



San Diego County Air Pollution Control District

BAE Systems – San Diego Ship Repair

Public Meeting

June 20, 2023



Background Air Toxics “Hot Spots” Program



Background

Air Toxics “Hot Spots” Program

Health Risk Assessment

- As required by State law, BAE conducted a Health Risk Assessment based on emissions that occurred in 2017

Approval

- State law requires the District and the Office of Environmental Health Hazard Assessment (OEHHA) to review and approve Health Risk Assessments conducted by facilities subject to the Hot Spots Program

Requirements

- Based on the approved Health Risk Assessment, BAE was required to conduct public notification and submit a risk reduction plan to the District



Elevated Health Risks BAE Systems' 2017 Emissions

Health Risk	HRA Results	Risk Notification Thresholds	Risk Reduction Thresholds
Maximum Worker Cancer Risk	14.2 in one million	10 in one million	100 in one million (10 in one million for 2018 and later emissions)
Acute Health Hazard Index	2.44	1.0	1.0





BAE Systems

- Ship repair facility
- 2204 E Belt St, San Diego



BAE Systems Equipment

Coating Operations

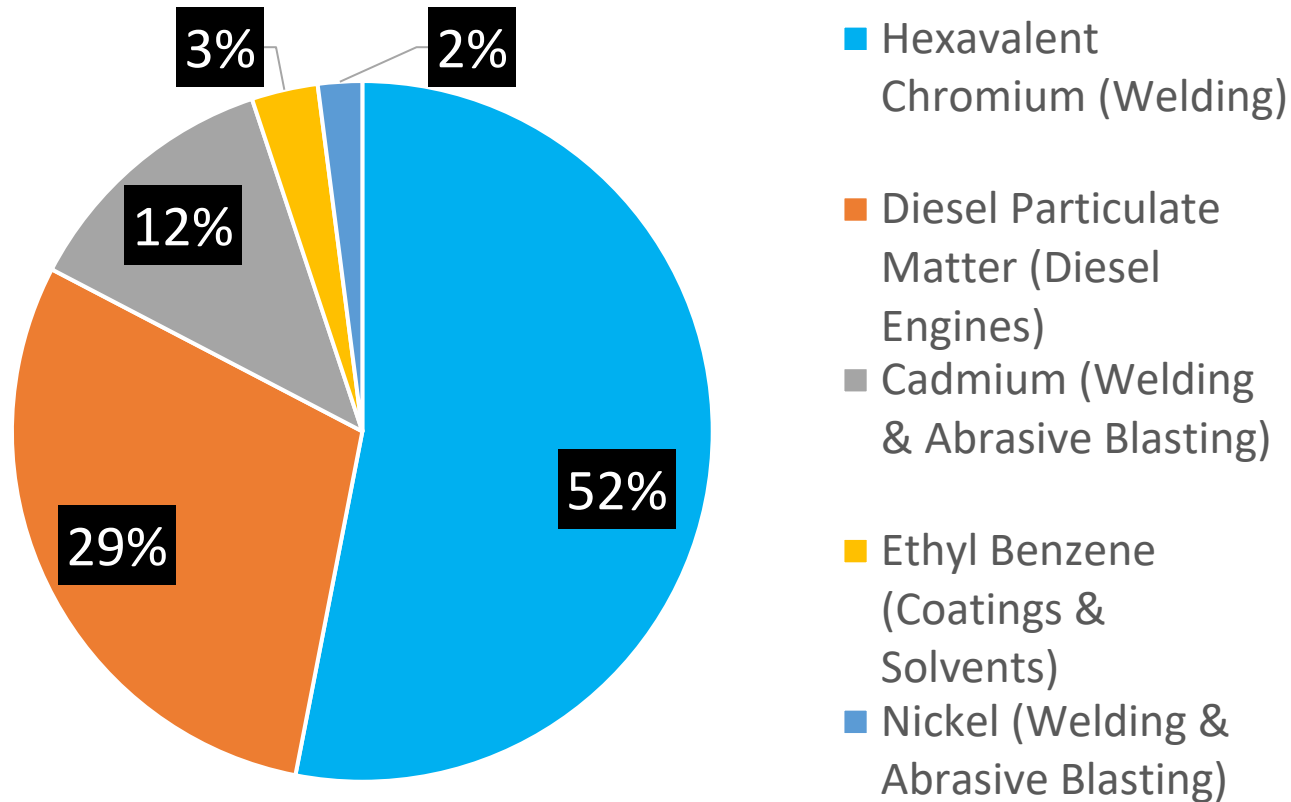
Abrasive Blasting

Welding

Diesel Engines

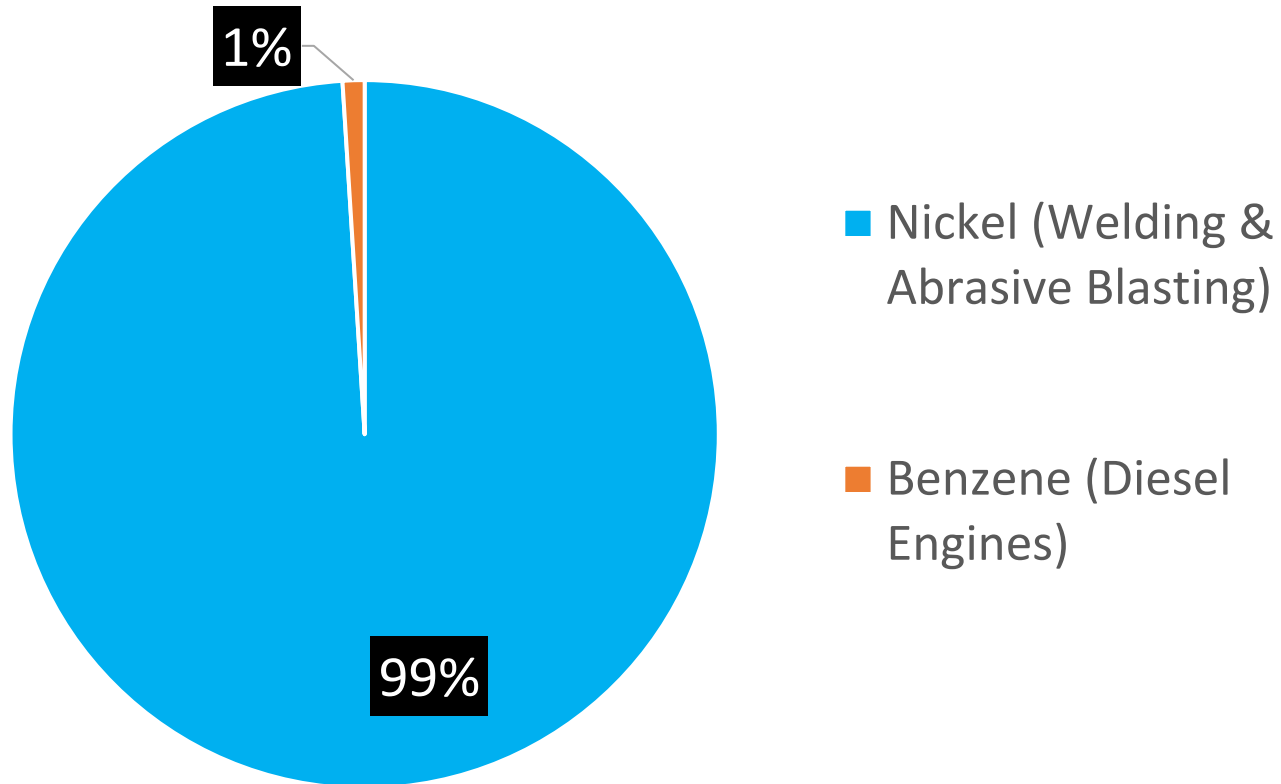
Emission Contributions

Worker Cancer Risk 14.2 in One Million



Emission Contributions

Worker Acute Health Hazard Index of 2.44



BAE's Risk Reduction Plan

May 2022

- Plan was submitted to the District

September 2022

- Revised Plan was submitted to the District, which proposes to:
 - Utilize an alternate method to replace some of the welding for pipe connections to reduce toxic emissions
 - Limit the daily use of some of the welding rods
 - Maintain specific recordkeeping

Current Status

- District proposed permit conditions that align with BAE's proposal
- Proposed permit conditions are still being discussed between BAE and the District



Factual Corrections to 2017 HRA BAE Systems SDSR - Nickel Emissions

Category	HRA Corrections	Impact
Weld rod consumption rate	Confirmed one spool is used over several shifts – not over two 4-hour shifts	Material reduction in emissions calculation
Maximum wire spool weight	Confirmed 11-lb wire spool – not 15-lb wire spool	27% reduction in hourly usage rate
Location of Volume Sources	Corrected source locations and aligned with ships and dry dock locations	Lower estimated risk due to longer distance to receptors

Factual Corrections to 2017 HRA BAE Systems SDSR - Nickel Emissions

BAE SYSTEMS SDSR :

2017 HRA used conservative assumptions based on available data.

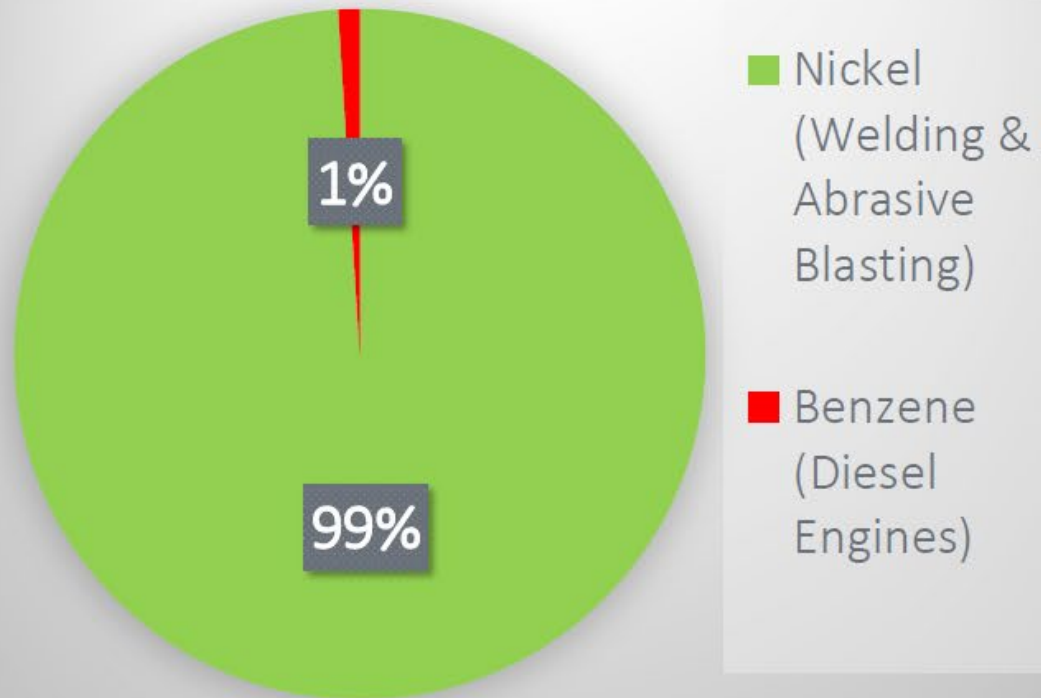
*Current data shows **67-88%** reduction in nickel emissions compared to previous years.*

Had more accurate data been available and recorded at the time, there is a high likelihood an HRA would not have been triggered.

Health Risks Using Correct Facts BAE Systems SDSR - 2017 Emissions

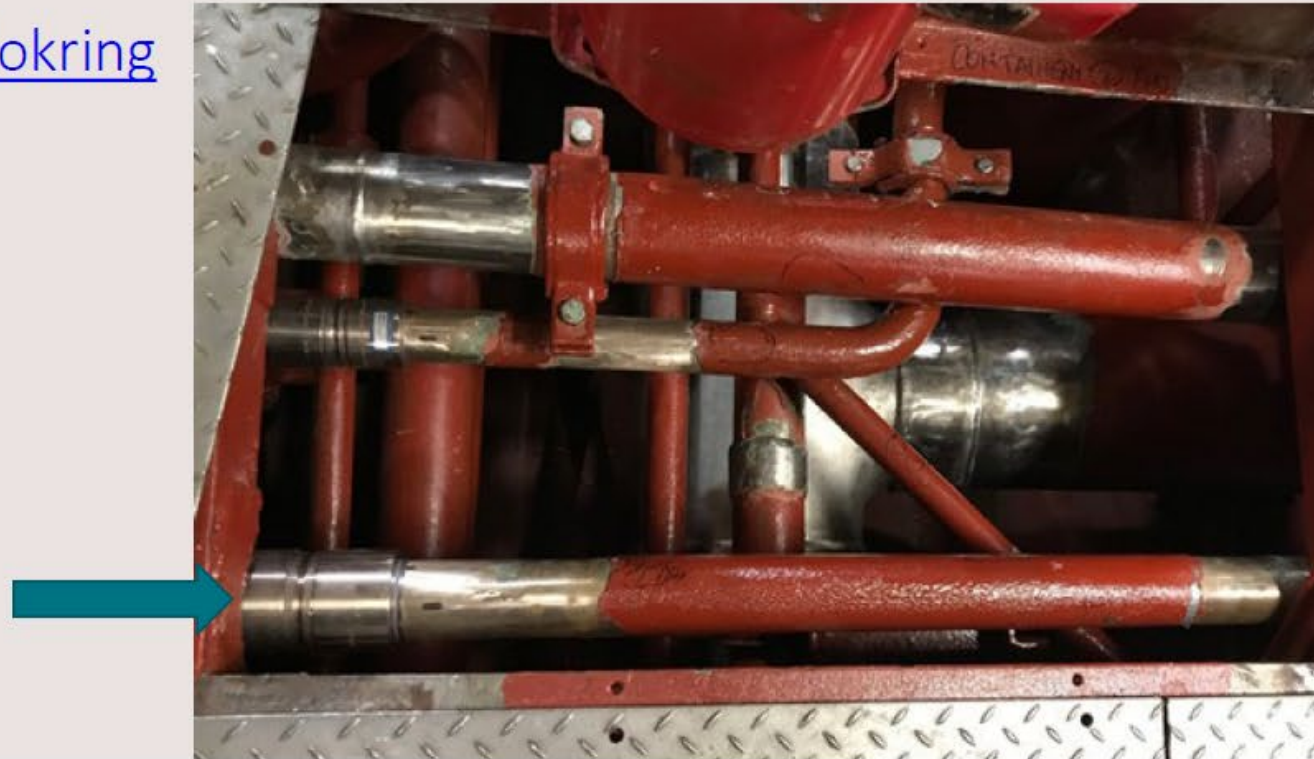
Health Risk	2017 HRA Results	Revised HRA
Maximum Worker Acute Health Hazard Index	2.44	1.05

Revised Worker Acute Non-Cancer Isopleth



Emission Reduction Efforts

- Mechanically Attached Fittings – Reduces Copper Nickel welding of pipe fittings on ships
- [MAF Fitting Example - Lokring](#)



Emission Reduction Efforts

- More accurate tracking of welding consumables used on a daily basis
 - Semi-automated check out and check in procedure for BAE Systems employees
 - Requesting daily usage from subcontractors and government sponsored contractors

Next Steps



District to take final action on Risk Reduction Plan and make it enforceable

BAE to implement the RRP

Annual notifications will continue until the plan is fully implemented and the risks are below the thresholds

BAE is required to submit another Heath Risk Assessment based on their 2021 emissions by November 7, 2023



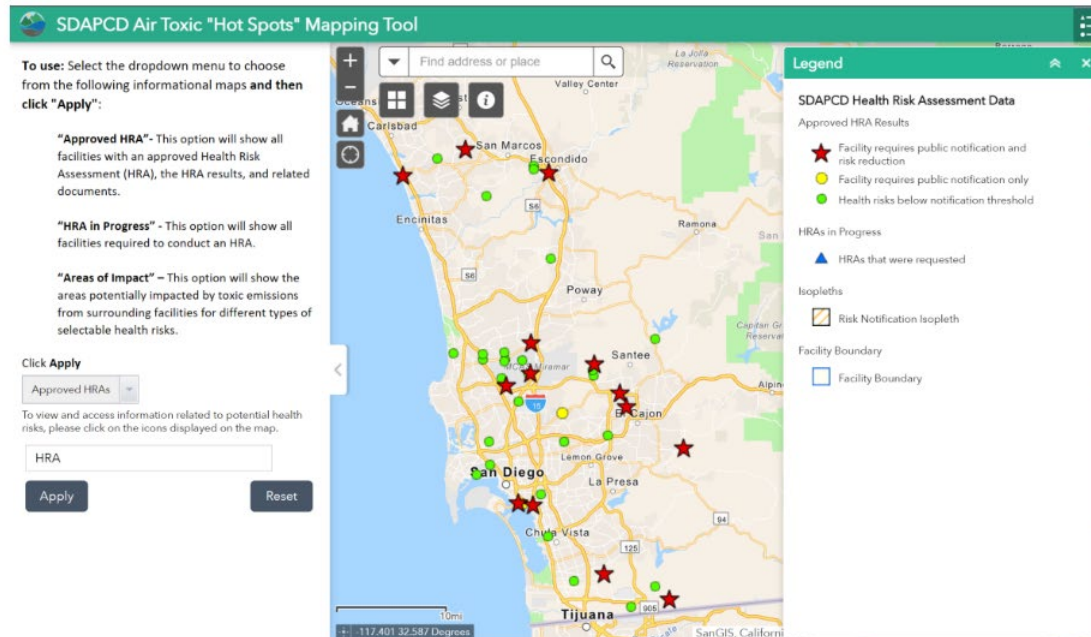
Stay Informed

Sign up for District Updates

- <https://bit.ly/SDAPCD-Updates>

Visit District Hot Spots Page

- <https://sdapcd.org/hotspots>



Procedures & Guidelines

Public Documents for "Hot Spots" Facilities

The facilities listed below are subject to the notification requirements of the "Hot Spots" program. Select a facility to see documents related to this program. The most recent facility documents below are also available when viewing a facility record in the SDAPCD Air Toxics "Hot Spots" Mapping Tool presented above.

BAE Systems Ship Repair - San Diego - 92113 - 2017

Pacific Ship Repair - San Diego - 92113 - 2019

Vulcan Materials (Carrol Canyon) - San Diego - 92126 - 2017

Superior Ready Mix (Escondido Asphalt) - Escondido - 92024 - 2019

Encina Wastewater Authority - Carlsbad - 92011 - 2017

Minnesota Methane - San Diego - 92111 - 2018

Vulcan Materials (Otay) - San Diego - 92154 - 2019

Otay Landfill - Chula Vista - 91911 - 2017

