5.9 Public Health

This section presents the methodology and results of the human health risk assessment (HRA) conducted to assess the potential public health impacts and exposure associated with airborne emissions from the proposed routine operation of the Rice Solar Energy Project (RSEP). Quantities of hazardous materials proposed to be stored onsite, description of their uses, and potential concerns regarding these materials are presented in Section 5.5, Hazardous Materials Handling. Discussion of potential concerns associated with electromagnetic field exposure is presented in Section 3.0, Electric Transmission.

5.9.1 Affected Environment

The RSEP will be located at the former Rice Army Airfield in the eastern portion of unincorporated Riverside County. The nearest residences are at Vidal Junction, approximately 15 miles northeast. The nearest settlement is a cluster of homes at the Iron Mountain Pumping Plant, 17 miles west. The nearest town with significant services is Parker, Arizona, approximately 32 miles east. Blythe, California, is approximately 40 miles south. Twentynine Palms, California, is approximately 75 miles west.

Consistent with the California Energy Commission (CEC) Siting Regulations, a search of sensitive receptors was conducted within a 6-mile radius of the RSEP. Appendix B (g)(9)(E)(i) defines sensitive receptors as infants and children, the elderly, the chronically ill, and any other member of the general population who is more susceptible to the effects of exposure than the population at large. Therefore, schools (public and private), daycare facilities, convalescent homes, and hospitals are of particular concern. As previously noted, the nearest residents are located more than 15 miles from the RSEP site at Vidal Junction. The La Pera Elementary School in Parker, Arizona, is the nearest school, located approximately 23 miles east of the project site. The nearest hospitals are La Paz Regional Hospital and Parker Indian Hospital, approximately 35 miles to the east-northeast in Parker, Arizona, and the Palo Verde Hospital, approximately 35 miles to the southeast in Blythe, California.

Per Appendix B(g)(9)(D) of the CEC Siting Regulations, a map showing the sensitive receptors within the area exposed to the potential toxic air contaminants (TAC) from the RSEP is required. Figure 5.5-1 (see Section 5.5, Hazardous Materials Management) presents an outline of the 6-mile radius surrounding the proposed RSEP site. As noted, there are no sensitive receptors identified within the 6-mile radius.

Appendix B (g)(9)(C) of the CEC Siting Regulations requires a search of available health studies concerning the potentially affected populations within a 6-mile radius of the project site and associated new generator tie-line and interconnection substation. There are no resident populations within 6 miles of the proposed RSEP site. Therefore, there are no human health studies available for this area.

5.9.2 Environmental Analysis

5.9.2.1 Toxic Air Contaminant Exposure Assessment (Operation Impacts)

Potential human health risks associated with TAC emissions from the proposed operation of RSEP were evaluated. The HRA was conducted using the following guidance:

- Air Toxics Hot Spots Program Risk Assessment Guidelines (Office of Environmental Health Hazard Assessment [OEHHA], 2003)
- Rice Solar Energy Project Dispersion Modeling Protocol (CH2M HILL, 2009)
- California Air Resources Board (ARB) Recommended Interim Risk Management Policy for Inhalation-based Residential Cancer Risk (ARB, 2003)

The HRA modeling was conducted using the ARB Hotspots Analysis Reporting Program (HARP, Version 1.4a, July 2008), combined with the ARB HARP On-Ramp Program (Version 1.0, May 2008). The HARP On-Ramp Program was used to import the Industrial Source Complex-Short Term (ISCST3) air dispersion modeling results into the HARP Risk Module.

The HRA process requires four general steps to estimate the upper bound of potential health impacts: (1) identify and quantify project-generated emissions; (2) evaluate pollutant transport (air dispersion modeling) to estimate ground-level TAC concentrations at each receptor location; (3) assess human exposure; and (4) use a risk characterization model to estimate the potential health risk at each receptor location. Acute, chronic and cancer risks were evaluated in the HRA. The following sections describe in detail the methods used in this HRA.

5.9.2.1.1 Toxic Air Contaminant Emission Calculations

The proposed RSEP is based on concentrating solar-thermal power technology, which uses reflecting mirrors, called heliostats, to redirect sunlight onto a receiver erected at the top of a tower in the center of the solar field. Liquid salt will be heated as it passes through the receiver and is circulated through a series of heat exchangers to generate high-pressure superheated steam. The steam is then used to power a steam turbine generator (STG) at conventional temperatures and pressures, to produce electricity. The steam from the STG will be condensed using an air-cooled condenser (ACC) and returned via feedwater pumps to the heat exchangers where the high-pressure superheated steam will be regenerated.

Although the solar-thermal power generation will not consume fossil fuels, the project will include the limited testing of two diesel-powered emergency generators and two diesel-powered emergency fire pumps. The primary function of the emergency generators will be to provide instantaneous power needed to redirect the heliostat field in the event of an emergency shutdown. Although the emergency generators are approximately 3,600 brake-horsepower (bhp) each, it is expected the two emergency generators would be operated only 30 minutes or less per week for maintenance and testing. The two 600-bhp fire pumps would also be operated approximately 30 minutes or less per week for maintenance and testing. Therefore, the TAC emissions from the two emergency units are expected to be very low, compared with units that operate continuously.

TACs are compounds that have been identified by ARB as pollutants that may pose a significant health hazard. Diesel particulate emission factors for the diesel fire pump were based on vendor estimates. The remaining TAC emission factors for the diesel engines were based on factors published by the Ventura County Air Pollution Control District (2001).

In addition to the use of an ACC unit for closed loop, dry cooling of the STG exhaust, a wet surface air cooler (WSAC) will be installed to provide for equipment cooling, including the STG lubricating oil system, generator air coolers, and the balance of the plant ancillary systems. The WSAC unit will have a recirculation rate of approximately 2,736 gallons per minute (gpm). Because the WSAC unit recirculation rate is less than 10,000 gpm and the primary function would not be associated with rejecting STG cycle exhaust heat, the WSAC is exempt from the Mojave Desert Air Quality Management District (MDAQMD) permitting requirements per Rule 219. However, for completeness, the emissions from the WSAC unit were evaluated as part of the air quality and public health risk assessments. The TAC emissions from the WSAC unit were calculated based on the measured concentrations in the groundwater and a cooling tower drift eliminator efficiency of 0.005 percent. Although the WSAC unit is expected to operate less than 3,286 hours, the emission calculations were conservatively estimated assuming a 50 percent annual capacity factor (i.e., 4,400 hours), a margin of approximately 33 percent over expected operation.

The chronic and cancer risks associated with the diesel engines and the WSAC unit were evaluated based on the annual diesel particulate matter emissions and the groundwater sampling data, respectively. Annual emissions used for the chronic and cancer risk evaluations were estimated assuming 26 hours of non-emergency use per year per engine and 4,400 hours of operation for the WSAC unit. The evaluation of the acute risks was based on the speciated hourly emissions of diesel exhaust and groundwater sampling data. Hourly emissions were estimated assuming a maximum of 30 minutes of operation in any one hour. A summary of the TAC emissions is presented in Table 5.9-1. The total TAC emissions from the 26 hours of non-emergency use per year per engine and 4,400 hours of operation for the WSAC unit would be less than 100 pounds. The detailed emission calculations for the TACs are provided in Appendix 5.1B.

TABLE 5.9-1
TAC Pollutant Emission Rates Modeled for the RSEP

Pollutant	Chemical Abstract Service	Emergency Generator* (per engine)		Diesel Fire Pump* (per engine)		WSAC	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Benzene	71432	1.61E-02	-	2.92E-03	-	-	-
Formaldehyde	50000	1.50E-01	-	2.71E-02	-	-	-
Total PAHs (minus naphthalene)	1151	3.14E-03	-	5.68E-04	-	-	-
Naphthalene	91203	1.71E-03	-	3.09E-04	-	-	-
Acetaldehyde	75070	6.79E-02	-	1.23E-02	-	-	-
Acrolein	107028	2.94E-03	-	5.32E-04	-	-	-
1,3 Butadiene	106990	1.88E-02	-	3.41E-03	-	-	-
Chlorobenzene	108907	1.73E-05	-	3.14E-06	-	-	-

TABLE 5.9-1
TAC Pollutant Emission Rates Modeled for the RSEP

Pollutant	Chemical Abstract Service	Emergency Generator* (per engine)		Diesel Fire Pump* (per engine)		WSAC	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Propylene	115071	4.05E-02	-	7.33E-03	-	-	-
Hexane	110543	2.33E-03	-	4.22E-04	-	-	-
Toluene	108883	9.13E-03	-	1.65E-03	-	-	-
Xylenes	1330207	3.67E-03	-	6.65E-04	-	-	-
Ethyl Benzene	100414	9.44E-04	-	1.71E-04	-	-	-
Hydrogen Chloride	7647010	1.61E-02	-	2.92E-03	-	-	-
Arsenic	7440382	1.39E-04	-	2.51E-05	-	4.28E-06	1.88E-02
Cadmium	7440439	1.30E-04	-	2.35E-05	-	6.85E-07	3.01E-03
Hexavalent Chromium	18540299	8.67E-06	-	1.57E-06	-	-	-
Copper	7440508	3.55E-04	-	6.43E-05	-	2.05E-06	9.04E-03
Lead	7439921	7.19E-04	-	1.30E-04	-	3.25E-06	1.43E-02
Manganese	7439965	2.69E-04	-	4.86E-05	-	1.03E-06	4.52E-03
Mercury	7439976	1.73E-04	-	3.14E-05	-	5.13E-08	2.26E-04
Nickel	7440020	3.38E-04	-	6.12E-05	-	1.71E-06	7.53E-03
Selenium	7782492	1.91E-04	-	3.45E-05	-	4.45E-06	1.96E-02
Zinc	7440666	1.94E-03	-	3.51E-04	-	-	-
Fluoride	1101	-	-	-	-	1.56E-03	6.85E+00
Silica	1175	-	-	-	-	5.48E-03	2.41E+01
Vanadium	7440622	-	-	-	-	6.50E-06	2.86E-02
Diesel Particulate Matter	9901		7.44E-00		3.64E-00	-	-

*The chronic and cancer risks were evaluated based on the annual diesel particulate matter emissions. The acute risk was evaluated based on the individual speciation factors for diesel fired internal combustion engines. Annual emissions were estimated assuming 26 hours of non-emergency use per engine. Hourly emissions were estimated assuming a maximum of 30 minutes of operation per hour per engine.

lb/hr = pounds per hour
lb/yr = pounds per year
PAH = polyaromatic hydrocarbon

5.9.2.1.2 Dispersion Modeling

The ISCST3 dispersion model (Version 99155) combined with screening level meteorological data was used to predict ground-level concentrations of TACs associated with the RSEP. The ISCST3 settings, source parameters, screening level meteorological data set, and source definition for the risk assessment were the same as the criteria pollutant air quality impact analysis methodology (Section 5.1). A unit emission rate (1 gram/second) was used to model each source, as outlined in the HARP On-Ramp Program manual. The discrete

receptor grid spacing out to 10 kilometers was also similar to the air quality impact analysis modeling methodology.

As noted in Section 5.1, the ISCST3 model was used to predict a 1-hour concentration at each receptor using a combination of possible wind speeds, wind directions, and stability categories. This represents a conservative 1-hour concentration because the combination of the most conservative wind speed, wind direction, and stability categories may not occur in the atmosphere. Although this approach may be overly conservative, it was used because a meteorological data set consisting of 1 year or more of continuous data from on or near the RSEP site is not available for use in site-specific modeling. The annual concentrations used to evaluate the long term exposures at each receptor were calculated based on the 1-hour conversion method outlined in the U.S. Environmental Protection Agency's (EPA) Screening Procedures for Estimating the Air Quality Impact of Stationary Sources (EPA, 1992).

5.9.2.1.3 Risk Characterization

The results of the dispersion modeling analysis represent an intermediate product in the HRA process. The HARP On-Ramp Program was used to convert the ISCST3 output files to a format compatible with the HARP model. The HARP model was subsequently used to determine cancer, chronic, and acute health risks.

Cancer risks were evaluated based on the screening level annual TAC ground-level concentrations, inhalation cancer potency, oral slope factor, frequency and duration of exposure at the receptor, and breathing rate of the exposed persons. Cancer risks were estimated using a conservative assumption of 70-year continuous exposure duration. In addition, for predicted cancer risks where the inhalation pathway is the dominant pathway of cancer risks, the Derived (Adjusted) Method was used for the cancer risk evaluation, based on the Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk (ARB, 2003).

If a predicted Derived Adjusted cancer risk is greater than one in a million, the cancer burden is calculated for each census block receptor. Cancer burden is defined as the estimated increase in the occurrence of cancer cases in a population resulting from exposure to carcinogenic air contaminants. The population data for census block receptors within 6 miles of the facility would be based on the population information in the HARP database.

Chronic toxicity is defined as adverse health effects from prolonged chemical exposure. Acute toxicity is defined as adverse health effects caused by a brief chemical exposure of no more than 24 hours. To assess chronic and acute non-cancer exposures, screening level annual and 1-hour TAC ground-level concentrations were compared with the Reference Exposure Levels (RELs) developed by OEHHA to obtain a chronic or acute hazard index. The REL is a concentration in ambient air at or below which no adverse health effects are anticipated.

OEHHA/ARB Cancer and Non-cancer RELs

This HRA included potential health impacts from home-grown produce, dermal absorption, soil ingestion, and mother's milk, as required by OEHHA guidelines (OEHHA, 2003). The inhalation cancer potency, oral slope factor values, and RELs used to characterize health risks associated with the modeled impacts were obtained from the Consolidated Table of

OEHHA/ARB Approved Risk Assessment Health Values (OEHHA and ARB, 2009), and are shown in Table 5.9-2.

TABLE 5.9-2
Risk Assessment Health Values for Toxic Air Contaminants

Compound	Inhalation Cancer Potency $(mg/kg\text{-}day)^{-1}$	Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL (mg/kg-day)	Acute Inhalation REL ($\mu g/m^3$)
Benzene	1.00E-01	-	6.00E+01	-	1.30E+03
Formaldehyde	2.10E-02	-	9.00E+00	-	5.50E+01
Total PAHs (minus naphthalene)	3.90E+00	1.20E+01	-	-	-
Naphthalene	1.20E-01	-	9.00E+00	-	-
Acetaldehyde	1.00E-02	-	1.40E+02	-	4.70E+02
Acrolein	-	-	3.50E-01	-	2.50E+00
1,3 Butadiene	6.00E-01	-	2.00E+01	-	-
Chlorobenzene	-	-	1.00E+03	-	-
Propylene	-	-	3.00E+03	-	-
Hexane	-	-	7.00E+03	-	-
Toluene	-	-	3.00E+02	-	3.70E+04
Xylenes	-	-	7.00E+02	-	2.20E+04
Ethyl Benzene	8.70E-03	-	2.00E+03	-	-
Hydrogen Chloride	-	-	9.00E+00	-	2.10E+03
Arsenic	1.20E+01	1.50E+00	1.50E-02	3.50E-06	2.00E-01
Cadmium	1.50E+01	-	2.00E-02	5.00E-04	-
Hexavalent Chromium	5.10E+02	-	2.00E-01	2.00E-02	-
Copper	-	-	-	-	1.00E+02
Lead	4.20E-02	8.50E-03	-	-	-
Manganese	-	-	9.00E-02	-	-
Mercury	-	-	3.00E-02	1.60E-04	6.00E-01
Nickel	9.10E-01	-	5.00E-02	5.00E-02	6.00E+00
Selenium	-	-	2.00E+01	-	-
Zinc	-	-	-	-	-
Fluorides and Compounds	-	-	1.30E+01	4.00E-02	2.40E+02
Silica, Crystln	-	-	3.00E+00	-	-
Vanadium	-	-	-	-	3.00E+01
Diesel Particulate Matter	1.10E+00	*	5.00E+00	-	-

Source: OEHHA/ARB, 2009

mg/kg-day = milligrams per kilogram per day

$\mu g/m^3$ = micrograms per cubic meter

Significance Criteria

Cancer Risk. Residential excess cancer risk is the probability or chance of contracting cancer over a human life span (assumed to be 70 years). Carcinogens are not assumed to have a threshold below which there is no human health impact. In other words, any exposure to a carcinogen is assumed to have some probability of causing cancer; the lower the exposure (time or mass), the lower the cancer risk (i.e., a linear, no-threshold model). State and local regulations in California use an excess (i.e., an incremental increase) cancer risk greater than 10 in one million as the significant impact level for public health impact assessments. For example, the 10-in-one-million risk level is used by the Air Toxics Hot Spots (Assembly Bill 2588) program and California's Proposition 65 as the public notification level for air toxic emissions from existing sources. An excess cancer risk below 1 in one million is typically considered the de minimis impact level, meaning an excess cancer risk less than 1 in one million would be less than significant.

Based on MDAQMD Regulation 13, Rule 1320, Best Available Control Technology for Toxics (T-BACT) shall be applied to any new source of TACs where the excess cancer risk for each individual source or the facility is predicted to be greater than 1 in one million. Therefore, the predicted cancer risk values for the proposed project will be considered less than significant if the incremental increase in cancer risk is less than 1 in one million individuals. The cancer burden for the facility must also be below the MDAQMD Regulation 13, Rule 1320 threshold of 0.5.

Non-cancer Risk. Non-cancer health effects can be either chronic or acute. In determining potential non-cancer health risks (chronic and acute) from air toxics, it is assumed there is a dose of the TAC below which there would be no impact on human health. The air concentration corresponding to this dose is called the REL. Non-cancer health risks are measured in terms of a hazard quotient, which is the calculated exposure of each contaminant divided by its REL. Hazard quotients for pollutants affecting the same target organ are typically summed with the resulting totals expressed as hazard indexes for each organ system.

Based on MDAQMD Regulation 13, Rule 1320, a hazard index of less than 1.0 for the entire project is considered to be a less-than-significant health risk. Therefore, the non-cancer risk values for the project would be considered less than significant if the chronic and acute hazard indices are less than 1.0.

5.9.2.1.4 Summary of TAC Exposure Assessment Results

A risk analysis using screening level meteorological data was performed to evaluate the potential impacts from the operation of the WSAC unit and the periodic testing of the diesel-fired emergency engines.

The predicted incremental increase in cancer risk at the point of maximum impact (PMI) is approximately 0.89 in one million using the Derived Adjusted Method. The maximum impact is located along the southwest portion of the heliostat fenceline. The maximum predicted incremental increase in cancer risk at the PMI is below the MDAQMD significance threshold of 1 in one million. Therefore, the predicted facility-wide incremental increase in cancer risk would be less than significant for all receptors (i.e., residential, worker, and sensitive) based on MDAQMD Regulation 13, Rule 1320. Because the predicted Derived Adjusted cancer risk is less than 1 in one million and there are no residents within 6 miles of

RSEP, the cancer burden would be zero. Therefore, the cancer burden also would be less than significant.

The maximum chronic hazard index increment at the PMI is predicted to be 0.013. The maximum acute hazard index at the PMI is predicted to be approximately 0.125. The maximum predicted chronic and acute impacts are located along the southwest portion of the heliostat fenceline. The chronic and acute index increments are well below the MDAQMD significance threshold of 1.0. Therefore, the predicted impact from the proposed project would be less than significant for all receptors within six miles of the facility.

The potential health impacts at the PMI are summarized in Table 5.9-3. Additionally, the HARP report files have been prepared and submitted to the CEC on compact disc.

TABLE 5.9-3
Health Risk Assessment Summary: Facility

Risk	Receptor Number	Value	Universal Transverse Mercator (NAD 27)
Cancer Risk at the PMI (Derived OEHHA Method)	3339	1.13 per million	(701,342; 3,770,638)
Cancer Risk at the PMI (Derived Adjusted Method)	3339	0.89 per million	(701,342; 3,770,638)
Chronic Hazard Index at the PMI	3836	0.013	(701,134; 3,771,052)
Acute Hazard Index at the PMI	3339	0.125	(701,342; 3,770,638)

5.9.2.2 Uncertainty in the Public Health Impact Assessment

Sources of uncertainty in the HRA include emissions estimates, dispersion modeling, exposure characteristics, and extrapolation of toxicity data in animals to humans. Assumptions used in HRAs are designed to provide sufficient health protection to avoid underestimation of risk to the public, which may add an additional level of conservativeness in the predicted impacts. Some sources of uncertainty and conservativeness applicable to this HRA are discussed below.

The models used in dispersion modeling contain assumptions that tend to over predict ground-level concentrations. For example, the modeling performed in the HRA assumed a conservation of mass (i.e., all the pollutants emitted from the sources remained in the atmosphere while being transported downwind). During the transport of pollutants from sources to receptors, none of the material was assumed to be removed through chemical reaction or to be lost at the ground surface through reaction, gravitational settling, or turbulent impaction. In reality, these mechanisms work to reduce the level of pollutants remaining in the atmosphere. Furthermore, the ISCST3 model combined with screening meteorological data predicts emission source impacts by reviewing an array of different wind speeds, wind directions, and stability classes to determine the worst-case ambient concentrations. This potentially represents an overly conservative estimate because the combination of the most conservative wind speed, direction, and stability categories, along

with the annual persistence assumed for the most conservative conditions may not occur in the atmosphere at this location.

The long-term exposure characteristics assessed in the HRA included the assumption that a resident would be at the same location for 24 hours per day, 365 days per year, for 70 years. It is extremely unlikely that any person would meet this condition. The conservative exposure assumption tends to over-predict risk estimates in the HRA process.

The toxicity data used in the HRA contain uncertainties due to the extrapolation of data from animals to humans. Typically, safety factors are applied when doing the extrapolation. Furthermore, the human population is much more diverse, both genetically and culturally, than bred experimental animals; thus, the intraspecies variability among humans is expected to be much greater than in laboratory animals. With all the uncertainty in the assumptions used to extrapolate toxicity data, significant measures are taken to ensure that sufficient health protection is built into the available health effects data.

5.9.2.3 TAC Exposure Assessment (Construction Impacts)

TAC emissions associated with the construction of the RSEP would consist primarily of combustion byproducts from onsite construction equipment and vehicle trips on site, as well as worker and delivery truck vehicle trips to and from the construction site. Although construction activities would result in TAC emissions, an assessment of the potential health impacts associated with construction activities was not conducted because the construction phase is expected to be finite (i.e., 27 months) and there are no receptors within 6 miles of the project (De Salvio, 2009).

5.9.3 Cumulative Effects

Per CEC requirements, a cumulative air quality modeling impacts analysis for the project's typical operating mode would be conducted as part of the AFC process. Impacts from the project would be combined with other stationary emission sources within a 6-mile radius that have received construction permits but are not yet operational, or are in the permitting process (such as, the New Source Review or California Environmental Quality Act permitting process). However, no facilities have recently requested an authority to construct or been issued permits within 6 miles of the project site (De Salvio, 2009). Therefore, no significant cumulative impacts are expected.

5.9.4 Mitigation Measures

5.9.4.1 Criteria Pollutants

The results of the air dispersion modeling presented in Section 5.1, Air Quality, concluded that emissions from the RSEP will not cause or contribute to the violation of the ambient air quality standards (either National Ambient Air Quality Standards [NAAQS] or California Ambient Air Quality Standards) for those pollutants for which the area is designated as attainment. These standards are intended to protect the general public with a wide margin of safety. Therefore, the RSEP is not expected to have a significant impact on public health from emissions of criteria pollutants. For those criteria pollutants (and their precursor pollutants) where the ambient air quality standards are categorized as non-attainment, mitigation will be provided to reduce the impacts to less-than-significant levels (see

Section 5.1). The proposed facility will also include emission-control technologies necessary to meet the required emission standards specified for criteria pollutants under MDAQMD rules (e.g., to control oxides of nitrogen emissions from the salt conditioning process during the plant's commissioning phase).

5.9.4.2 TAC Pollutants

As presented in Section 5.9.3, the maximum incremental increase in the cancer risk predicted at the point of maximum impact is 0.89 in one million. The maximum chronic and acute hazard indices are 0.013 and 0.125, respectively. These levels are below the significance thresholds for cancer risk of one in one million, and/or the chronic and acute hazard index of 1.0. Therefore, mitigation measures are not required for TAC emissions from the RSEP.

5.9.5 Laws, Ordinances, Regulations, and Standards

Table 5.9-4 provides an overview of the relevant laws, ordinances, regulations, and standards (LORS) that affect public health and the conformity of the project to each.

TABLE 5.9-4
Laws, Ordinances, Regulations, and Standards for Public Health

LORS	Requirements/ Applicability	Administering Agency	AFC Section Explaining Conformance
Federal			
Title 40 CFR, Part 63	Establishes national emission standards to limit emissions of hazardous air pollutants (HAPs, or air pollutants identified by EPA as causing or contributing to the adverse health effects of air pollution but for which NAAQS have not been established) from facilities in specific categories.	MDAQMD, with EPA Region IX oversight	The estimated annual RSEP HAP emissions are less than the major source thresholds for HAPs (10 tons per year for any one pollutant or 25 tons per year for all HAPs combined). Therefore, National Emissions Standards for Hazardous Air Pollutants regulations do not apply.
State			
California Code of Regulations Sections 93115 (Diesel ATCM)	The purpose of the airborne toxics control measure (ATCM) is to reduce diesel particulate emissions from stationary diesel fired compression engines.	MDAQMD with ARB oversight	The diesel ATCM applies to stationary compression engines with a rating of greater than 50 brake horsepower and requires the use of ARB-certified diesel fuel or equivalent, and limits emissions from the operation of compression engines. The proposed fire pump and emergency generators would be greater than 50 bhp. The fire pump would meet the Tier III PM_{10} emission standards of 0.15 gram/bhp and non-emergency hours of operation would be limited to 26 hours or

TABLE 5.9-4
Laws, Ordinances, Regulations, and Standards for Public Health

LORS	Requirements/ Applicability	Administering Agency	AFC Section Explaining Conformance
			less per year. Therefore, the fire pumps would comply with the diesel ATCM. The emergency generators would meet the Tier II emission standards and non-emergency hours of operation would be limited to 26 hours of operation or less per year. Therefore, the emergency generators would comply with the diesel ATCM.
Health and Safety Code Sections 44360 to 44366 (Air Toxics "Hot Spots" Information and Assessment Act—Assembly Bill 2588)	Requires preparation and biennial updating of facility emission inventory of hazardous substances; risk assessments.	MDAQMD with oversight from ARB/OEHHA	An estimate of TAC emissions and associated risk was conducted as part of this analysis. (See Conformance description for MDAQMD Regulation 13, Rule 1320, Permits – Toxics New Source Review)
Health and Safety Code 25249.5 et seq. (Safe Drinking Water and Toxic Enforcement Act of 1986—Proposition 65)	Provides notification of Proposition 65 chemicals.	OEHHA	RSEP will comply with all signage and notification requirements, if required.
Local			
MDAQMD Regulation 13, Rule 1320 (Permits – Toxics New Source Review)	The purpose of this rule is to provide for the review of new and modified sources of TAC emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced.	MDAQMD	T-BACT shall be applied to any new or modified source of TACs where the facility or individual source cancer risk is greater than 1 in one million (10^{-6}). An ATC or PTO will be denied if the facility cancer risk exceeds 10 in a million, or the chronic hazard index exceeds 1.0, or the acute hazard index exceeds 1.0. The predicted cancer risk at the PMI for the project is 0.89 in one million. The maximum predicted chronic and acute hazard indices at the PMI are 0.013 and 0.125, respectively. The values are below the ATC or PTO facility thresholds for cancer risk of 1 in one million and the chronic and acute hazard index of 1.0.

5.9.6 Agencies and Agency Contacts

Table 5.9-5 provides contact information for agencies involved with public health.

TABLE 5.9-5
Agency Contacts for Public Health

Issue	Agency	Contact
Regulatory oversight	EPA Region IX	Gerardo Rios EPA Region IX 75 Hawthorne Street San Francisco, CA 94105 (415) 947-3974
Regulatory oversight	ARB	Michael Tollstrup Project Assessment Branch ARB 2020 L Street Sacramento, CA 95814 (916) 322-6026
Permit issuance, enforcement	MDAQMD	Alan de Salvio Mojave Desert Air Quality Management District 14306 Park Avenue Victorville, CA 92392 (760) 245-1661

5.9.7 Permits and Permit Schedule

MDAQMD is responsible for issuing the required operating permits related to public health. MDAQMD must issue a preliminary determination of compliance within 180 days after issuing the application completeness determination letter. If all requirements of MDAQMD rules are met, MDAQMD will issue a determination of compliance to the CEC within 240 days after the acceptance of the application as complete. Upon approval by the CEC, a determination of compliance serves as the MDAQMD authority to construct. A permit to operate will be issued by MDAQMD after construction and prior to commencement of operation.

5.9.8 References

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