

**REVIEW OF PACIFIC SHIP REPAIR & FABRICATION INC.
AB2588 HEALTH RISK ASSESSMENT (HRA)**

January 20, 2022

Emissions Inventory Facility ID: 7067

Toxics Emissions Inventory Year: 2019

Review Conducted by: Peter Ossowski, SDAPCD

A Health Risk Assessment (HRA) was performed for Pacific Ship Repair & Fabrication Inc., 1625 Rigel St., San Diego, CA 92113 by BlueScape Environmental for emissions in calendar year 2019 and submitted to the District for review on April 13, 2021 (Submittal HRA). The District provided District's comments on the HRA along with comments provided by the Office of Environmental Health Hazard Assessment (OEHHA) to Pacific Ship Repair & Fabrication Inc. on June 30, 2021. Pacific Ship Repair & Fabrication Inc. submitted a Revised HRA to the District on August 27, 2021. Subsequently, the District reviewed the Revised HRA and Modified and Approved the HRA on January 20, 2022.

The following are the District's comments on the Revised HRA and, in addition, the results of the District Modified and Approved HRA.

Summary of District Modified and Approved Health Risk Assessment Results:

Point of Maximum Impact (PMI) Cancer Risk	867.7 in a million
Maximum Exposed Individual Resident Cancer Risk	48.2 in a million
Maximum Exposed Individual Worker Cancer Risk	121.5 in a million
Maximum Chronic Non-Cancer Health Hazard Index (PMI)	0.19
Maximum Residential Chronic Non-Cancer Health Hazard Index	0.01
Maximum Worker Chronic Non-Cancer Health Hazard Index	0.08
Maximum 8-Hour Chronic Occupational Non-Cancer Health Hazard Index	0.08
Maximum Acute Health Hazard Index (PMI)	3.98
Maximum Residential Acute Health Hazard Index	0.62
Maximum Worker Acute Health Hazard Index	3.00
Population Excess Cancer Burden	0.16
Sub-Chronic Lead Exposure Risk	<0.12 µg/m ³

Since annual lead emissions at the site are less than the 0.038 lb/yr volume source de minimis level (modeled with AERMOD) at 10 m distance), the 30-day lead concentration at the point of Maximum Offsite Concentration (MOC) can be assumed to be less than

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the High Exposure Scenario approval level of 0.12 ug/m³ in the ARB Risk Management Guidelines for Lead, 2001. Worst-case generic release parameters were assumed, and lead emissions were estimated based on annual emissions being emitted in 30 days.

The facility's sources include:

- Abrasive Blasting
- Coating
- Solvent Cleaning
- Welding

Summary of Health Impacts by Pollutant and Source:

Cancer risk at the MEIR is mainly due to Hexavalent Chromium (99.8%) and Nickel (0.2%).

Cancer risk at the MEIR is mainly due to welding shop - NW end (68%), welding shop - SE end (22%), pipe fitting shop (7%), and sheet metal shop (3%).

Cancer risk at the MEIW is mainly due to Hexavalent Chromium (99.8%) and Nickel (0.2%).

Cancer risk at the MEIW is mainly due to welding shop - NW end (77%), welding shop - SE end (18%), pipe fitting shop (4%), and sheet metal shop (1%).

The Acute HHI at the MEIW is due to Nickel (100%).

The Acute HHI at the MEIW is due to welding shop - NW end (62%), welding shop - SE end (33%), pipe fitting shop (4%), and sheet metal shop (1%).

The Revised and District's Modified and Approved HRA concludes that cancer risk and the acute noncancer index do exceed the significant risk thresholds specified in District Rule 1210.

Location of Receptors at Maximum Exposure Points:

Universal Transverse Mercator (UTM)	X (m)	Y (m)
Cancer Risk at the PMI	488727.72	3616883.7
Cancer Risk at the MEIR	488542	3616894
Cancer Risk at MEIW	488682	3617054
Chronic Non-Cancer Health Hazard Index (PMI)	488646.62	3617013.1
Chronic Non-Cancer Health Hazard Index (MEIR)	488542	3616894
Chronic Non-Cancer Health Hazard Index (MEIW)	488682	3617054

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Acute Non-Cancer Health Hazard Index (PMI)	488677.89	3617003.18
Acute Non-Cancer Health Hazard Index (MEIR)	488842	3617154
Acute Non-Cancer Health Hazard Index (MEIW)	488682	3617034

UTM was used for the geographic coordinate system with the North American Datum of 1983 (NAD83).

Changes to the Revised HRA:

Sub-Chronic Lead Exposure risk analysis was completed according to the District's de minimis level.

No community gardens were found within the zone of impact, so the homegrown produce pathway was removed.