918-007acp

B. The MND Fails to Provide an Accurate Analysis of the Environmental Setting With Respect to Biological Resources

The MND fails to provide a complete and accurate description of the Project's environmental setting related to biological resources, and thus, the MND's impact assessment and proposed mitigation measures are inadequate.

In particular, the MND fails to provide an accurate picture of the environmental setting for birds. The MND states that "[t]he 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."⁹¹ However, biological resource expert Scott Cashen determined that the Project may still result in significant impacts to birds that use the trees for nesting, even without removal of the trees.⁹² This would result in a significant impact under CEQA, and a violation of the MBTA and the California Fish and Game Code.⁹³ The MND provides no mitigation for nesting birds, and thus impacts remain significant.⁹⁴ The City must prepare an EIR which adequately analyzes the environmental setting for nesting birds, and adequately analyzes and mitigates resultant significant impacts.

V. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN SIGNIFICANT AIR QUALITY AND HEALTH RISK IMPACTS REQUIRING AN EIR FOR THE PROJECT

A negative declaration is improper, and an EIR must be prepared, whenever it can be fairly argued on the basis of substantial evidence that a project may have a significant environmental impact.⁹⁵ "[S]ignificant effect on the environment" is defined as "a substantial, or potentially substantial, adverse change in the environment."⁹⁶ An effect on the environment need not be "momentous" to meet the CEQA test for significance; it is enough that the impacts are "not trivial."⁹⁷

⁹¹ MND, p. 21-22.

⁹² Cashen Comments, p. 2.

 $^{^{93}}$ Id.

 $^{^{94}}$ Id.

⁹⁵ Pub. Resources Code § 21151; CEQA Guidelines § 15064(f); Citizens for Responsible Equitable Envt'l Dev. v. City of Chula Vista ("CREED") (2011) 197 Cal.App.4th 327, 330-31; Communities for a Better Env't v. South Coast Air Quality Mgmt. Dist. (2010) 48 Cal.4th 310, 319 ("CBE v. SCAQMD").
⁹⁶ Pub. Resources Code § 21068; CEQA Guidelines § 15382; County Sanitation Dist. No. 2 v. County of Kern (2005) 127 Cal.App.4th 1544, 1581.

 ⁹⁷ No Oil, Inc. v. City of Los Angeles (1974) 13 Cal.3d 68, 83.
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Substantial evidence, for purposes of the fair argument standard, includes "fact, a reasonable assumption predicated upon fact, or <u>expert opinion</u> supported by fact."⁹⁸

A. The MND Fails to Provide an Accurate Analysis of Impacts from the Required Grading

The MND fails to provide substantial evidence to support the CalEEMod emissions calculations for construction of the Project. The City denied Citizens' California Public Records Act requests for documents underlying the CalEEMod calculations, and failed to provide all documents related to the (a) construction schedule; (b) figure showing access roads and construction area; (c) acres of disturbed land; (d) list of all construction equipment that will be used, its horsepower (hp) and engine tier; (e) CalEEmod or other analysis of emissions from constructing the project; (f) construction HRA and air quality analysis; and (g) dust control plan. The City even admitted that "[t]he inputs for CalEEmod calculations are not in Lancaster's possession."⁹⁹ As such, Citizens determined that the CalEEMod calculations were not based on substantial evidence in the record.

Dr. Fox's calculations confirm that the Project construction will result in significant and unmitigated PM2.5 and PM10 emissions from the previously graded areas that are not covered by Project components, the heliostats, towers/receivers, and the pilot hydrogen plant because the MND provides no mitigation to control fugitive PM2.5 and PM10 emissions in these areas.¹⁰⁰ Absent the rebuilding or revegetation of these areas, the PM2.5 and PM10 emissions remain significant and unmitigated.

Further, wind erosion from previously graded portions of the Project site will continue to emit fugitive PM2.5 and PM10 emissions until they are built out, revegetated, or otherwise mitigated.¹⁰¹ Dr. Fox recommends feasible mitigation to reduce PM2.5 and PM10 emissions that are not included in the MND. Dr. Fox recommends the use of conventional dust control measures, including watering and dust control agents. These measures should be included in a revised EIR circulated for public review and comment.

⁹⁸ Pub. Resources Code § 21080(e)(1) (emphasis added); *CREED*, 197 Cal.App.4th at 331.
⁹⁹ See Exhibit B to Citizens' March 3, 2023 request for extension of the MND comment period, Email from Kathleen Stenback, Assistant City Clerk, City of Lancaster to Sheila Sannadan, Adams Broadwell Joseph & Cardozo, City of Lancaster Records Request 2023-0122 [Heliogen R&D Facility Project (CUP No. 22-11, SCH No. 2023020184)], (February 16, 2023).

¹⁰⁰ Fox Comments, p. 11.

¹⁰¹ *Id.* at 12.

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Dr. Fox concludes that wind erosion from graded areas on the Project site will result in fugitive dust emissions of PM10of 453 lb/day, greatly exceeding the AVAQMD daily construction significance threshold for PM10 of 82 lb/day.¹⁰² The Project thus results in significant unmitigated air emissions from PM10, requiring the preparation of an EIR. Similarly, PM2.5 emissions will exceed the AVAQMD daily construction threshold 65 lb/day.¹⁰³ Dr. Fox calculates that PM2.5 emissions would be 216 lb/day, resulting in a significant impact under CEQA requiring preparation of an EIR.

B. The MND Lacks Analysis of the Project's Construction Health Risk Impacts

CEQA requires the lead agency to must support its findings of a project's potential environmental impacts with concrete evidence, and with "sufficient information to foster informed public participation and to enable the decision makers to consider the environmental factors necessary to make a reasoned decision."¹⁰⁴ In particular, CEQA requires that a project's health risks "must be 'clearly identified' and the discussion must include 'relevant specifics' about the environmental changes attributable to the Project and their associated health outcomes."¹⁰⁵ Courts have held that an environmental review document must disclose a project's potential health risks to a degree of specificity that would allow the public to make the correlation between the project's impacts and adverse effects to human health.¹⁰⁶ The MND fails to meet this standard because it omits a meaningful, detailed, or quantitative analysis of the Project's health risk. The MND does not include a site-specific health risk analysis ("HRA") to disclose the extent of the Project's construction and operational health impacts, as required by CEQA.

The MND concludes, absent substantial evidence, that the Project would have a less than significant impact related to exposure of sensitive receptors to substantial pollutant concentrations. But, the MND fails to conduct a health risk analysis for the cancer risk posed by exposure to toxic air contaminants ("TACs"), in particular diesel particulate matter ("DPM") during Project construction and operation. Substantial evidence supports a fair argument that construction of the

¹⁰² Fox Comments, p. 11.

 $^{^{103}}$ *Id*.

¹⁰⁴ Sierra Club v. County of Fresno (2018) 6 Cal.5th 502, 516.

¹⁰⁵ *Id.* at 518.

¹⁰⁶ Id. at 518–520; Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184.

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Project may result in significant impacts associated with health risk impacts to sensitive receptors from toxic air contaminants.

In *Sierra Club*, the County's failure to include a health risk analysis enabled the California Supreme Court to find "the EIR insufficient because it failed to explain why it was not feasible to provide an analysis that connected the air quality effects to human health consequences."¹⁰⁷ Here, the MND fails to analyze the significant health risk impacts of the Project in a health risk analysis and fails to connect the Project's air quality effects to human health consequences, in violation of CEQA. The City must prepare an EIR which accurately analyzes the health risk impacts of the Project.

Dr. Fox calculates that the Project's health risk impacts exceed AVAQMD CEQA significance thresholds because Project construction and operation will expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.¹⁰⁸ Project construction and operation will emit diesel particulate matter ("DPM"), which is a potent human carcinogen and also acutely and chronically toxic.¹⁰⁹ The MND concludes that health risks are less than significant, without providing substantial evidence to support such a conclusion in a health risk analysis for Project construction or operation.

The MND erroneously asserts that construction health risks are less than significant because "there will be minimal heavy equipment operations because there is no demolition or grading activities as part of the project."¹¹⁰ Dr. Fox concludes that this assertion is not supported by substantial evidence. Minimal heavy equipment operations still emit significant DPM emissions. Even minimal DPM emissions are potent human carcinogens and acutely and chronically toxic.¹¹¹

Further, Dr. Fox explains that the MND incorrectly asserts that because construction emissions are temporary, they are not significant. This is false. The MND is incorrect in its assertion that "[c]onstruction activities with respect to each related project would not result in a long-term (i.e., 70-year) substantial source of TAC emissions. It is therefore not required or meaningful to evaluate long term cancer impacts from construction activities that occur over relatively short duration.

¹¹⁰ MND, Appendix A, pdf 32.

¹⁰⁷ Sierra Club v. County of Fresno (2018) 6 Cal.5th 502, 525.

¹⁰⁸ Fox Comments, p. 13.

¹⁰⁹ MND, Appendix A, pdf 13-14; Fox Comments, p. 13.

¹¹¹ Fox Comments, p. 14.

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As such, cumulative toxic emission impacts during construction would be less than significant."¹¹² Absent a health risk analysis, this finding is not supported by substantial evidence.

Numerous sensitive receptors are close to Project components (e.g., solar panels), where significant DPM would be emitted, both during construction and during operational mirror washing. Thus, Dr. Fox concludes that construction and operation of the Project would result in significant public health impacts.¹¹³ Dr. Fox conducted a quantified health risk analysis and calculated that acute on-site construction worker health impacts and acute off-site worker and resident health impacts are significant and unmitigated.¹¹⁴ Dr. Fox finds that the maximum 1-hour (acute) DPM concentration is 600 ug/m³ at the property line and 154 ug/m³ at the nearest home.¹¹⁵ These concentrations exceed the acute 1-hour REL by factors of 15 to 60.¹¹⁶ Thus, Dr. Fox finds acute on-site construction worker health impacts and acute off-site worker and resident health impacts and acute off-site worker and resident health impacts during the acute 1-hour REL by factors of 15 to 60.¹¹⁶ Thus, Dr. Fox finds acute on-site construction worker health impacts and acute off-site worker and resident health impacts to be significant and unmitigated.¹¹⁷

Dr. Fox proposes the following feasible mitigation measures to reduce Project impacts to less than significant levels:

- Require the use of biodiesel in all construction equipment;
- Require the use of Tier 4 final engines in all construction equipment;
- Install engine particulate filters;
- Install diesel oxidation catalysts;
- Prohibit and/or restrict unnecessary idling or lugging of engines;
- Limit idling to no more than 2 minutes, enforced by an on-site construction monitor;
- Restrict the amount of diesel-powered equipment and total engine horsepower operating in a given area;
- Modify and/or extend the construction schedule to minimize the amount of diesel-powered equipment operating in a given area at the same time;
- Relocate significantly impacted sensitive receptors;
- Require routine maintenance of construction equipment;
- Hire only highly skilled equipment operators; and

¹¹² MND, Appendix A, pdf 32.

¹¹³ Fox Comments, p. 15.

 $^{^{114}}$ *Id*. at 17.

 $^{^{115}}$ Id.

 $^{^{116}}$ Id.

 $^{^{117}}$ Id.

⁴⁹¹⁸⁻⁰⁰⁷acp

• Retain an on-site construction manager to assure all mitigation is achieved in practice.

Absent these mitigation measures, Project impacts remain significant and unmitigated. The City must implement these measures in and EIR with a Mitigation Monitoring and Reporting Program ("MMRP") before the Project can lawfully be approved.

C. The MND Lacks Analysis of the Project's Construction Health Risk Impacts from Exposition to Pesticides

Dr. Fox concludes that construction impacts from the potential disturbance of existing pesticides on the Project site will result in significant health risk impacts to construction workers and nearby residents and workers. Nearby sensitive receptors include students at iLead Charter School, and residents just across the street at the Sienna Heights Apartments only 90 feet away.¹¹⁸

The Phase I Environmental Site Assessment ("ESA") found that from 1915 through the 1990s, the site was agricultural in use.¹¹⁹ Dr. Fox confirms that likely the soils that would be disturbed during construction will contain pesticides, which could include DDT and other now banned highly toxic pesticides.¹²⁰ The IS/MND failed to use California's extensive Pesticide Use Reports ("PUR") database to identify the pesticides that have been historically used at the site and to evaluate their risk to construction workers or require preconstruction monitoring of site soils for pesticides or evaluate the health risks of pesticides in disturbed soils to construction workers and nearby off-site residents and workers, thus failing as an informational document under CEQA.¹²¹ These measures must be implemented in an EIR's MMRP before the Project can lawfully be approved.

D. Substantial Evidence Supports a Fair Argument that the MND's Proposed Mitigation Would Not Sufficiently Mitigate Project Impacts

Dr. Fox confirms that the IS/MND does not include any mitigation requiring the use of a statewide average construction fleet, thus allowing the applicant to select equipment that emits far more than the statewide average.¹²² The MND

¹¹⁸ Fox Comments, p. 18.

¹¹⁹ Phase I ESA, p. iii, pdf 6.

¹²⁰ Fox Comments, p. 19.

 $^{^{121}}$ Id.

 $^{^{122}}$ Id.

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would allow the applicant to select all Tier 1-3 equipment to construct the Project.¹²³ If the Applicant selected all Tier 1-3 construction equipment, emissions would be significantly higher than calculated by the CalEEMod model and disclosed in the MND.¹²⁴ This would result in significant health impacts to construction workers, nearby residents, and off-site workers. Thus, the MND fails as an information document under CEQA for failing to accurately reflect the Project's emissions absent adequate mitigation.

E. Substantial Evidence Supports a Fair Argument that Valley Fever Impacts are Significant and Unmitigated

Valley Fever is caused by microscopic fungus known as Coccidioides immitis ("CI"), which lives in the top 2 to 12 inches of soil in many parts of the state of California.¹²⁵ When soil is disturbed by activities such as digging, grading, or driving, or is disturbed by environmental conditions such as high winds, fungal spores can become airborne and can potentially be inhaled. The infectious dose is very low, typically less than 10 spores.¹²⁶ The Centers for Disease Control determined that "as little as one spore may transmit disease."¹²⁷

The Project site is in an area endemic for Valley Fever.¹²⁸ Yet, the MND fails to adequately analyze impacts to construction workers and nearby sensitive receptors from exposure to Valley Fever. Further, the MND erroneously concludes that "the risk of exposure to Valley Fever would be minimized to a less than significant level" through implementation of Mitigation Measures 1 and 2.¹²⁹

Dr. Fox explains that construction workers are at significant risk of developing Valley Fever. However, the potentially exposed population is much larger than construction workers because the non-selective raising of dust during Project construction will carry the very small spores, 0.002-0.005 millimeters

¹²³ Fox Comments, p. 19.

 $^{^{124}}$ Id.

¹²⁵ Cal. Lab. Code § 6709(a).

¹²⁶ Jennifer McNary and Mary Deems, Preventing Valley Fever in Construction Workers, March 4, 2020, pdf 10; <u>https://www.safetybayarea.com/media/2020-3A.pdf</u>.

¹²⁷ Centers for Disease Control and Prevention

 ¹²⁸ County of Los Angeles Public Health, Acute Communicable Disease Control, Coccidioidomycosis, <u>http://publichealth.lacounty.gov/acd/diseases/cocci.htm#:~:text=Southern%20California%20is%20a%</u> <u>20known,many%20parts%20of%20the%20body</u>..
 ¹²⁹ MND, p. 19.

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("mm"), into off-site areas, potentially exposing large non-construction worker populations. $^{\rm 130}$

Many of the Project components, for example, are adjacent to sensitive receptors, including residential areas, schools, and parks, resulting in significant public health impacts. Valley fever spores can be carried on the winds into surrounding areas, exposing farm and vineyard workers, students at nearby schools, and residents adjacent to many of the construction sites. Valley Fever spores, for example, have been documented to travel as much as 500 miles¹³¹ and, thus, dust raised during construction could potentially expose a large number of people hundreds of miles away. The MND failed to identify this significant risk to sensitive receptors and fails to adequately mitigate it.

Dr. Fox concludes that Geology and Soils Mitigation Measure 2 would not adequately mitigate the risk to sensitive receptors from Valley Fever. Dr. Fox confirms that conventional dust control measures have been demonstrated to not be effective in controlling Valley Fever because they largely focus on visible dust or larger dust particles—the PM10 fraction—not the very fine particles where the Valley Fever spores are found.¹³² The spores are much smaller than construction fugitive dust, which dust control plans are designed to control.¹³³ Thus, Dr. Fox concludes that implementation of conventional dust control measures will not provide sufficient protection for both on-site workers, workers at nearby facilities, and the general public.¹³⁴

Dr. Fox recommended feasible mitigation measures in her comments to reduce the impacts of Valley Fever on construction workers and nearby sensitive receptors. Dr. Fox concludes that the Project's public health impacts from Valley Fever spores raised during Project construction, especially on construction workers, are significant and inadequately mitigated.¹³⁵ The health-protective measures recommended by Dr. Fox from the San Luis Obispo County Public Health

¹³⁰ Comment by Dr. Phyllis Fox; Schmelzer and Tabershaw, 1968, p. 110; Pappagianis and Einstein, 1978, p. 527 ("The northern areas were not directly affected by the ground level windstorm that had struck Kern County but the dust was lifted to several thousand feet elevation and, borne on high currents, the soil and arthrospores along with some moisture were gently deposited on sidewalks and automobiles as "a mud storm" that vexed the residents of much of California." The storm originating in Kern County, for example, had major impacts in the San Francisco Bay Area and Sacramento).

¹³¹ David Filip and Sharon Filip, Valley Fever Epidemic, Golden Phoenix Books, 2008, p. 24.

¹³² Fox Comments, p. 20.

 $^{^{133}}$ Id.

¹³⁴ Fox Comments, p. 20.

 $^{^{\}rm 135}$ Id. at 27

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Department, Monterey County Health Department, and the California Department of Public Health are feasible for the Project and should be required in an enhanced dust control plan to reduce the risk to construction workers, nearby residents, and nearby off-site workers of contacting Valley Fever.¹³⁶ Dr. Fox concludes that even if all of the above measures are adopted, an EIR is required to analyze whether these measures are adequate to reduce this significant impact to a level below significance.

The City must circulate an EIR which adequately analyzes the Project's impacts from Valley Fever and mitigates such impacts to the greatest extent feasible before the Project can be approved.

F. Substantial Evidence Supports a Fair Argument that Operational Air Quality Impacts are Significant and Unmitigated

The MND provides that "[o]perational emissions would include emissions from potential off-site equipment and emissions associated with routine washing of the mirrors."¹³⁷ But, the MND fails to clarify the frequency with which the mirrors will be routinely washed. Dr. Fox concludes that for the Project to optimally operate, the mirrors would need to be washed daily.¹³⁸ Particulate matter accumulates on solar panels, blocking a large portion of sunlight and thus reducing their efficiency.¹³⁹ Therefore, the panels must be periodically cleaned to maintain their output.¹⁴⁰ This would result in significant and unmitigated emissions associated with heliostat washing. But, the MND and the Air Quality and Greenhouse Gas Report fail to calculated the emissions associated with heliostat washing.¹⁴¹ Dr. Fox concludes that heliostat washing would generate fugitive PM2.5 and PM10 emissions from dust washed from the mirrors and NOx, ROG, PM10, PM2.5, CO, and GHG emissions from the washing vehicle.¹⁴² Emissions from the pressure washer were not included in the CalEEMod analysis, which results in an artificial underestimation of operational emissions.¹⁴³

 142 Id. 143 Id.

¹³⁶ Fox Comments, p. 27.

¹³⁷ MND, Appendix A, pdf 26.

¹³⁸ Fox Comments, p. 28.

 $^{^{139}}$ Id.

 $^{^{140}}$ Id.

¹⁴¹ *Id*.

⁴⁹¹⁸⁻⁰⁰⁷acp

The MND is silent on the amount of particulate matter removed from the panels, its composition, and fate.¹⁴⁴ The MND is also silent on the disposal of the wash water used to clean the panels.¹⁴⁵ The MND's conclusions regarding operational emissions are therefore not supported by substantial evidence. In fact, substantial evidence presented by Dr. Fox confirms that the Project's washing process alone would emit extremely high levels of particulate matter emissions, including PM10 and PM2.5 during and after panel washing.¹⁴⁶ Dr. Fox calculates that PM10 emissions during and washing 0.5 acres of heliostats would be 45 lb/day.¹⁴⁷ These impacts would be cumulatively significant with other operational air quality impacts, resulting in a significant environmental impact, thus requiring preparation of an EIR.

G. Substantial Evidence Supports a Fair Argument that the Risk of Upset from Potential Releases of Hazardous Materials Remains Significant and Unmitigated

Project operation will generate, store, transport, use, and dispose of hazardous materials, including six 300-cubic foot cylinders and one 1,000 kg storage unit of hydrogen gas and 50 gallons of synthetic crude.¹⁴⁸ The MND concludes that risk associated with the routine transport, use, and disposal of hazardous materials as part of the R&D operations would be less than significant with implementation of mitigation measures, but this conclusion is not supported by substantial evidence.¹⁴⁹ This conclusion is unsupported by any analysis or supporting evidence. Absent a risk of upset analysis, the MND's less than significant determination is not supported by substantial evidence.

Dr. Fox reviewed the Project's hazardous materials discussion and concludes, based on the volatility and toxicity of the Project's hazardous materials, that leakage of hazardous materials from cylinders, pipelines, and fugitive components may result in fires and explosions that would pose significant health risks to on-site workers and nearby off-site workers and residents at the property boundary.¹⁵⁰ Dr. Fox's observations constitute substantial evidence that the risk of upset from

 146 Id.

¹⁴⁴ Fox Comments, p. 28.

 $^{^{145}}$ Id.

¹⁴⁷ *Id*.

¹⁴⁸ MND, p. 31.
¹⁴⁹ Fox Comments, p. 31.

 $^{^{150}}$ Id.

⁴⁹¹⁸⁻⁰⁰⁷acp

hazardous materials is potentially significant and unmitigated due to proximity to numerous sensitive receptors. $^{\rm 151}$

The MND fails to include a risk of upset analysis to accurately analyze the potential for such accidental leaks or explosions during transport, use, or storage. The City must circulate an EIR which includes a risk of upset analysis and adequately analyzes and mitigates the Project's risk of upset from hazardous materials.

H. The Project's Air Emissions Result in Nonconformance with the City's General Plan

The City of Lancaster General Plan 2030 requires that, in order to protect the air quality in Lancaster, the General Plan presents an Air Quality Program for achieving the following objectives:

- Minimizing air pollution emissions generated by stationary sources through the implementation of energy conservation programs outlined in the Plan for the Natural Environment and mitigation of impacts to air resources resulting from new development.
- Protection of sensitive uses from the impacts of air pollution by ensuring that potential air pollution sources are located away from residential areas and other sensitive receptors.
- Mitigating construction activities to minimize fugitive dust by implementing the dust abatement procedures described in the Land Resources section of the Plan for the Natural Environment.¹⁵²

The Project does not comport with the General Plan because it will expose sensitive uses to significant, unmitigated levels of air pollution. The Project also directly contravenes the General Plan by siting a polluting industrial site immediately adjacent to sensitive receptors. This Project is likely to result in significant and unmitigated construction and operation air pollution and health risks to nearby sensitive receptors, namely residents in the Sienna Heights Apartments.

¹⁵¹ Fox Comments, p. 32.

¹⁵² Lancaster General Plan 2030, p. 1-31,

https://www.cityoflancasterca.org/home/showpublisheddocument/9323/635775792210230000. 4918-007acp

The City must circulate an EIR which adequately analyzes the Project's air pollution emissions, and resultant nonconformance with the City's General Plan, in accordance with CEQA.

VI. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN SIGNIFICANT BIOLOGICAL RESOURCE IMPACTS REQUIRING AN EIR FOR THE PROJECT

There is substantial evidence supporting a fair argument that the significant risk to avian mortality posed by solar PV facilities, combined with the Project's location, size, and technology, is substantial.¹⁵³

Mr. Cashen describes the increased risks to biological resources as a result of the Project's location near the intersection of two major avian migration routes, its relatively large size, and the use of PV technology, which appears to be especially hazardous to birds.¹⁵⁴ Mr. Cashen confirms that many of the bird species killed at renewable energy facilities are vulnerable to population or subpopulation-level effects, and that cumulative effects of renewable energy appear to be more extensive than previously understood, especially for migratory species.¹⁵⁵ These findings are particularly relevant to the Project because it is located near the intersection of two major migration routes: one used by landbirds, and one used by waterbirds.¹⁵⁶

The USFWS and their own forensics specialists documented numerous reports of collisions and mortalities at solar power facilities, including facilities with PV panel design like the Project. ¹⁵⁷ The USFWS reports explain that "[s]ome species of birds, such as waterbirds, may perceive the solar field as a water body (commonly referred to as the "Lake effect"). Many avian species are attracted to permanent and ephemeral water sources, especially in arid environments. **Based on information collected at existing solar facilities, solar panels and other**

¹⁵³ Cashen Comments, p. 3.

¹⁵⁴ Cashen Comments, p. 3; Walston LJ Jr, KE Rollins, KE LaGory, KP Smith, SA Meyers. 2016. A preliminary assessment of avian mortality at utility-scale solar energy facilities in the United States. Renewable Energy 92:404-414.

¹⁵⁵ Cashen Comments p. 4.

¹⁵⁶ Cooper DS. 2016. Industrial-scale solar projects and birds in the California desert: Assessing impacts & developing mitigation. Technical report prepared for Sonoran Joint Venture, Tucson, AZ. Figure 3.

¹⁵⁷ Kagan RA, TC Viner, PW Trail, EO Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory. 28 pp. Retrieved from: <u>https://www.ourenergypolicy.org/wp-content/uploads/2014/04/avianmortality.pdf</u>.

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project components are likely to present a collision hazard to migratory birds (emphasis added)." 158

A. Substantial Evidence Supports a Fair Argument that the Project Will Have Potentially Significant, Unmitigated Cumulative Impacts to Biological Resources

Substantial evidence supports a fair argument that the Project would have significant, unmitigated cumulative impacts to biological resources. As Mr. Cashen explains in his comments, the Project may result in a significant and cumulatively significant impact to biological resources, through mortality associated with bird strikes on the PV and heliostats on the Project site.¹⁵⁹ Mr. Cashen writes that "[b]ecause the IS/MND does not incorporate mitigation, the Project's contribution to cumulatively significant impacts on bird populations remain considerable."¹⁶⁰

The City must prepare an EIR which adequately analyzes and mitigates potentially significant impacts to avian mortality from Project components.

VII. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN SIGNIFICANT NOISE IMPACTS REQUIRING AN EIR FOR THE PROJECT

Substantial evidence supports a fair argument that noise impacts from Project construction and operation will be significant on noise sensitive receptors in the vicinity of the Project.

The Project is 65 feet from the nearest sensitive receptors at the Sienna Heights Apartments.¹⁶¹ It is the policy of the City of Lancaster "to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power. At certain levels noises are detrimental to the health and welfare of the citizenry, and, in the public interests, such noise levels shall be systematically proscribed."¹⁶² Here, the Project contravenes the Municipal Code because it results in excessive noise from construction and operation which may detrimentally impact nearby sensitive receptors in the Sienna Heights Apartments. Additionally, the noise and vibration from Project construction may result in a significant impact to the radio broadcasting stations at KTPI, Fox Sports 610 AM, and Clear Channel

¹⁵⁸ *Ibid*. (emphasis added).

¹⁵⁹ Cashen Comments, p. 4.

 $^{^{160}}$ *Id*.

¹⁶¹ Toncheva Comments, p. 3.

¹⁶² Lancaster Municipal Code § 8.24.010.

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Radio, as well as the Antelope Valley Springs of Life Ministries and iLEAD Lancaster Charter School.¹⁶³

Substantial evidence supports a fair argument that noise emissions from pile driving during Project construction will result in a significant unmitigated impact. The Project requires pile driving to install the heliostats.¹⁶⁴ But the MND fails to analyze the noise impacts associated with pile driving which can produce Lmax noise levels of 95 dBA at 50 feet.¹⁶⁵ Ms. Toncheva confirmed that pile driving will be as close as 97 feet from the Sienna Heights Apartments, resulting in a significant, unanalyzed, and unmitigated noise impact to sensitive receptors in the Sienna Heights Apartments.¹⁶⁶ Further, pile driving may result in a potentially significant vibration impact to those recording audio at the KTPI radio station which is 227 feet from the closest heliostat.¹⁶⁷

Ms. Toncheva concludes that excavators, rubber-tired dozers and loaders within 89 feet of sensitive receptors and concrete saws within 158 feet of sensitive receptors exceed 80 dBA Lmax threshold criteria and would result in significant noise impacts to the Sienna Heights Apartments only 90 feet away.¹⁶⁸ Ms. Toncheva's analysis provides substantial evidence demonstrating that the noise impacts from construction may result in a significant and unmitigated impact on nearby sensitive receptors in the Sienna Apartments.¹⁶⁹ The MND does not adequately analyze or mitigate these construction related noise impacts.

Ms. Toncheva explains that the Project's heliostats may also cause significant, unmitigated noise impacts that the MND fails to disclose and mitigate. The heliostat field is within 97 feet of the Sienna Heights Apartments.¹⁷⁰ As such, the pressure washing of the heliostats and the PV panels may result in a potentially significant impact to sensitive receptors in the Sienna Heights Apartments.¹⁷¹ The heliostats "may include routine washing of mirrors requiring approximately 20,800 gallons of water per year."¹⁷² The MND states that "operations would include routine washing of mirrors".¹⁷³ The Initial Study does not say how often the

 169 *Id*.

¹⁶³ Google Maps, 2023.

¹⁶⁴ MND, Noise Technical Report, p. 1.

¹⁶⁵ Toncheva Comments, p. 3.

 $^{^{166}}$ Id.

 $^{^{167}}$ Id.

 $^{^{168}}$ Id.

¹⁷⁰ *Id.* at 2. ¹⁷¹ *Id.* at 6.

¹⁷² MND A ...

¹⁷² MND, Appendix A, pdf 9.¹⁷³ IS/MND, Appendix A, pdf 27.

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mirrors would be washed, but an informational video produced by Heliogen states it will be done "regularly".¹⁷⁴ The MND fails to analyze or mitigate this impact. Substantial evidence shows that this noise impact to Sienna Heights Apartments remains significant and unmitigated.

Moreover, the MND's conclusion that the Project would not exceed ambient air noise levels is not supported by substantial evidence. Ms. Toncheva demonstrates that individual pieces of construction equipment would produce levels 7 to 22 dBA above existing daytime noise levels, thus exceeding the ambient noise levels in excess of the local standards.

An EIR must be prepared which adequately analyzes and mitigates the Project's significant noise impacts before the Project can be approved.

VIII. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN SIGNIFICANT CUMULATIVE IMPACTS REQUIRING AN EIR FOR THE PROJECT

CEQA requires lead agency's to provide cumulative impacts analyses to evaluate the incremental impact of the project in conjunction with, or collectively with, other closely related past, present, and reasonably foreseeable probable future projects.¹⁷⁵ "Cumulative impacts" are defined as "two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts."¹⁷⁶ The purpose of this requirement is to avoid "piecemeal" approval of projects without consideration of the total environmental effects the project would have when taken together.¹⁷⁷ The adequacy of an MND's discussion of cumulative impacts is determined by standard of practicality and reasonableness.¹⁷⁸

The MND's cumulative impacts analysis is inadequate because it is too general. The MND fails to identify all nearby projects for a cumulative construction

¹⁷⁴ YouTube, Heliogen demonstrates AI-powered autonomous robot, ICARUS, (Dec 9, 2021), <u>https://www.youtube.com/watch?v= M80FW7WzNc</u>

¹⁷⁵ 14 CCR § 15355(b); City of Long Beach v. Los Angeles Unified School Dist. (2009) 176 Cal.App.4th 889, 905.

¹⁷⁶ 14 CCR § 15355.

¹⁷⁷ Cecily Talbert Barclay and Matthew S. Gray, California Land Use and Planning Law (Solano Press, 37th ed. 2020) p. 180.

¹⁷⁸ Environmental Protection & Information Center v. California Dept. of Forestry & Fire Protection
(2008) 44 Cal.4th 459, 525; 14 CCR § 15130(b).
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impact analysis, in violation of CEQA. "The analysis should not be so general that the potential combined impacts of the project and a key nearby project are not disclosed."¹⁷⁹ In *City of Long Beach v. City of Los Angeles*, the court held that the fact that "CEQA does not require quantified analysis does not mean that all meaningful information on a subject can be omitted from an EIR's cumulative impacts analysis."¹⁸⁰ The MND fails to include a 48-MW battery energy storage facility project being constructed for an existing solar facility, and only mentions one of the many solar facilities being constructed in Lancaster.¹⁸¹ The MND therefore fails as an informational document under CEQA.

A. Substantial Evidence Supports a Fair Argument that the Project Results in Cumulatively Significant Impacts to Biological Resources

Dr. Cashen concludes that mortality associated with the Project is potentially significant when considering the cumulative effects of the many renewable projects in the region, or when considering the mortality combined with other human-caused sources of bird mortality.¹⁸² Because the MND does not incorporate mitigation, the Project's contribution to cumulatively significant impacts on bird populations remain considerable.¹⁸³ The City must circulate an EIR which accurately analyzes the cumulatively significant impact of the Project on biological resources, and mitigates such impacts to the greatest extent feasible.

B. Substantial Evidence Supports a Fair Argument that the Project Results in Cumulatively Significant Impacts to Air Quality

Dr. Fox concludes that cumulative construction emissions are significant and unmitigated.¹⁸⁴ The MND's conclusion that the Project would "not result in a cumulatively considerable net increase of any criteria pollutants"¹⁸⁵ is not supported by substantial evidence. Dr. Fox calculates that PM10 emissions are cumulatively significant because the air basin is in nonattainment for PM10 and the Project exceeds the applicable AVAQMD threshold.¹⁸⁶ Further, Dr. Fox finds

¹⁷⁹ City of Long Beach v. City of Los Angeles (2018) 19 Cal.App.5th 465, 490.

 $^{^{180}}$ Id.

¹⁸¹ Fox Comments, p. 34.

¹⁸² Cashen Comments, p. 3.

 $^{^{183}}$ Id.

¹⁸⁴ Fox Comments, p. 33.

¹⁸⁵ MND p. 19.

¹⁸⁶ Fox Comments, p. 33.

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that cumulative operational emissions are significant and unmitigated.¹⁸⁷ These deficiencies must be remedied in an EIR before the Project can lawfully be approved.

IX.THE PLANNING COMMISSION CANNOT MAKE THE NECESSARY FINDINGS TO APPROVE THE CONDITIONAL USE PERMIT

The Lancaster Municipal Code provides that in order to receive a Conditional Use Permit approval, the applicant shall substantiate to the satisfaction of the zoning board and/or the commission the following facts:

A. That the requested use at the location proposed will not:

- **i.** Adversely affect the health, peace, comfort or welfare of persons residing or working in the surrounding area, or
- **ii.** Be materially detrimental to the use, enjoyment or valuation of property of other persons located in the vicinity of the site, or
- iii. Jeopardize, endanger or otherwise constitute a menace to the public health, safety or general welfare.¹⁸⁸

As shown herein, the Project will result in significant unmitigated health risk impacts from construction and operation. The MND fails to analyze and mitigate the Project's impacts to human health, in violation of CEQA. As such, the City cannot make the necessary finding that the Project will not adversely affect the health, peace, comfort, or welfare of persons residing or working in the surrounding area, as required by the Municipal Code.¹⁸⁹

X. CONCLUSION

CEQA requires that an EIR be prepared if there is substantial evidence demonstrating that any aspect of a project, either individually or cumulatively, may cause a significant effect on the environment.¹⁹⁰ As discussed herein, there is substantial evidence supporting a fair argument that the Project would result in significant adverse impacts that were not identified in the MND, and that are not adequately analyzed or mitigated. The MND also fails to contain the basic information and analysis required by CEQA, deficiencies which "cannot be

 $^{^{187}}$ Id.

¹⁸⁸ Lancaster Municipal Code § 17.32.040.

 $^{^{189}}$ Id.

¹⁹⁰ PRC § 21151; 14 CCR §15063(b)(1).

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dismissed as harmless or insignificant defects." ¹⁹¹ The City's findings regarding Project impacts either do not comply with the law or are not supported by substantial evidence. The City cannot approve the Project until it prepares an EIR that resolves these issues and complies with CEQA's requirements.

Thank you for your attention to these comments. Please include them in the record of proceedings for the Project.

Sincerely,

Kelilde Kelecon

Kelilah D. Federman

Attachments KDF:acp

¹⁹¹ Bakersfield Citizens for Local Control v. Bakersfield ("Bakersfield") (2004) 124 Cal. App. 4th 1184, 1220.
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