

**REVIEW OF MARTIN MARIETTA  
AB2588 HEALTH RISK ASSESSMENT (HRA)**

October 9, 2024

Emissions Inventory Facility ID: 9165

Toxics Emissions Inventory Year: 2021

Review Conducted by: Stephen Amberg, SDAPCD

A Health Risk Assessment (HRA) was performed for Martin Marietta San Diego Aggregates, LLC (Martin Marietta), 8514 Mast Blvd., Santee, CA 92071 by Taylor Environmental for emissions in calendar year 2021 and submitted to the District for review on October 9, 2023 (Submittal HRA). The District provided District's comments on the HRA along with comments provided from the Office of Environmental Health Hazard Assessment (OEHHA) to Martin Marietta on June 4, 2024. Martin Marietta submitted a revised HRA (Revised HRA) to the District on August 2, 2024. Subsequently, a correction was made to the emissions inventory and a revised HRA was requested on September 16, 2024. Martin Marietta submitted an updated revised health risk assessment (Updated Revised HRA) on October 4, 2024.

The following are the District's comments and the results of the Updated Revised HRA

**Approved HRA Results**

Point of Maximum Impact (PMI) Cancer Risk	466 in a million
Maximum Exposed Individual Resident Cancer Risk	32.90 in a million
Maximum Exposed Individual Worker Cancer Risk	37.08 in a million
Maximum Non-Cancer Chronic Health Hazard Index (PMI)	27.17
Maximum Residential Non-Cancer Chronic Health Hazard Index	1.91
Maximum Worker Non-Cancer Chronic Health Hazard Index	14.41
Maximum Worker 8-Hour Non-Cancer Chronic Health Hazard Index	5.74
Maximum Acute Health Hazard Index (PMI)	3.77
Maximum Residential Acute Health Hazard Index	0.671
Maximum Worker Acute Health Hazard Index	2.23
Population Excess Cancer Burden	1.03
Sub-Chronic Lead Exposure Risk	<0.12 µg/m <sup>3</sup>

The 30-day lead concentration at the Maximum Offsite Concentration (MOC), using EPA's AERMOD model, is estimated to be 0.0294 µg/m<sup>3</sup>, which is below the High Exposure Scenario approval level of 0.12 µg/m<sup>3</sup> in the ARB Risk Management Guidelines for Lead, 2001. Lead emissions were estimated based on annual emissions being emitted in a 30-day period.

Major Pollutant and Source Contributions for Selected Risks

Residential cancer risk at the MEIR is mainly due to the haul roads (90%). The main pollutant contributing to this risk is Arsenic (96%).

Occupational cancer risk at the MEIW is mainly due to the haul roads (98%). The main pollutant contributing to this risk is Arsenic (91%).

Non-cancer chronic risk at the MEIR is mainly due to the haul roads (92%). The main pollutant contributing to this risk is Arsenic (92%) and Manganese (8%).

Non-cancer chronic risk at the MEIW is mainly due to the haul roads (98%). The main pollutant contributing to this risk is Arsenic (88%) and Manganese (12%).

Acute risk at the MEIW is mainly due to the haul roads (94%). The main pollutant contributing to this risk is Arsenic (100%).

The Revised HRA concludes that the residential and occupational cancer risk, the residential and occupational chronic HHI, the acute HHI, and the cancer burden exceed the public notification levels specified in District Rule 1210.

**Locations of Receptors at Maximum Exposure Points**

<b>Receptor - Cancer Risk</b>	<b>Risk (1 in 1 million)</b>	<b>x (m)</b>	<b>y (m)</b>
Point of Maximum Impact Cancer Risk (PMI)	466	497239.6	3635725.8
Maximum Exposed Individual Resident Cancer Risk (MEIR)	32.90	498639.6	3636025.8
Maximum Exposed Individual Worker Cancer Risk (MEIW)	37.08	497239.6	3635625.8

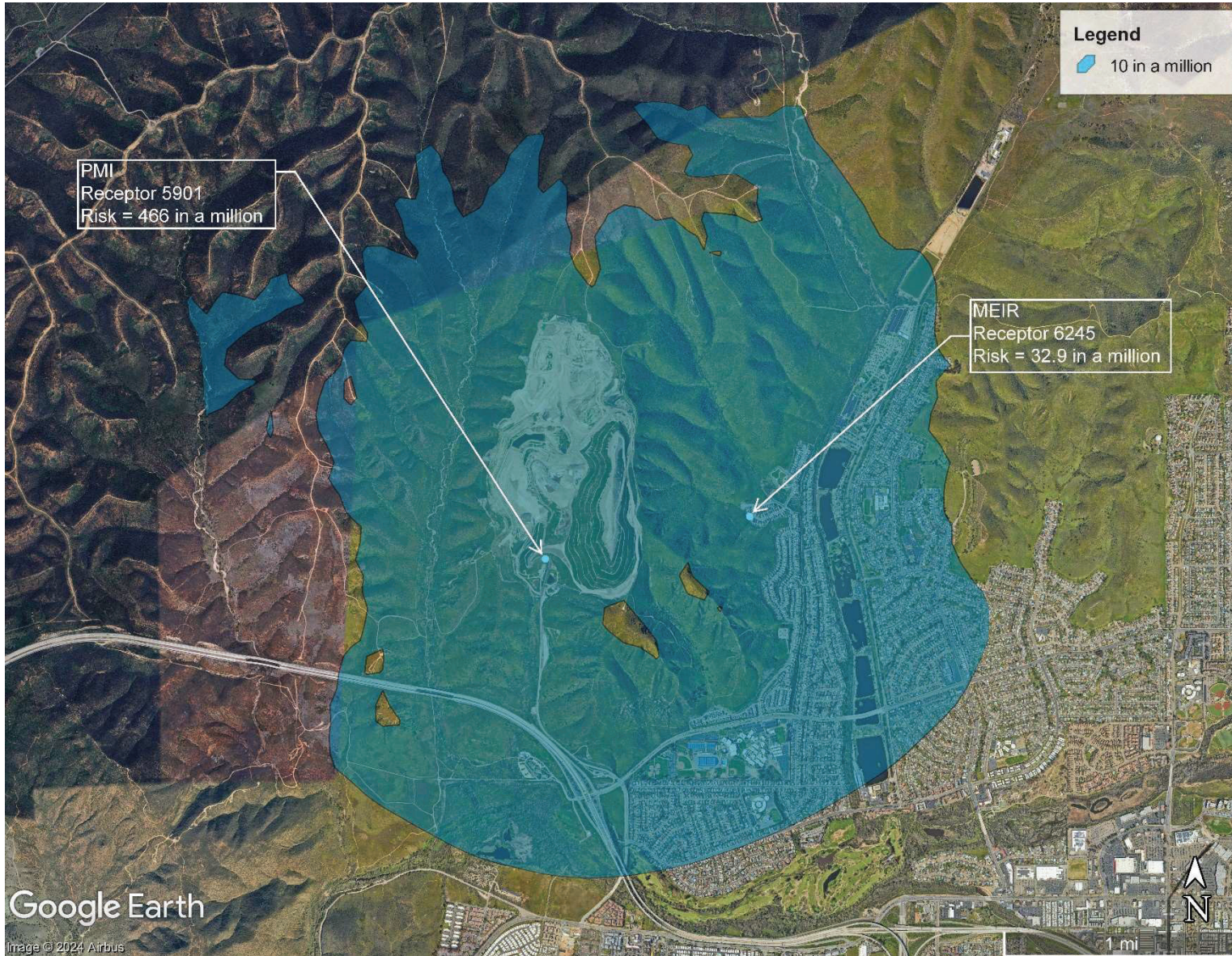
<b>Receptor - Non-Cancer Chronic Health Hazard Index</b>	<b>Health Hazard Index</b>	<b>x (m)</b>	<b>y (m)</b>
Maximum Non-Cancer Chronic Health Hazard Index (PMI)	27.17	497239.6	3635725.8
Maximum Residential Non-Cancer Chronic Health Hazard Index (MEIR)	1.91	498639.6	3636025.8
Maximum Worker Non-Cancer Chronic Health Hazard Index (MEIW)	14.41	497239.6	3635625.8
Maximum Worker 8-Hour Non-Cancer Chronic Health Hazard Index (MEIW)	5.74	497239.6	3635625.8

<b>Receptor - Acute Health Hazard Index</b>	<b>Health Hazard Index</b>	<b>x (m)</b>	<b>y (m)</b>
Maximum Acute Health Hazard Index (PMI)	3.77	497214.6	3635450.8
Maximum Residential Acute Health Hazard Index (MEIR)	0.671	496602.39	3633341.77
Maximum Worker Acute Health Hazard Index (MEIW)	2.225	497239.6	3635625.8

The geographic coordinate system for the locations is the North American Datum of 1983.

**Contours for Selected Risk and Health Hazard Index Calculations:**





**Figure 9 - Resident Maximum Individual Cancer Risk**





Figure 10 - Worker Maximum Individual Cancer Risk



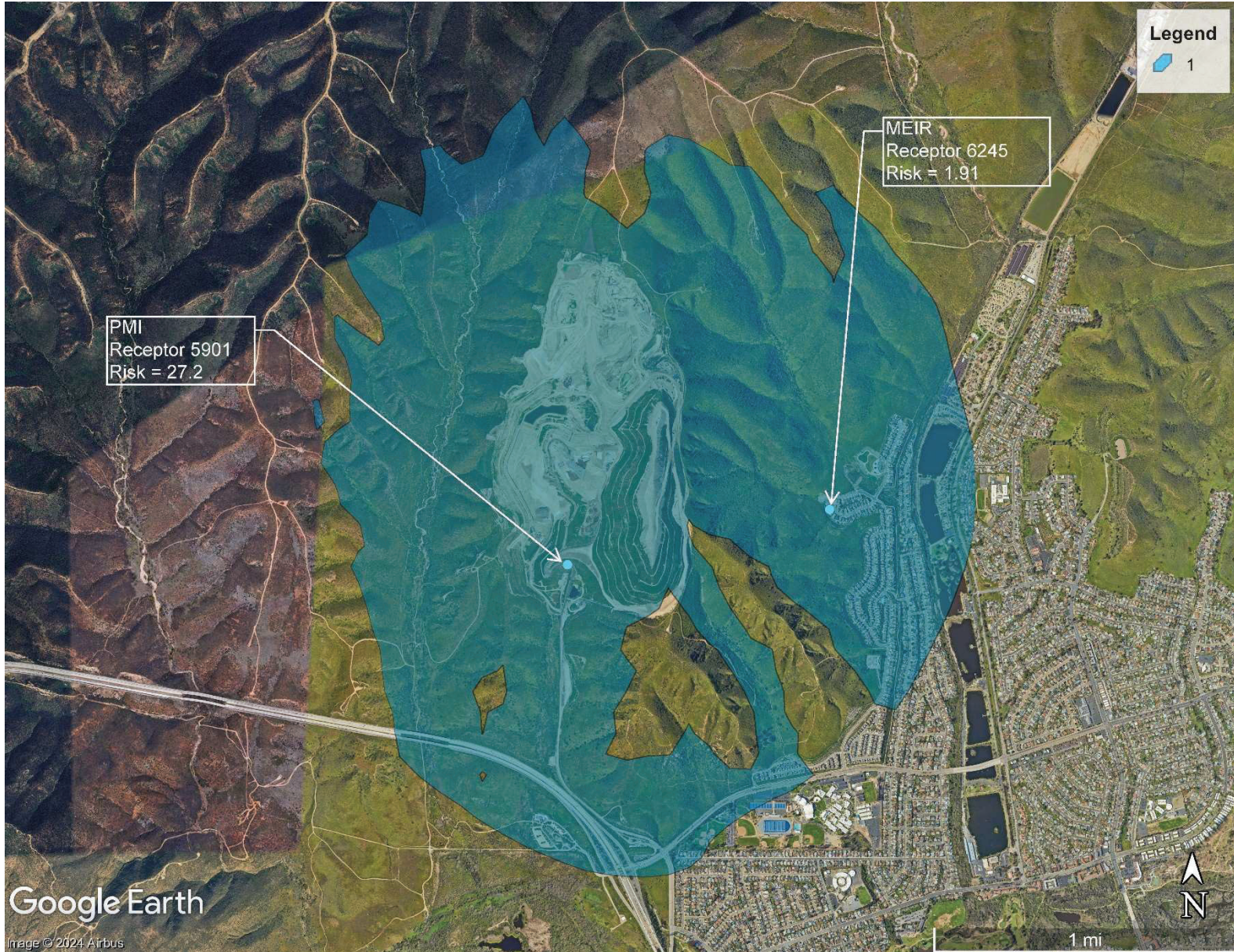


Figure 11 - Resident Chronic Risk



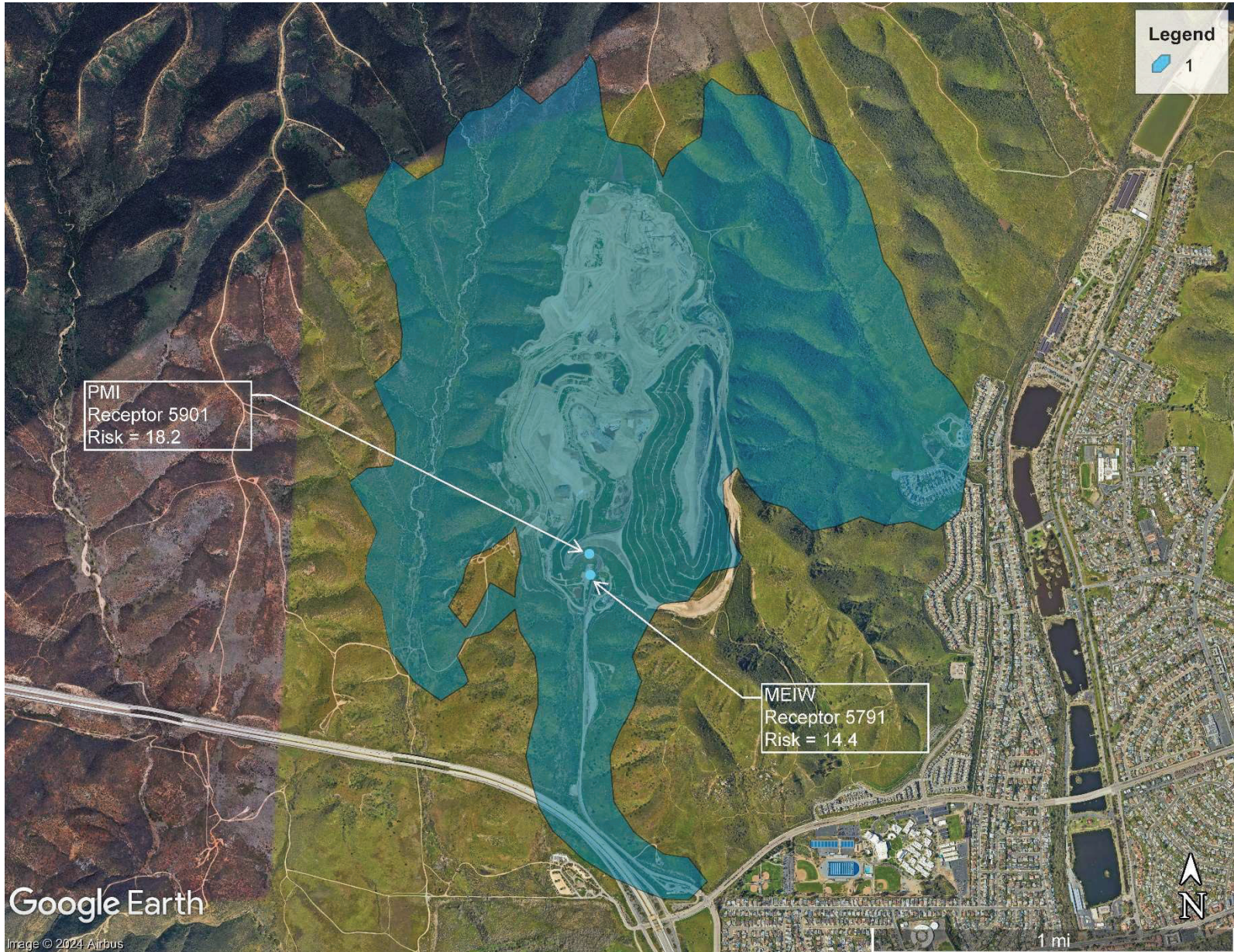


Figure 12 - Worker Chronic Risk





Figure 14 - Acute Risk