REVIEW OF VULCAN MATERIALS COMPANY
AB2588 HEALTH RISK ASSESSMENT (HRA)

April 22, 2026

Emissions Inventory Facility ID: 200806448

Toxics Emissions Inventory Year: 2023

Review Conducted by: Maria Galvez, SDAPCD

A Health Risk Assessment (HRA) was performed for Vulcan Materials Company, for the operation at 2275 Hard Rock Road, Chula Vista, CA 91911, by Sespe Consulting for emissions in calendar year 2023 and submitted to the San Diego County Air Pollution Control District (SDAPCD) for review on March 18, 2025. The SDAPCD provided comments on the HRA along with comments provided from the Office of Environmental Health Hazard Assessment (OEHHA) to Vulcan Materials Company on February 4, 2026. Vulcan Materials Company submitted a revised HRA to the SDAPCD on April 6, 2026. The SDAPCD revised the HRA, and the following are the approved results of the revised HRA.

Approved HRA Results

Maximum Individual Excess Cancer Risk (PMI)	39.46 in a million
Maximum Residential Excess Cancer Risk	3.65 in a million
Maximum Occupational Excess Cancer Risk	0.21 in a million
Maximum Chronic Non-Cancer Health Hazard Index (PMI)	2.31
Maximum Residential Chronic Non-Cancer Health Hazard Index	0.21
Maximum Occupational Chronic Non-Cancer Health Hazard Index	0.08
Maximum 8-Hour Occupational Non-Cancer Health Hazard Index	0.03
Maximum Acute Health Hazard Index (PMI)	5.79
Maximum Residential Acute Health Hazard Index	1.46
Maximum Occupational Acute Health Hazard Index	1.12
Population Excess Cancer Burden	0.01

A map showing the area impacted by the acute HHI above the threshold of Rule 1210 is attached to this report.

Summary of Health Impacts by Pollutant and Source

Acute risk at the MEIR is mainly due to the quarry (99%). The main pollutant contributing to this risk is Nickel (100%).

Acute risk at the MEIW is mainly due to the quarry (95%). The main pollutant contributing to this risk is Nickel (100%).

The HRA concludes that the acute health hazard index exceeds the level for public notification and risk reduction specified in SDAPCD Rule 1210.

Comments on the revised HRA

The 1-hour dispersion modeling was re-run with the following changes: AERMAP terrain processing was updated with NED 1/3 terrain data (10 m spacing) to further refine the model for terrain impacts; the met station base elevation was corrected; and receptor heights were set to 0.0 m. Additionally, the revised HRA submitted by Vulcan Materials incorrectly applied quarry emissions (Device 318002 – mining and dozing) to the haul road leading to the quarry. The approved results appropriately include the emissions from device 318002 applied to the quarry area source, PAREA2.

Locations of Receptors at Maximum Exposure Points

Receptor - Cancer Risk	Risk (in 1 million)	x (m)	y (m)
Point of Maximum Impact Cancer Risk (PMI)	39.46	501,289.11	3,606,394.54
Maximum Exposed Individual Resident Cancer Risk (MEIR)	3.65	500,567.36	3,606,939.36
Maximum Exposed Individual Worker Cancer Risk (MEIW)	0.21	500,251.14	3,606,839.14

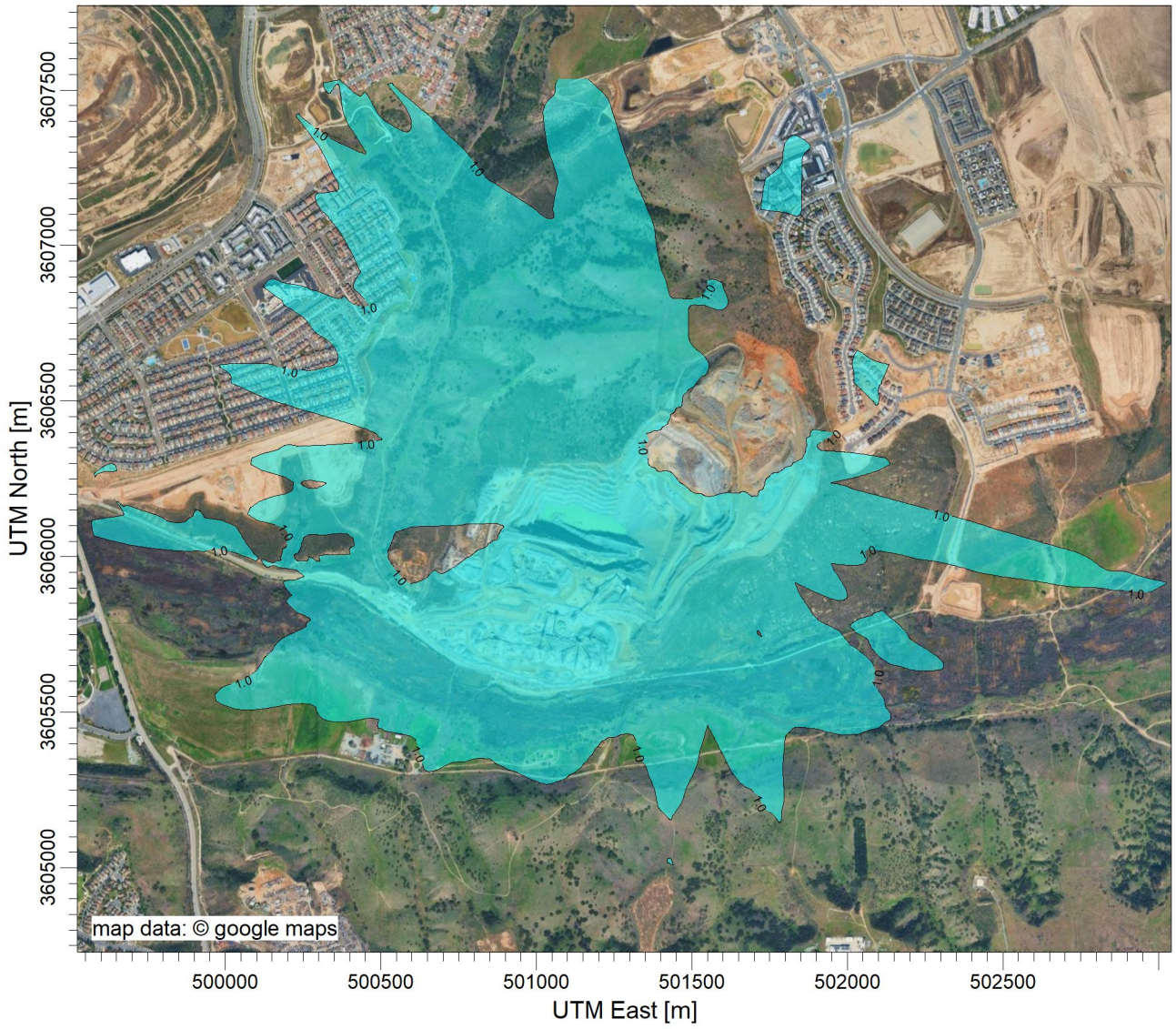
Receptor - Non-Cancer Chronic Health Hazard Index	Health Hazard Index	x (m)	y (m)
Maximum Non-Cancer Chronic Health Hazard Index (PMI)	2.312	501,289.11	3,606,394.54
Maximum Residential Non-Cancer Chronic Health Hazard Index (MEIR)	0.21	500,567.36	3,606,939.36
Maximum Worker Non-Cancer Chronic Health Hazard Index (MEIW)	0.08	500,251.14	3,606,839.14
Maximum Worker 8-Hour Non-Cancer Chronic Health Hazard Index (MEIW)	0.03	500,251.14	3,606,839.14

Receptor - Acute Health Hazard Index	Health Hazard Index	x (m)	y (m)
Maximum Acute Health Hazard Index (PMI)	5.79	501,551.68	3,606,136.69
Maximum Residential Acute Health Hazard Index (MEIR)	1.46	502,031.68	3,606,566.69
Maximum Worker Acute Health Hazard Index (MEIW)	1.12	500,251.14	3,606,839.14

*The geographic coordinate system for the locations is the North American Datum of 1983, Zone 11.

PROJECT TITLE:

2023 Vulcan Chula Vista AB2588 HRA
Acute Notification Isopleth



PLOT FILE OF HIGH 1ST HIGH 1-HR VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 5.8 [ug/m^3] at (501551.68, 3606136.69)

1.0 5.8

COMMENTS:	SOURCES: **11**	COMPANY NAME:	
	RECEPTORS: **12016**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:22,126 0 0.5 km	
	MAX: **5.8 ug/m^3**	DATE: **4/14/2026**	PROJECT NO.: