APPENDIX C

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MEMORANDUM

Date: June 21, 2023

To: Valley Wide Engineering & Construction Services

From: Graham Stephens; and, Andre Almeida, P.E. – Sespe Consulting, Inc.

Re: **CEQA Air Quality and Greenhouse Gas Analysis Memorandum for the Barker Photovoltaic Solar Project in Inyo County, California**

Sespe Consulting, Inc. ("Sespe") has prepared the following memorandum to evaluate the potential air quality and greenhouse gas impacts resulting from the construction and operation of two proposed photovoltaic (PV) solar facilities located in Inyo County, California. Valley Wide Engineering & Construction Services (the "Applicant") is proposing to develop the PV solar facilities on two separate parcels of land, specifically a 15-acre property referred to as the Trona 4 site, and a 5-acre property referred to as the Trona 7 site (collectively referred to herein as the "Project"). See Figure 1 in Attachment A which shows the Project Area boundaries, and the surrounding environmental setting.

The California Environmental Quality Act (CEQA) requires an environmental analysis, including those related to air quality and greenhouse gases (GHG), for projects requiring discretionary approval by a local lead agency with land use authority, which in this case is Inyo County (the "County"). Therefore, pursuant to CEQA, this memorandum describes and analyzes the proposed Project's estimated air and GHG emissions and associated impacts. Potential air toxics emissions and associated health risks are also evaluated. Table 1 below summarizes the applicable CEQA Appendix G – Environmental Checklist Form questions that are used as criteria against which to evaluate the significance of the Project impacts related air quality and GHG resources, as well as the corresponding significance thresholds determinations.

Table 1: Summary of CEQA Significance Determinations

CEQA Threshold	Impact Determination
AIR QUALITY-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant
AIR QUALITY-2: Would the Project 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?	Less Than Significant
AIR QUALITY-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant
AIR QUALITY-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant

CEQA Threshold	Impact Determination
GREENHOUSE GAS EMISSIONS-1: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant
GREENHOUSE GAS EMISSIONS-2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No Impact

PROJECT SUMMARY

The Project is located on contiguous County parcels (assessor's parcel numbers [APNs] 038-330-32, 038-330-33, 038-330-34 and 038-330-46), located north of the unincorporated town of Trona, California. The Project consists of two separate applications for renewable energy permits, one covering approximately 15 acres (referred to as the Trona 4 site) and the other covering approximately 5 acres (referred to as the Trona 7 site). Both the Trona 4 and Trona 7 solar arrays will connect to the existing Southern California Edison (SCE) 33-kilovolt (kV) transmission line that passes through the Project area with separate connections.

The Trona 7 PV solar facility would consist of approximately 2,300 single-axis tracker solar panels that will produce approximately 1.2 megawatts (MW) of electricity. The Trona 4 site would also generate approximately 3.0 MW of electricity utilizing approximately 6,000 single-axis tracker solar panels. Both sites are currently graded and highly disturbed with little to no natural vegetation, habitat, water features or structures. A private dirt track and a junk yard also existed within the western portion of the Trona 4 site, but both features have been recently removed.

The Project Area is located approximately 3.0 miles north of the unincorporated Trona community, and approximately 1.0 mile west of the Trona Airport. Surrounding areas are generally undeveloped, flat or gently sloped, graded and without significant vegetation. The Project Area is bordered by an existing solar facility to the south, scattered residential homes to the west, and miscellaneous abandoned vehicles, local trash and debris. Access to the site is provided by dirt roads connecting to Trona Wildrose Road to the east of the site. See Figure 1 (Attachment A) which shows the Project Area and adjacent land uses.

Project Construction

Project construction will involve minor land disturbance, consisting of minor leveling, digging of shallow trenches for placing underground conduits, and installation of a 20-foot by 20-foot concrete pad for a transformer. Site preparation will require approximately two days using a grader and a backhoe. Water trucks will also be utilized as needed to control dust throughout the construction phase. In addition to regular watering using the mobile water trucks, further dust controls will include the placement of crushed limestone on the ground, and the application of a non-toxic clay polymer compound, such as EarthGlue, to provide further dust suppression as needed. Stabilized construction entrance and exits will also be installed and maintained at driveways to reduce sediment track-out onto the adjacent public roadway.

Following the trenching and leveling, metal pole supports will be installed on which the solar panels will be mounted. Poles will be driven directly into the ground using a compact, lightweight pile driver. A forklift may also

be used onsite during this construction phase. Installation of the mounting poles, solar panels and related infrastructure (transformer, connection to adjacent SCE lines, etc.) will take approximately two months. Regular watering, limestone base, and chemical binders (e.g., EarthGlue) will continue to be used onsite to control dust during this phase of construction. Once operational, onsite control of fugitive dust is critical to solar operations, as solar panels coated by dust do not function at full capacity. As such, dust controls such the limestone base and/or EarthGlue binder will remain in place and be maintained post-construction.

Once installed, the solar panels will reach a maximum height of 12-feet above the ground surface (or less, as the panels change slightly in height as they rotate slowly throughout the day to track the sun). The solar panels will also feature anti-reflective coatings to minimize daytime glare and reflectivity. Both the Trona 4 and 7 sites will be fenced and gated to prevent unauthorized access.

Per information provided by the Applicant, Table 2 below summarizes the types of equipment that would operate onsite during the Project's construction phase, as well as the activity levels. This information is utilized to quantify the Project's air emissions resulting from onsite construction activities.

Table 2: Project Construction Equipment List and Activity Level

Equipment	Engine Tier	Total Duration of Operations		Onsite Location
		Total Weeks	Total Hours	
Grader	Tier 4	2	40	Trona 4 (former track area)
Bulldozer	Tier 4	2	40	Trona 4 (former track area)
Water truck (4,000 gal.)	Tier 4	8	150	Throughout Site
Water truck (4,000 gal.)	Tier 4	8	150	Throughout Site
Forklift (Reach)	Tier 4	8	150	Throughout Site
PD5 Pile Driver	Tier 4	8	150	Throughout Site
Light-Duty Pickups	Tier 4	8	150	Throughout Site
Light-Duty Pickups	Tier 4	8	150	Throughout Site

Project Operations

After construction is complete, the PV solar facilities will be placed into commercial operation. Unlike construction, operation of the PV Solar Facilities will not require permanent onsite personnel, as control of the solar array would be automated and/or controlled remotely. At times, operations staff would come to the site to conduct routine maintenance and inspections, but these activities would be infrequent, and would only require one light-duty work vehicle travelling to and from the site (assume approximately 15 vehicle miles travelled round trip per site inspection). At most, it's assumed that up to one site inspection will occur per week during normal facility operations. Table 3 below summarizes the vehicle activity levels used to quantify operational emissions.

Table 3: Project Operations Vehicle Activity Level

Vehicle Type	Engine Tier	Roundtrips per Year	VMT's per Roundtrip	Notes / Assumptions
Light-Duty Pickup Truck	Tier 4	52	15	Assume vehicle would originate from nearby Ridgecrest (approximately 15 miles roundtrip). To conservatively estimate vehicle emissions, the analysis assumed up to one inspection/maintenance trip could occur per week (in reality, periodic inspections would most likely be far less).

Note that in addition to fuel combustion in off-road construction equipment and on-road vehicles, electricity consumption is also considered an indirect source of GHG emissions under CEQA. However, because the Project involves PV solar facilities, it would therefore be a net producer of renewable electricity, and the Project would therefore not produce indirect GHG's as a result of electricity consumption. See the discussion below for additional detail.

APPLICABLE CEQA METHODOLOGIES AND SIGNIFICANCE THRESHOLDS

The Project Area is located in the Great Basin Valleys Air Basin (GBVAB), and is within the jurisdictional boundaries of the Great Basin Unified Air Pollution Control District (GBUAPCD). While the GBUAPCD has regulatory authority over stationary air emissions sources and administers permits limiting emissions of criteria air pollutants and toxic air contaminants (TACs) within the GBVAB, they have yet to establish numerical significance thresholds or publish guidance for evaluating air quality and GHG impacts under CEQA. Similarly, Inyo County also has no established thresholds or CEQA guidance. Therefore, in lieu of appropriate local thresholds, numerical standards published by the Mojave Desert Air Quality Management District (MDAQMD) and the South Coast Air Quality Management District (SCAQMD) are utilized within this memorandum to determine the significance of Project impacts. Use of the MDAQMD and SCAQMD thresholds is also consistent with other CEQA documents certified by both the County and GBUAPCD, including the Environmental Impact Report (EIR) certified by the County in 2015 for their Renewable Energy General Plan Amendment (REGPA) (Inyo County, 2015).

MDAQMD's *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines* (MDAQMD, 2020) contains various significance thresholds that can be applied to the Project. Specifically, MDAQMD guidance states that a project would have a potentially significant air quality impact under CEQA if it:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 4;
2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s)[1];
4. Exposes 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.

[1] A project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold (MDAQMD, 2020).

Table 4: MDAQMD CEQA Numeric Emissions Thresholds

Criteria Pollutant	Annual Threshold (short tons)	Daily Threshold (pounds)
Greenhouse Gases (CO_2e)	100,000	548,000
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_x)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO_x)	25	137
Particulate Matter (PM_{10})	15	82
Particulate Matter ($PM_{2.5}$)	12	65
Hydrogen Sulfide (H_2S)	10	54
Lead (Pb)	0.6	3

In addition to the MDAQMD thresholds summarized above, additional guidance and thresholds published by the SCAQMD are also utilized. Specifically, SCAQMD's health risk screening tool is utilized to address CEQA Guidelines Appendix G, Air Quality Threshold Criteria (c) below.

With respect to GHG emissions, most requirements for sources and projects to reduce GHG emissions in California originate from the Assembly Bill (AB) 32 Scoping Plan (the "Scoping Plan") and associated programs administrated by the California Air Resources Control Board (CARB). The Scoping Plan is the State's blueprint for how GHG reductions will be achieved. Local jurisdictions may have requirements as well, but the overall effort is centralized with CARB. Therefore, potential GHG impacts under CEQA can be determined based on whether a specific project may conflict with the current Scoping Plan.

In addition to the state-wide Scoping Plan, in 2008 the SCAQMD adopted the Interim GHG Significance Threshold which takes a tiered approach whereby individual projects can be "screened-out" and found to have less than significant CEQA GHG impacts by one of the following five methods: exemption from CEQA, GHG emissions already analyzed in GHG budgets from in approved regional plans, having emissions less than the 10,000 metric tons of CO_2 equivalent emissions per year (MT CO_2e/year) screening level for industrial projects, meeting best performance standards, or purchase GHG emissions offsets by funding projects or buying them outright. Projects with incremental increases less than these thresholds can be screened out of further analysis and are not cumulatively considerable.

In the decade since the SCAQMD adopted this Interim GHG Significance Threshold, several new laws and executive orders were adopted that require additional reductions in years after 2020. For instance, Senate Bill 32 (Lara, 2016) requires that GHG emissions be 40% less than 1990 levels by 2030. Senate Bill 100 (de Leon, 2018), which was signed by the Governor, requires 100% zero-carbon electricity by 2045. On the day SB 100 was signed into law, the Governor also signed Executive Order B-55-18 which commits California to total, economy-wide carbon neutrality by 2045.

For these reasons, Project's GHG emissions levels and the use of the MDAQMD and SCAQMD screening threshold presented below are for disclosure purposes as well as CEQA compliance, because this impact analysis for the Project follows the approach certified by SCAQMD for other projects. The approach used by SCAQMD to assess GHG impacts from those project recognized that consumers of electricity and transportation fuels are, in effect, regulated by requiring providers and importers of electricity and fuel to participate in the GHG Cap-and-Trade Program and other state/sector-wide programs (e.g., low carbon fuel standard, renewable portfolio standard, etc.). Each such sector-wide program exists within the framework of AB 32 and its descendant laws the purpose of which is to achieve GHG emissions reductions consistent with the AB 32 Scoping Plan.

EMISSIONS QUANTIFICATION METHODOLOGIES

This assessment incorporates the following methodologies in the quantification of criteria pollutant, toxic air contaminant (TAC) and GHG emissions during the Project's construction and operation phases. Additionally, health risk screening was performed as outlined in this section. Detailed emissions calculations can be found in Attachment B, and documentation related to the health risk screening can be found in Attachment C.

Onsite Project construction phase emissions were determined using CARB's California Emissions Estimator Model (CalEEMod®) and the equipment and activity levels summarized in Table 2 above. Attachment D contains the CalEEMod output results and documentation for the Project. Off-site construction phase vehicle exhaust emissions were calculated separately, assuming up to ten contractors would drive 15 miles round trip per day, for up to 25 total days of construction. Similarly, operation phase vehicle exhaust emissions were calculated assuming up to one employee trip per day, travelling a total of 15 miles to and from the site, as well as 1 mile within the site boundaries. Employee truck emissions were estimated using CARB's Emissions Factors (EMFAC) 2021 model, assuming each employee would utilize a "light-duty truck (LDT2)" with a diesel engine vehicle. Lastly, road dust emissions from onsite vehicle traffic were calculated using the unpaved road emissions factor outlined in AP-42 Section 13.2.2 published by the Environmental Protection Agency (EPA). TACs from road dust emissions were quantified using San Diego Air Pollution Control District (SDAPCD) speciation profile R01 – *Haul Roads, General* (SDAPCD, 2021).

Health risk screening was performed using the SCAQMD Risk Tool V1.105 (the "Risk Tool"). A Tier 2 analysis was performed per SCAQMD Risk Assessment Procedures version 8.1. The analysis represents a highly conservative risk assessment used to determine if more complex assessment (i.e., modeling) is necessary. Per SCAQMD Risk Assessment Procedures version 8.1:

> *Tier 2 is a screening risk assessment, which includes procedures for determining the level of risk from a source for cancer risk, cancer burden, HIA, HIC8, and HIC. If the estimated risk from Tier 2 screening is below Rule 1401 limits, then a more detailed evaluation is not necessary.*

In order to perform health risk screening for each risk type (e.g., cancer, chronic, and acute impacts) over the course of the Project, the screening analysis for the Project was divided into four phases as outlined in Table 5 below. Also see Attachment C for additional detail.

Table 5: Screening Health Risk Assessment Phases

Health Risk Screening Phase Title	Project Phase	Risk Type Assessed	Model Duration (Years)
Screen 1	Construction	Acute	2
Screen 2a	Construction	Cancer/Chronic	2
Screen 2b	Operation	Cancer/Chronic	30
Screen 3	Operation	Acute	2

Notes: Total Project cancer risk is determined by combining risk from Screen 2a and Screen 2b. Attachment B contains TAC emissions quantified by Project phase. Attachment C contains SCAQMD Risk Tool output documentation.

Model duration used in the health screening was conservatively chosen based on the available model duration options. Although onsite construction activities would not last longer than a single year (i.e., estimate to take approximately 2 months total), in the Risk Tool two years is the shortest duration available, and 30 years is the longest. Project health risk emissions were conservatively modeled using a point source in the Tier 2 analysis. Meteorological data from the "Desert Hot Springs Airport" was used in the risk tool, as the climate in Desert Hot

Springs area is similar to that of Inyo County. Residential receptor distance was set to 130 meters (i.e., 425-feet) and commercial distance was set to 1,000 meters (i.e., 3,280-feet).

CEQA IMPACT ANALYSIS

The following section summarizes the Project's potential impacts with respects to air quality and GHGs, which address the specific impact statements outlined in the current CEQA Guidelines Appendix G Environmental Checklist Form (California Code of Regulations, Title 14). As discussed above, this analysis primarily uses the MDAQMD approved methods and thresholds to quantify the impacts associated with the Project. Methods or guidance provided by the SCAQMD were also used in certain cases to supplement MDAQMD guidance when applicable.

Air Quality

Air Quality-1: *Would the Project conflict with or obstruct implementation of the applicable air quality plan?* (CEQA Guidelines Appendix G, Air Quality Threshold Criteria (a))

The Project would be required to comply with regional air quality rules promulgated by the GBUAPCD and participate in reducing air pollutant emissions. As the local air district with jurisdiction over the Project, the GBUAPCD is the applicable agency tasked with implementing programs and regulations required by the Clean Air Act (CAA) and the California Clean Air Act (CCAA). In that capacity, the GBUAPCD has prepared plans to attain Federal and State ambient air quality standards. Pursuant to the CAA, the GBUAPCD is required to reduce emissions of criteria pollutants for which the GBVAB is in nonattainment. While portions of Inyo County are in nonattainment for particulate matter (i.e., PM_{10}), the Project Area is located within the Coso Junction PM_{10} State Implementation Plan (SIP) (GBUAPCD, 2021), which was redesignated as in attainment by the EPA in 2010 per the National Ambient Air Quality Standards (NAAQS). While the Project is not located in a nonattainment area for PM_{10}, the GBUAPCD still maintains established thresholds of significance for criteria pollutant emissions for any new stationary source or modification of an existing stationary source as part of their "New Source Review Requirements for Determining Impact on Air Quality" (Rule 216).

As discussed above, the Project proposes to develop PV solar facilities on an approximately 20-acre Project Area, located north of the town of Trona. Project contractors and operators would be required to comply with regional air quality rules promulgated by the GBUAPCD, and participate in reducing air pollutant emissions, including those required under their new source review requirements. Further, development of renewable solar projects in Inyo County was contemplated as part of the County's REGPA, and the Project would comply with applicable goals and policies outlined in the REGPA that are meant to reduce air emissions during construction and operation.

The primary air emissions associated with the Project would be fugitive dust emissions during facility construction, and to a lesser extent fugitive dust due to vehicles travelling on unpaved roadways during facility operations. Fugitive dust is addressed under GBUAPCD Rules 401 and 402, and the Applicant would be required to comply with applicable provisions found therein. While some grading and clearing would be required to prepare the site for installation of the solar panels, because the site is already relatively flat, and because much of the site has already been prepared, only minimal grading would be required. In accordance with GBUAPCD rules, mobile water trucks will also be used onsite throughout the entirety of the construction phase to control fugitive dust. Limestone base materials and/or soil binders such as EarthGlue will also be used onsite to control dust emissions, and will remain on certain portions of the site to reduce dust once the facility is put into normal operation. Note,

implementation of these dust control measures is consistent with applicable GBUAPCD rules, as well as the standard mitigations measures described within the EIR prepared by Inyo County in support of the REGPA.

Through compliance with GBUAPCD's new source review for stationary sources, and through implementation of onsite fugitive dust control measures consistent with GBUAPCD's Rule 401 and 402 requirements, as well as the programmatic mitigations described within the EIR prepared by the County for their REGPA, the Project would be consistent with applicable air quality plans adopted by the GBUAPCD. Therefore, the Project would not obstruct implementation of applicable air quality plans, and impacts would therefore be less than significant with no mitigation required.

Air Quality-2: *Would the Project 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?* (CEQA Guidelines Appendix G, Air Quality Threshold Criteria (b))

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are either significant or "cumulatively considerable", meaning they add considerably to a significant environmental impact. An adequate cumulative impact analysis considers a project over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed.

By its very nature, air pollution is largely a cumulative impact, and is a result of past and present development. Similarly, the application of thresholds of significance for criteria pollutants, such as those promulgated by the MDAQMD, is also relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

A CEQA lead agency, in this case Inyo County, may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (CCR §15064(h)(3)).

Thus, if project emissions (i.e., change from baseline) exceed the MDAQMD thresholds for carbon monoxide (CO), Oxides of Nitrogen (NOx), Volatile Organic Compounds (VOC), Oxides of Sulfur (SOx), and particulate matter (PM_{10} or $PM_{2.5}$), hydrogen sulfide (H_2S), or lead (Pb), summarized previously in Table 4 above, then a project would potentially result in a cumulatively considerable net increase of a criteria pollutant. The applicable MDAQMD significance criteria as well as the Project's worst-case annual and daily emissions are presented in Table 6 and Table 7 below. Note that the Project year and day with the maximum amount of emissions were compared to the applicable thresholds to determine the potential significance of Project criteria pollutant emissions. See the emissions summaries in Attachment B, as well as the CalEEMod output files in Attachment D, for additional detail.

Table 6: Project Criteria Pollutant Increase (Annual Emissions)

Pollutant	Maximum Project Emissions (tons/year)	Significance Threshold (tons/year)	Exceeds Criteria?
Carbon Monoxide (CO)	0.4	100	No
Oxides of Nitrogen (NO_x)	0.2	25	No
Volatile Organic Compounds (VOC)	0.009	25	No
Oxides of Sulfur (SO_x)	0.001	25	No
Particulate Matter (PM_{10})	0.13	15	No
Particulate Matter ($PM_{2.5}$)	0.028	12	No
Hydrogen Sulfide (H_2S)	0	10	No
Lead (Pb)	3.0E-06	0.6	No

Note, none of the Project's construction or operational emissions sources would emit Hydrogen Sulfide (H_2S).

Table 7: Project Criteria Pollutant Increase (Daily Emissions)

Pollutant	Maximum Project Emissions (pounds/day)	Significance Threshold (pounds/day)	Exceeds Criteria?
Carbon Monoxide (CO)	32	548	No
Oxides of Nitrogen (NO_x)	16	137	No
Volatile Organic Compounds (VOC)	0.8	137	No
Oxides of Sulfur (SO_x)	0.1	137	No
Particulate Matter (PM_{10})	0.001	82	No
Particulate Matter ($PM_{2.5}$)	0.5	65	No
Hydrogen Sulfide (H_2S)	0	54	No
Lead (Pb)	0.0001	3	No

Note, none of the Project's construction or operational emissions sources would emit Hydrogen Sulfide (H_2S).

Table 6 and Table 7 above show that the Project's estimated daily and annual emissions are well below established MDAQMD thresholds. Therefore, the Project would not 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, and impacts would be less than significant with no mitigation required.

Air Quality-3: *Would the Project expose sensitive receptors to substantial pollutant concentrations?* (CEQA Guidelines Appendix G, Air Quality Threshold Criteria (c))

Determination of whether project emissions would expose receptors to substantial pollutant concentrations is a function of assessing potential health risks. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. When evaluating whether a project has the potential to result in localized impacts, the nature of the air pollutant emissions, the proximity between the emitting facility and sensitive receptors, the direction of prevailing winds, and local topography must be considered.

A Health Risk Screening was performed to evaluate the effects of TACs, including diesel particulate matter (DPM) from vehicle engines, and various substances found in fugitive dust emissions (i.e., metals and respirable crystalline silica). Health risks associated with the Project are presented in Table 8, which shows impacts are well

below applicable SCAQMD screening thresholds. Therefore, there would be no new or significant health risk impacts from the Project, with no mitigation required. See the health risk screening results in Attachment C for additional detail.

Table 8: Project Health Risk Screening Results

Health Risk Screening Phase	Risk Type Assessed	Risk Units	Maximum Risk Value	Risk Threshold	Threshold Exceeded?
Screen 1	Acute	Hazard Index	0.0003	1.0	No
Screen 2a	Chronic	Hazard Index	0.0009	1.0	No
	Cancer	MICR Per Million Exposed	1.9	10	No
Screen 2b	Chronic	Hazard Index	0.0006	1.0	No
	Cancer	MICR Per Million Exposed	0.009	10	No
Screen 2 (Total)	Cancer	MICR Per Million Exposed	1.9	10	No
Screen 3	Acute	Hazard Index	0.0007	1.0	No

Notes: See Attachment C for the risk tool output files. Values in the table above may differ slightly from the attached values due to rounding.
MICR = "Maximum Individual Cancer Risk".

Air Quality-4: *Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?* (CEQA Guidelines Appendix G, Air Quality Threshold Criteria (d))

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine the presence of a significant odor impact. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. Substantial odor-generating operations generally include wastewater treatment facilities, composting facilities, agricultural operations, and heavy industrial operations. Note, the Project would not involve any activities with the potential to generate odor impacts. While diesel exhaust from mobile equipment/vehicles, such as those that would be used onsite during construction, has a slight odor, odor intensity would decrease rapidly with distance and is not expected to be frequently (or at all) detectable at locations outside of the Project Area boundaries. No other potential source of odors are associated with the Project construction activities or ongoing operations. Further, the Project would comply with GBUAPCD's nuisance rules, including those related to odor. As such, the Project will not result in other emissions (such as those leading to odors) that could adversely affect a substantial number of people, and therefore the Project impacts were determined to be less than significant with no mitigation required.

Greenhouse Gases

Greenhouse Gas Emissions-1: *Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?* (CEQA Guidelines Appendix G, Greenhouse Gas Threshold Criteria (a))

In general, it is widely recognized that no single project could generate enough GHG emissions to noticeably change the global climate temperature; however, the combination of GHG emissions from past, present, and future projects could contribute substantially to global climate change. GHG emissions, and their associated contribution to climate change, are inherently a cumulative impact issue.

This concept is also reflected in California's *2022 Scoping Plan for Achieving Carbon Neutrality* (CARB, 2022). Specifically, regulations are implemented in order to reduce the cumulative impact of GHG emissions on a statewide level, and generally not at the project-level. Sources of GHG emission associated with the Project include fuel combustion within construction equipment and vehicles travelling to and from the site, and indirect GHG's emitted through electricity consumption. Fuel is regulated at a level in the supply chain above an individual project, such that any project has no choice but to purchase and use fuel energy in California which is already regulated. The Project therefore is simply a location in which GHG emissions are emitted by consuming fuel that was already regulated through Cap-and-Trade, applicable Low-Carbon Fuel Standards (GHG) and other applicable regulations higher up the supply chain.

To comply with CEQA, GHG emissions impacts from implementing the Project were calculated at the Project-specific level for construction and operations, and compared to applicable significance thresholds published by the MDAQMD and the SCAQMD. Impact analysis for the Project follows the approach certified by SCAQMD for other projects, which takes into account the cumulative nature of the energy industry and recognizes that consumers of electricity and diesel fuel are, in effect, regulated by higher level emissions restrictions on the producers of these energy sources. As shown in Table 9 below, the Project's worst case annual GHG emissions are well below the applicable MDAQMD and the SCAQMD screening thresholds.

Table 9: Project GHG Emissions

Source / Parameter	CO_2e (MT/year)
Total Project Emissions	63
MDAQMD Screening Threshold	100,000
Exceed?	No
SCAQMD Screening Threshold	10,000
Exceed?	No

For the reasons outlined above, the proposed Project would have a less than significant GHG impact, with no mitigation measures required.

Greenhouse Gas Emissions-2: *Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?* (CEQA Guidelines Appendix G, Greenhouse Gas Threshold Criteria (b))

Project emissions of GHGs are presented in Table 9 above. The Project would emit GHGs from fuel burned in mobile equipment and vehicle engines; however, the quantity of fuel consumed would be minimal. Specifically, onsite construction activities would be temporary in nature (take approximately two months to complete). Similarly, because the facility would be monitored remotely once placed into operation, operational fuel consumption would also be minimal (estimate a maximum of up to one inspection per week). Transportation fuel suppliers and importers, such as the ones the Applicant would use during both construction and operation, are required to report emissions under the Cap-and-Trade which is designed to reduce GHG emissions as needed to achieve emissions reductions described in related planning documents, which primarily consists of the AB 32 Scoping Plan(s), described previously. Thus, the emissions reductions will occur at a level in the supply chain above

the Project which will have no choice but to use fuels with GHG intensities that are consistent with the CARB's Scoping Plan.

Furthermore, because the Project involves renewable PV solar facilities, development of the Project would help California meet their state-wide climate change goals by producing clean renewable electricity within Inyo County. Energy generated by the Project likely would replace energy produced by the burning of fossil fuels elsewhere in the region, thereby resulting in a net reduction of GHG emissions. For example, based upon data described within the EIR published for the County's REGPA, a renewable solar project with a capacity of 900 MW could offset up to 1 million MT of CO_2e per year. As noted above, collectively the Project would have a total capacity of approximately 4.2 MW, which would result in significant GHG offsets per the REGPA methodology.

In summary, the GHGs associated with the Project would be consistent with the AB 32 Scoping Plan and applicable County and GBUAPCD policies. Conversely, by generating sustainable solar electricity, the Project is expected to offset GHG emissions that would otherwise result due to the burning of fossil fuels at other power generating facilities, which would therefore result in a beneficial impact. Therefore, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and there would be no impact.

CONCLUSIONS

In summary, the Project would generate a small amount of air quality and GHG emissions due to fuel combustion within offroad construction equipment and on-road vehicles. These impacts will be less than significant per the applicable CEQA guidance and significance thresholds. Specifically, onsite equipment and offsite vehicles travelling to and from the site during the Project's construction phase would generate minimal and short-term air emissions over an approximately two month period, and onsite construction emissions were found to be below applicable numeric thresholds.

Once the facility is constructed and put into operation, long-term air emissions would also be minimal and well below applicable CEQA thresholds. Because the solar facilities would be monitored remotely and would generally operate without the need for a permanent onsite staff, at most is estimated that a single-light duty truck would travel to and from the site no more than once per week to conduct routine inspections and maintenance. As such, air emissions associated with ongoing operations were also found to be less than significant.

In addition to combustion emissions, fugitive dust due to ground disturbing activities and vehicles/equipment travelling on unpaved roadways were also quantified. Water trucks will be utilized as needed throughout the Project construction phase to control dust, and crushed limestone and/or non-toxic clay polymer compounds will be applied to exposed surfaces during construction and operations to further ensure fugitive dust is sufficiently controlled. Stabilized entrance and exits will be installed and maintained at driveways to reduce sediment track-out onto the adjacent public roadway. As stated above, the control of fugitive dust is critical to solar operations, as panels coated by dust do not function at full capacity. Therefore, dust controls will remain in place throughout the life of the Project, which will in turn ensure impacts remain less than significant.

Lastly, because the proposed facility is a renewable energy project, the Project would have a beneficial impact related to GHG emissions and climate change. The County, through adoption of their REGPA, is promoting

renewable solar development to reduce GHG emissions and help the region and state meet their aggressive climate change goals. Once operational, the Project would provide a renewable source of electricity that would offset existing electrical generating facilities that rely upon the combustion of fossil fuels. As such, the Project would be consistent with the County's REGPA and would have a beneficial effect related to GHG.

REFERENCES

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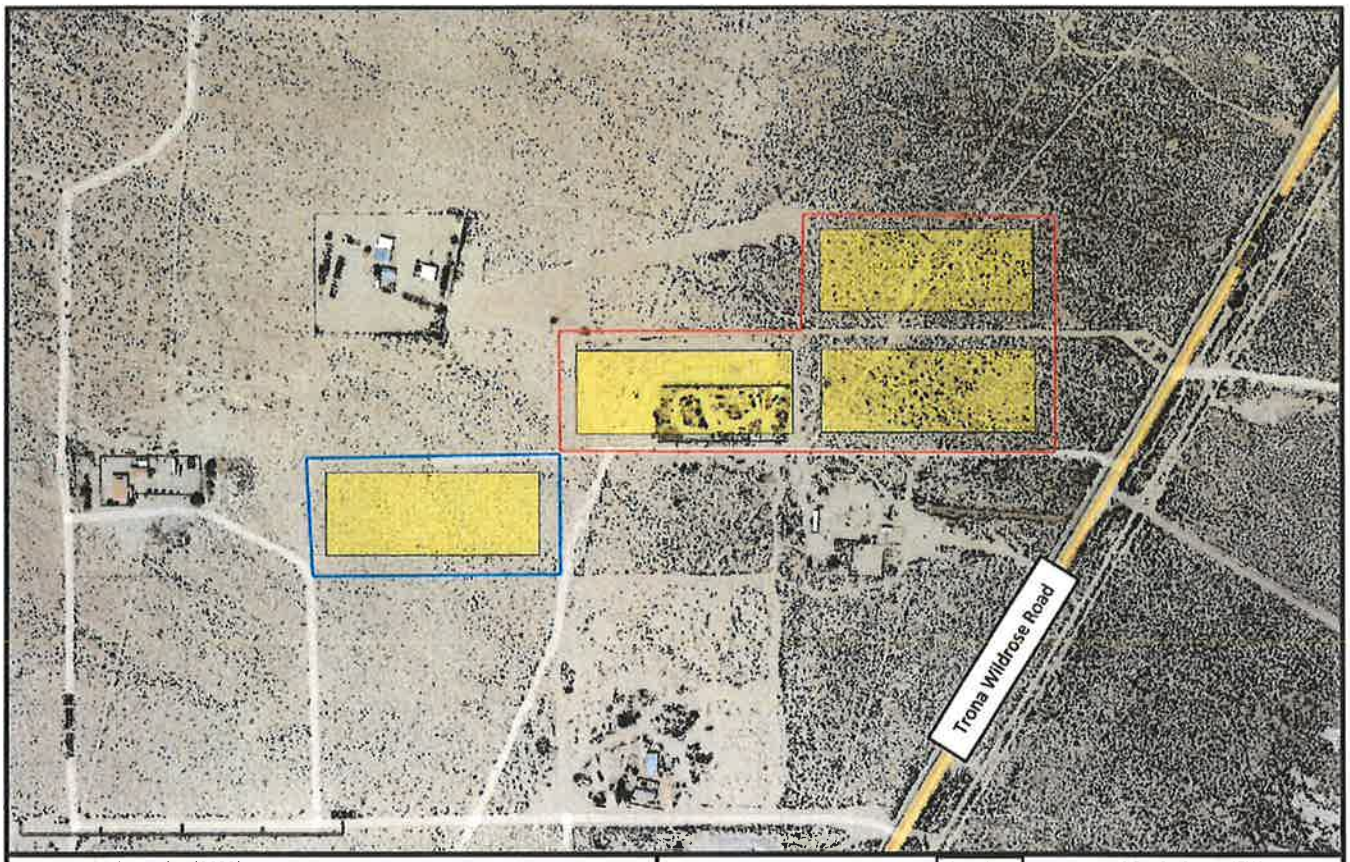
ATTACHMENTS

A. Figures
B. Project Emissions Summary (Construction and Operations)
C. SCAQMD's Health Risk Screening Tool Output File/Results
D. CalEEMod Output File/Results

ATTACHMENT A

Figures



Source: Google Earth™ (2023)

Project Site Boundary - Trona 4 (approx.)
Project Site Boundary - Trona 7 (approx.)
Proposed Solar Array Footprint/Construction Area (approx.)

N

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FIGURE	PROJECT OVERVIEW		
1	Inyo County Solar Project Trona Wildrose Road Inyo County, California		
PROJECT #:	230510.0036	DATE:	6/5/23
SCALE:	See Above	DRAWN BY:	GPS

ATTACHMENT B

Project Emissions Summary (Construction and Operations)

Summary of Project Emissions						
Criteria Pollutant	**Annual Threshold (short tons) [A]**	**Maximum Year Project Emissions (short tons)**	**Annual Threshold Exceeded?**	**Daily Threshold (pounds) [A]**	**Max Day Project Emissions (pounds)**	**Daily Threshold Exceeded?**
Greenhouse Gases (CO_2e)	100,000	63	**No**	548,000	6,388	**No**
Carbon Monoxide (CO)	100	0.4	**No**	548	32	**No**
Oxides of Nitrogen (NO_x)	25	0.2	**No**	137	16	**No**
Volatile Organic Compounds (VOC)	25	0.009	**No**	137	0.8	**No**
Oxides of Sulfur (SO_x)	25	0.001	**No**	137	0.1	**No**
Particulate Matter (PM_{10})	15	0.130	**No**	82	0.001	**No**
Particulate Matter ($PM_{2.5}$)	12	0.028	**No**	65	0.5	**No**
Hydrogen Sulfide (H_2S) [B]	10	0	**No**	54	0	**No**
Lead (Pb)	0.6	3.0E-06	**No**	3	0.0001	**No**

Footnotes:

A - Annual and daily thresholds taken from MDAQMD's *California Environmental Quality Act (CEQA) and Federal Conformity Guidelines* (February 2020).

B - Note, none of the Project's construction or operational emissions sources would emit Hydrogen Sulfide (H_2S).

Onsite Construction Phase Emissions (from CalEEMod)

2. Emissions Summary

2.1 Construction Emissions Compared Against Thresholds

	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	TOG	NOx	CO	SO_2	CO_2e
Daily, Winter (Max) Unmit. (lbs)	0.1150	0.1493	0.2643	0.1150	0.0350	0.1500	0.8172	16.0021	32.3832	0.0562	6282.57
Average Daily (Mex) Unmit. (lbs)	0.0068	0.0088	0.0156	0.0068	0.0021	0.0089	0.0479	0.9551	1.9178	0.0033	371.23
Annual (Max) Unmit. (tons)	0.0012	0.0016	0.0028	0.0012	0.0004	0.0016	0.0087	0.1743	0.3500	0.0006	61.46

Offsite Construction Phase Emissions (Calculated)

Construction Emissions	PM10 (total)	PM10 (Dust)	Exhaust Emissions								
			PM10	PM2.5	NOx	CO2	N20	ROG	TOG	CO	SOx
Offsite Emissions (lbs/day)	0.006865278	N/A	6.87E-03	0.003188657	0.01588079	105.8793324	0.000283472	0.016681332	0.006102986	0.006947844	0.0608884
Offsite Emissions (lbs/yr)	0.171631949	N/A	0.17163	0.07972	0.39702	2646.98331	0.00709	0.41703	0.15257	0.17370	1.52221

Off-site operation - LDT2 Miles Per Day: 150 (assumes 10 employees driving 15 miles per day)

Off-site operation - LDT2 Miles Per Year: 3750 (assumes 10 employees driving 15 miles per day for 25 days of construction)

Onsite and Offsite Operation Phase Emissions (Calculated)

Operation Emissions	PM10 (total)	PM10 (Dust)	Exhaust Emissions								
			PM10	PM2.5	NOx	CO2	N20	ROG	TOG	CO	SOx
Onsite Emissions (lbs/hr)	2.6	2.6	4.58E-05	2.13E-05	1.06E-04	7.06E-01	1.89E-06	1.11E-04	4.07E-05	4.63E-05	4.06E-04
Onsite Emissions (lbs/day)	2.6	2.6	4.58E-05	2.12577E-05	0.00010587	0.705862216	1.88981E-06	0.000111209	4.06866E-05	4.6319E-05	0.0004059
Onsite Emissions (lbs/yr)	260	260	0.011899815	0.005527005	0.0275267	183.5241762	0.000491352	0.028914309	0.010578509	0.01204293	0.1055399
Offsite Emissions (lbs/day)	0.00069	N/A	6.87E-04	0.000318866	0.00158808	10.58793324	2.83472E-05	0.001668133	0.000610299	0.000694784	0.0060888
Offsite Emissions (lbs/yr)	0.18	N/A	0.178497227	0.082905075	0.41290054	2752.862643	0.007370273	0.43371463	0.15867784	0.180643944	1.5830982

Onsight operation - LDT2 Miles Per Day Traveled: 1

Off-site operation - LDT2 Miles Per Day Traveled: 15

Health Risk Screening Inputs

	Construction Acute (Screen 1)	Cancer/Chronic (Screen 2a)	Cancer/Chronic (Screen 2b)	Operation Acute (Screen 3)
Onsite Pollutant Emissions	Max Day Emissions Rate - Construction (lbs/hr)	Max Year Average Emissions Rate - Construction (lbs/hr)	Max Year Average Emissions Rate - Operation (lbs/hr)	Max Day Emissions Rate - Construction (lbs/hr)
Arsenic and Compounds (inorganic)	3.73317E-07	7.34124E-09	2.73973E-07	5.16022E-05
Beryllium and Compounds	1.86658E-08	3.67062E-10	1.36986E-08	2.58011E-06
Cadmium and Compounds	1.86658E-08	3.67062E-10	1.36986E-08	2.58011E-06
Copper and Compounds	1.86658E-06	3.67062E-08	1.36986E-06	0.000258011
Lead and Compounds (inorganic)	9.33292E-07	1.83531E-08	6.84932E-07	0.000129005
Manganese and Compounds	9.33292E-06	1.83531E-07	6.84932E-06	0.001290055
Nickel and Compounds	3.73317E-07	7.34124E-09	2.73973E-07	5.16022E-05
Selenium and Compounds	9.33292E-08	1.83531E-09	6.84932E-08	1.29005E-05
Diesel Particulate (PM)	0.014372816	0.000283404	1.35843E-06	4.58E-05

Screen 1 - Acute risk assessment max hour assumed to be the average hour in the max day, conservatively assuming maximum day only involves 8 hours of operation.

Screen 2a - Cancer/Chronic risk assessment hourly emissions calculated based on average hour in the maximum year (construction emissions).

Screen 2b - Cancer risk assessment hourly emissions calculated based on average annual operation emissions.

Screen 3 - Acute risk assessment max hour determined based on the maximum hour emissions for operation as calculated above.

On-Road Vehicle Emissions Factors (EMFAC DATA):
Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Inyo (GBV)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Categor	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Consumption
Inyo (GBV)	2024	LDT2	Aggregate	Aggregate	Diesel	50.6969863	2134.2364	2134.2364	0	241.24064	0

NOx_TOTEX	PM2.5_TOTAL	PM10_TOTAL	CO2_TOTEX	CH4_TOTEX	N2O_TOTEX	ROG_TOTAL	TOG_TOTAL	CO_RUNEX	CO_TOTEX	SOx_TOTEX	NH3_RUNEX
0.000112978	2.26845E-05	4.88404E-05	0.7532384	2.017E-06	0.00011867	4.3417E-05	4.943E-05	0.0004332	0.0004332	7.137E-06	7.29304E-06

Calculated Emissions Factors (lb/vmt)

PM10	PM2.5	NOx	CO2	N20	ROG	TOG	CO	SOx
4.57685E-05	2.12577E-05	0.000105872	0.7058622	1.89E-06	0.00011121	4.0687E-05	4.632E-05	0.0004059

Haul Road Fugitive Dust Factors

Fugitive Dust Speciation Profile

Pollutant	Concentration (ppm)	Concentration
Arsenic	20	0.00002
Beryllium	1	0.000001
Cadmium	1	0.000001
Copper	100	0.0001
Lead	50	0.00005
Manganese	500	0.0005
Nickel	20	0.00002
Selenium	5	0.000005
Zinc	200	0.0002

Source: San Diego APCD Table R01 - HAUL ROADS, GENERAL, PAVED & UNPAVED, WITH DEFAULT TRACE METAL COMPOSITION

Note: The table above includes toxic air contaminants presented in both the SDAPCD speciation profile, and the SCAQMD Risk Tool

Unpaved Road Emission Factors

Unpaved Road emissions factor from AP42 Section 13.2.2

EF (lb/VMT)= 4.9 * (S/12)$^{0.7}$ * (W/3)$^{0.45}$

	On-Road Light Truck	
	PM10	PM2.5
S = silt content (%) =	4.8	
W = avg truck weight	3	
EF (lb/VMT) =	2.58	0.55
Control Efficiency =	0%	0%
Emission Factor (lb/VMT) =	**2.58**	**0.55**

Silt content based on mean Sand and Gravel Processing from AP-42 Table 13.2.2-1.

PM2.5 emissions are 21.2% of PM10 for unpaved roads (SCAQMD *Updated CEIDARS Table).*

ATTACHMENT C

SCAQMD's Health Risk Screening Tool Output

TIER 1/TIER 2 SCREENING RISK ASSESSMENT DATA INPUT

(Procedure Version 8.1 & Package N, September 1, 2017) - Risk Tool V1.105

Application Deemed Complete Date	06/08/23
A/N	N/A
Facility Name	HTHJ Inyo Solar

1. Stack Data	Input	Units
Hours/Day	24	hrs/day
Days/Week	7	days/wk
Weeks/Year	52	wks/yr
Control Efficiency	0.000	
Does source have T-BACT?	NO	
Source type (Point or Volume)	P	P or V
Stack Height or Building Height	20	feet
[illegible]	5000	
Distance-Residential	130	meters
Distance-Commercial	1000	meters
Meteorological Station	Desert Hot Springs Airport	
Project Duration (Short term options: 2, 5, or 9 years; Else 30 years)	2	years

Conversion Units (select units

From: 1 feet

To: 0.3048 meter

Source Type	Other
Screening Mode (**NO** = Tier 1 or Tier 2; **YES** = Tier 3)	NO

FOR SOURCE TYPE OTHER THAN BOILER, CREMATORY, ICE, PRESSURE WASHER, OR SPRAY BOOTH, FILL IN THE USER DEFINED TABLE BELOW

Fac Name: HTHJ Inyo Solar A/N: N/A

TAC Code	Compound	Emission Rate (lbs/hr)	Molecular Weight	R1 - Uncontrolled (lbs/hr)	Efficiency Factor (Fraction range 0-1)	R2-Controlled (lbs/hr)
A11	Arsenic and Compounds (Inorganic)	3.73E-07	74.92	3.73E-07	0.00000	3.73317E-07
B8	Beryllium and Compounds	1.87E-08	9.012	1.87E-08	0.00000	1.86658E-08
C1	Cadmium and Compounds	1.87E-08	112.41	1.87E-08	0.00000	1.86658E-08
C23	Copper and Compounds	1.87E-06	63.55	1.87E-06	0.00000	1.86658E-06
L1	Lead and Compounds (Inorganic)	9.33E-07	207.2	9.33E-07	0.00000	9.33292E-07
M2	Manganese and Compounds	9.33E-06	54.938	9.33E-06	0.00000	9.33292E-06
N12	Nickel and Compounds	3.73E-07	58.71	3.73E-07	0.00000	3.73317E-07
S1	Selenium and Compounds	9.33E-08	78.96	9.33E-08	0.00000	9.33292E-08
P1	Particulate Emissions from Diesel-Fueled Engines	1.44E-02	350	1.44E-02	0.00000	0.014372816

6. Hazard Index Summary

A/N: N/A

Application deemed complete date: 06/08/23

HIA = [Q(lb/hr) * (X/Q)max * MWAF]/ Acute REL
HIC = [Q(ton/yr) * (X/Q) * MP * MWAF] / Chronic REL
HIC 8-hr= [Q(ton/yr) * (X/Q) * WAF * MWAF] / 8-hr Chronic REL

Target Organs	Acute	Chronic	8-hr Chronic	Acute Pass/Fail	Chronic Pass/Fail	8-hr Chronic Pass/Fail
Alimentary system (liver) - AL		6.97E-05		Pass	Pass	Pass
Bones and teeth - BN				Pass	Pass	Pass
Cardiovascular system - CV	2.53E-04	4.27E-02	4.85E-04	Pass	Pass	Pass
Developmental - DEV	2.53E-04	4.32E-02	4.85E-04	Pass	Pass	Pass
Endocrine system - END				Pass	Pass	Pass
Eye				Pass	Pass	Pass
Hematopoietic system - HEM		5.19E-04		Pass	Pass	Pass
Immune system - IMM	2.53E-04	5.19E-05	1.21E-04	Pass	Pass	Pass
Kidney - KID		3.59E-05		Pass	Pass	Pass
Nervous system - NS	2.53E-04	4.47E-02	1.55E-03	Pass	Pass	Pass
Reproductive system - REP	2.53E-04	4.32E-02	4.85E-04	Pass	Pass	Pass
Respiratory system - RESP	2.53E-06	9.93E-02	6.06E-04	Pass	Pass	Pass
Skin		4.27E-02	4.85E-04	Pass	Pass	Pass

TIER 1/TIER 2 SCREENING RISK ASSESSMENT DATA INPUT

(Procedure Version 8.1 & Package N, September 1, 2017) - Risk Tool V1.105

Application Deemed Complete Date	06/08/23
A/N	N/A
Facility Name	HTHJ Inyo Solar

1. Stack Data	Input	Units
Hours/Day	24	hrs/day
Days/Week	7	days/wk
Weeks/Year	52	wks/yr
Control Efficiency	0.000	
Does source have T-BACT?	YES	
Source type (Point or Volume)	P	P or V
Stack Height or Building Height	20	feet
[illegible]	5000	ft
Distance-Residential	130	meters
Distance-Commercial	1000	meters
Meteorological Station	Desert Hot Springs Airport	
Project Duration (Short term options: 2, 5, or 9 years; Else 30 years)	2	years

Conversion Units (select units

From: 1 feet

To: 0.3048 meter

Source Type	Other
Screening Mode (**NO** = Tier 1 or Tier 2; **YES** = Tier 3)	NO

FOR SOURCE TYPE OTHER THAN BOILER, CREMATORY, ICE, PRESSURE WASHER, OR SPRAY BOOTH, FILL IN THE USER DEFINED TABLE BELOW

Fac Name: HTHJ Inyo Solar A/N: N/A

TAC Code	Compound	Emission Rate (lbs/hr)	Molecular Weight	R1 - Uncontrolled (lbs/hr)	Efficiency Factor (Fraction range 0-1)	R2-Controlled (lbs/hr)
A11	Arsenic and Compounds (Inorganic)	7.34E-09	74.92	7.34E-09	0.00000	7.34124E-09
B8	Beryllium and Compounds	3.67E-10	9.012	3.67E-10	0.00000	3.67062E-10
C1	Cadmium and Compounds	3.67E-10	112.41	3.67E-10	0.00000	3.67062E-10
C23	Copper and Compounds	3.67E-08	63.55	3.67E-08	0.00000	3.67062E-08
L1	Lead and Compounds (Inorganic)	1.84E-08	207.2	1.84E-08	0.00000	1.83531E-08
M2	Manganese and Compounds	1.84E-07	54.938	1.84E-07	0.00000	1.83531E-07
N12	Nickel and Compounds	7.34E-09	58.71	7.34E-09	0.00000	7.34124E-09
S1	Selenium and Compounds	1.84E-09	78.96	1.84E-09	0.00000	1.83531E-09
P1	Particulate Emissions from Diesel-Fueled Engines	2.83E-04	350	2.83E-04	0.00000	0.000283404

5a. MICR

MICR Resident = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Resident * CEF Resident * MP Resident * 1e-6 * MWAF

MICR Worker = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Worker * CEF Worker* MP Worker* WAF Worker* 1e-6 * MWAF

Compound	Residential	Commercial
Arsenic and Compounds (Inorganic)	6.59E-09	6.70E-13
Beryllium and Compounds	1.87E-11	5.42E-15
Cadmium and Compounds	3.34E-11	9.67E-15
Copper and Compounds		
Lead and Compounds (Inorganic)	7.12E-11	7.62E-15
Manganese and Compounds		
Nickel and Compounds	4.05E-11	1.17E-14
Selenium and Compounds		
Particulate Emissions from Diesel-Fueled En	1.89E-06	5.48E-10
Total	**1.90E-06**	**5.48E-10**
	PASS	**PASS**

5b. Is Cancer Burden Calculation Needed (MICR >1E-6)? **YES**

New X/Q at which $MICR_{70yr}$ is one-in-a-million [(µg/m³)/(tons/yr)]:	9.54E-01
New Distance, interpolated from X/Q table using New X/Q (meter):	284.01
Zone Impact Area (km²):	2.53E-01
Zone of Impact Population (7000 person/km²):	1.77E+03
Cancer Burden:	**8.29E-03**
Cancer Burden is less than or equal to 0.5	**PASS**

6. Hazard Index Summary A/N: N/A **Application deemed complete date:** 06/08/23

HIA = [Q(lb/hr) * (X/Q)max * MWAF]/ Acute REL
HIC = [Q(ton/yr) * (X/Q) * MP * MWAF] / Chronic REL
HIC 8-hr= [Q(ton/yr) * (X/Q) * WAF * MWAF] / 8-hr Chronic REL

Target Organs	Acute	Chronic	8-hr Chronic	Acute Pass/Fail	Chronic Pass/Fail	8-hr Chronic Pass/Fail
Alimentary system (liver) - AL		1.37E-06		Pass	Pass	Pass
Bones and teeth - BN				Pass	Pass	Pass
Cardiovascular system - CV	4.98E-06	8.40E-04	9.53E-06	Pass	Pass	Pass
Developmental - DEV	4.98E-06	8.50E-04	9.53E-06	Pass	Pass	Pass
Endocrine system - END				Pass	Pass	Pass
Eyes				Pass	Pass	Pass
Hematopoietic system - HEM		1.02E-05		Pass	Pass	Pass
Immune system - IMM	4.98E-06	1.02E-06	2.38E-06	Pass	Pass	Pass
Kidney - KID		7.06E-07		Pass	Pass	Pass
Nervous system - NS	4.98E-06	8.79E-04	3.06E-05	Pass	Pass	Pass
Reproductive system - REP	4.98E-06	8.50E-04	9.53E-06	Pass	Pass	Pass
Respiratory system - RESP	4.98E-08	1.96E-03	1.19E-05	Pass	Pass	Pass
Skin		8.39E-04	9.53E-06	Pass	Pass	Pass

TIER 1/TIER 2 SCREENING RISK ASSESSMENT DATA INPUT

(Procedure Version 8.1 & Package N, September 1, 2017) - Risk Tool V1.105

Application Deemed Complete Date	06/08/23
A/N	N/A
Facility Name	HTHJ Inyo Solar

1. Stack Data	Input	Units
Hours/Day	24	hrs/day
Days/Week	7	days/wk
Weeks/Year	52	wks/yr
Control Efficiency	0.000	
Does source have T-BACT?	NO	
Source type (Point or Volume)	P	P or V
Stack Height or Building Height	20	feet
Building Area	[illegible]	
Distance-Residential	1000	meters
Distance-Commercial	1000	meters
Meteorological Station	Desert Hot Springs Airport	
Project Duration (Short term options: 2, 5, or 9 years; Else 30 years)	30	years

Conversion Units (select units

From: 1 feet

To: 0.3048 meter

Source Type	Other
Screening Mode (**NO** = Tier 1 or Tier 2; **YES** = Tier 3)	NO

FOR SOURCE TYPE OTHER THAN BOILER, CREMATORY, ICE, PRESSURE WASHER, OR SPRAY BOOTH, FILL IN THE USER DEFINED TABLE BELOW

Fac Name: HTHJ Inyo Solar A/N: N/A

TAC Code	Compound	Emission Rate (lbs/hr)	Molecular Weight	R1 - Uncontrolled (lbs/hr)	Efficiency Factor (Fraction range 0-1)	R2-Controlled (lbs/hr)
A11	Arsenic and Compounds (Inorganic)	2.74E-07	74.92	2.74E-07	0.00000	2.73973E-07
B8	Beryllium and Compounds	1.37E-08	9.012	1.37E-08	0.00000	1.36986E-08
C1	Cadmium and Compounds	1.37E-08	112.41	1.37E-08	0.00000	1.36986E-08
C23	Copper and Compounds	1.37E-06	63.55	1.37E-06	0.00000	1.36986E-06
L1	Lead and Compounds (Inorganic)	6.85E-07	207.2	6.85E-07	0.00000	6.84932E-07
M2	Manganese and Compounds	6.85E-06	54.938	6.85E-06	0.00000	6.84932E-06
N12	Nickel and Compounds	2.74E-07	58.71	2.74E-07	0.00000	2.73973E-07
S1	Selenium and Compounds	6.85E-08	78.96	6.85E-08	0.00000	6.84932E-08
P1	Particulate Emissions from Diesel-Fueled Engines	1.36E-06	350	1.36E-06	0.00000	1.35843E-06

5a. MICR

MICR Resident = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Resident * CEF Resident * MP Resident * 1e-6 * MWAF

MICR Worker = CP (mg/(kg-day))^-1 * Q (ton/yr) * (X/Q) Worker * CEF Worker* MP Worker* WAF Worker* 1e-6 * MWAF

Compound	Residential	Commercial
Arsenic and Compounds (Inorganic)	8.50E-09	3.26E-10
Beryllium and Compounds	3.06E-11	2.53E-12
Cadmium and Compounds	5.47E-11	4.51E-12
Copper and Compounds		
Lead and Compounds (Inorganic)	8.74E-11	3.68E-12
Manganese and Compounds		
Nickel and Compounds	6.64E-11	5.47E-12
Selenium and Compounds		
Particulate Emissions from Diesel-Fueled En	3.98E-10	3.28E-11
Total	**9.14E-09**	**3.75E-10**
	PASS	**PASS**

5b. Is Cancer Burden Calculation Needed (MICR >1E-6)? **NO**

New X/Q at which $MICR_{70yr}$ is one-in-a-million [(µg/m³)/(tons/yr)]:
New Distance, interpolated from X/Q table using New X/Q (meter):
Zone Impact Area (km²):
Zone of Impact Population (7000 person/km²):
Cancer Burden:

6. Hazard Index Summary A/N: N/A Application deemed complete date: 06/08/23

HIA = [Q(lb/hr) * (X/Q)max * MWAF]/ Acute REL
HIC = [Q(ton/yr) * (X/Q) * MP * MWAF] / Chronic REL
HIC 8-hr= [Q(ton/yr) * (X/Q) * WAF * MWAF] / 8-hr Chronic REL

Target Organs	Acute	Chronic	8-hr Chronic	Acute Pass/Fail	Chronic Pass/Fail	8-hr Chronic Pass/Fail
Alimentary system (liver) - AL		1.03E-06		Pass	Pass	Pass
Bones and teeth - BN				Pass	Pass	Pass
Cardiovascular system - CV	3.67E-06	6.32E-04	7.18E-06	Pass	Pass	Pass
Developmental - DEV	3.67E-06	6.40E-04	7.18E-06	Pass	Pass	Pass
Endocrine system - END				Pass	Pass	Pass
Eye				Pass	Pass	Pass
Hematopoietic system - HEM		7.69E-06		Pass	Pass	Pass
Immune system - IMM	3.67E-06	7.69E-07	1.80E-06	Pass	Pass	Pass
Kidney - KID		5.32E-07		Pass	Pass	Pass
Nervous system - NS	3.67E-06	6.62E-04	2.30E-05	Pass	Pass	Pass
Reproductive system - REP	3.67E-06	6.40E-04	7.18E-06	Pass	Pass	Pass
Respiratory system - RESP	3.67E-08	6.41E-04	8.98E-06	Pass	Pass	Pass
Skin		6.32E-04	7.18E-06	Pass	Pass	Pass

TIER 1/TIER 2 SCREENING RISK ASSESSMENT DATA INPUT

(Procedure Version 8.1 & Package N, September 1, 2017) - Risk Tool V1.105

Application Deemed Complete Date	06/08/23
A/N	N/A
Facility Name	HTHJ Inyo Solar

1. Stack Data	Input	Units
Hours/Day	24	hrs/day
Days/Week	7	days/wk
Weeks/Year	52	wks/yr
Control Efficiency	0.000	
Does source have T-BACT?	NO	
Source type (Point or Volume)	P	P or V
Stack Height or Building Height	20	feet
Building Area		
Distance-Residential	1000	meters
Distance-Commercial	1000	meters
Meteorological Station	Desert Hot Springs Airport	
Project Duration (Short term options: 2, 5, or 9 years; Else 30 years)	2	years

Conversion Units (select unit

From

1 feet

To

0.3048 meter

Source Type	Other
Screening Mode (**NO** = Tier 1 or Tier 2; **YES** = Tier 3)	NO

FOR SOURCE TYPE OTHER THAN BOILER, CREMATORY, ICE, PRESSURE WASHER, OR SPRAY BOOTH, FILL IN THE USER DEFINED TABLE BELOW

Fac Name: HTHJ Inyo Solar A/N: N/A

TAC Code	Compound	Emission Rate (lbs/hr)	Molecular Weight	R1 - Uncontrolled (lbs/hr)	Efficiency Factor (Fraction range 0-1)	R2-Controlled (lbs/hr)
A11	Arsenic and Compounds (Inorganic)	5.16E-05	74.92	5.16E-05	0.00000	5.16022E-05
B8	Beryllium and Compounds	2.58E-06	9.012	2.58E-06	0.00000	2.58011E-06
C1	Cadmium and Compounds	2.58E-06	112.41	2.58E-06	0.00000	2.58011E-06
C23	Copper and Compounds	2.58E-04	63.55	2.58E-04	0.00000	0.000258011
L1	Lead and Compounds (Inorganic)	1.29E-04	207.2	1.29E-04	0.00000	0.000129005
M2	Manganese and Compounds	1.29E-03	54.938	1.29E-03	0.00000	0.001290055
N12	Nickel and Compounds	5.16E-05	58.71	5.16E-05	0.00000	5.16022E-05
S1	Selenium and Compounds	1.29E-05	78.96	1.29E-05	0.00000	1.29005E-05
P1	Particulate Emissions from Diesel-Fueled Engines	4.58E-05	350	4.58E-05	0.00000	4.57685E-05

6. Hazard Index Summary

A/N: N/A

Application deemed complete date: 06/08/23

HIA = [Q(lb/hr) * (X/Q)max * MWAF]/ Acute REL
HIC = [Q(ton/yr) * (X/Q) * MP * MWAF] / Chronic REL
HIC 8-hr= [Q(ton/yr) * (X/Q) * WAF * MWAF] / 8-hr Chronic REL

Target Organs	Acute	Chronic	8-hr Chronic	Acute Pass/Fail	Chronic Pass/Fail	8-hr Chronic Pass/Fail
Alimentary system (liver) - AL		1.94E-04		Pass	Pass	Pass
Bones and teeth - BN				Pass	Pass	Pass
Cardiovascular system - CV	6.91E-04	1.19E-01	1.35E-03	Pass	Pass	Pass
Developmental - DEV	6.91E-04	1.20E-01	1.35E-03	Pass	Pass	Pass
Endocrine system - END				Pass	Pass	Pass
Eye				Pass	Pass	Pass
Hematopoietic system - HEM		1.45E-03		Pass	Pass	Pass
Immune system - IMM	6.91E-04	1.45E-04	3.38E-04	Pass	Pass	Pass
Kidney - KID		1.00E-04		Pass	Pass	Pass
Nervous system - NS	6.91E-04	1.25E-01	4.34E-03	Pass	Pass	Pass
Reproductive system - REP	6.91E-04	1.20E-01	1.35E-03	Pass	Pass	Pass
Respiratory system - RESP	6.91E-06	1.21E-01	1.69E-03	Pass	Pass	Pass
Skin		1.19E-01	1.35E-03	Pass	Pass	Pass

A/N: N/A Application deemed complete date: 06/08/23

6a. Hazard Index Acute - Resident

HIA = [Q(lb/hr) * (X/Q)max resident * MWAF] / Acute REL

	HIA - Residential									
Compound	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Arsenic and Compounds (Inorganic)		6.91E-04	6.91E-04				6.91E-04	6.91E-04		
Beryllium and Compounds										
Cadmium and Compounds										
Copper and Compounds									6.91E-06	
Lead and Compounds (Inorganic)										
Manganese and Compounds										
Nickel and Compounds						6.91E-04				
Selenium and Compounds										
Particulate Emissions from Diesel-Fueled En										
Total		6.91E-04	6.91E-04			6.91E-04	6.91E-04	6.91E-04	6.91E-06	

ATTACHMENT D

CalEEMod Output Files

Inyo Solar Summary Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Inyo Solar
Construction Start Date	1/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.70
Precipitation (days)	9.60
Location	100 Moses Ln, Trona, CA 93562, USA
County	Inyo
City	Unincorporated
Air District	Great Basin UAPCD
Air Basin	Great Basin Valleys
TAZ	3013
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	—
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	20.0	User Defined Unit	20.0	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.82	0.81	16.0	32.4	0.06	0.11	0.15	0.26	0.11	0.04	0.15	—	6,260	6,260	0.25	0.06	0.02	6,283
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.05	0.98	1.92	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	370	370	0.02	< 0.005	0.02	371
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.17	0.35	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	61.2	61.2	< 0.005	< 0.005	< 0.005	61.5

6. Climate Risk Detailed Report

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	0	0	0	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	1	1	1	2
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

7. Health and Equity Details

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	46.0

Healthy Places Index Score for Project Location (b)	51.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.