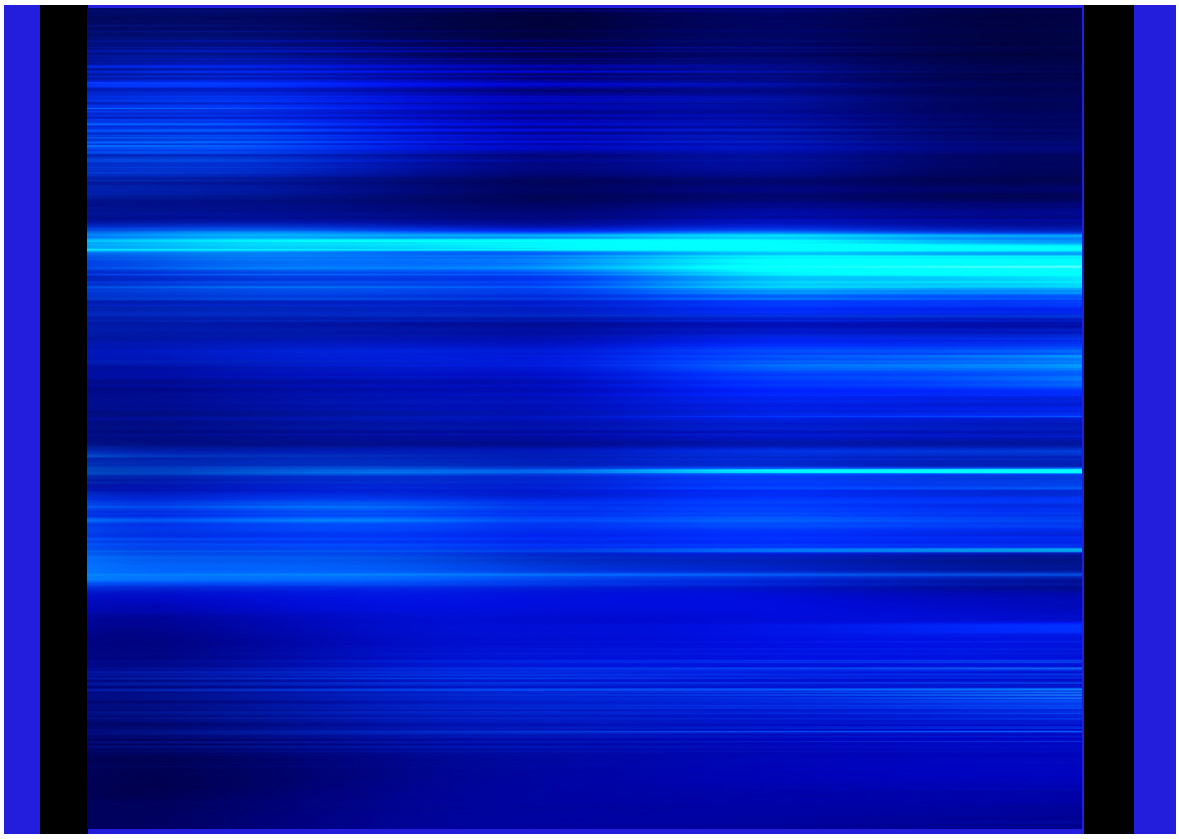
Air Quality and Health Risk Assessment Report

Revision: 1

Austal USA Floating Dry Dock Project
Austal USA

April 25, 2025



Executive Summary

Austal USA is a US government and commercial contractor that specializes in the repair and maintenance of ships for the US Department of the Navy (Navy), other governmental entities, and commercial customers. The Austal USA Floating Dry Dock Project (proposed project) entails constructing and operating a floating dry dock (FDD) at the Austal USA facility located on San Diego Bay in National City, California (Figure ES-1). The proposed project would provide governmental and commercial customers, including the Navy, with ship repair and maintenance capabilities under a 66-year commercial lease agreement. The proposed project location is immediately south of and adjacent to Naval Base San Diego 32nd Street Naval Station, and immediately north of and adjacent to the Port of San Diego's National City Marine Terminal in San Diego Bay, San Diego County, California.

This Health Risk Assessment (HRA) was prepared to evaluate and document project-related emissions and their potential health-related air quality impacts to support the Draft Environmental Impact Report (EIR) for the proposed project (Austal USA 2025).

Permitted operational emission sources would include stationary diesel emergency generators, portable diesel emergency engines, abrasive blasting, welding, adhesive use, and marine coating and solvent use. Nonpermitted sources as part of operations would include maritime vessels, haul trucks, and worker commute vehicles. Hourly and annual toxic air contaminant (TAC) emissions estimated for the proposed project are summarized in Tables 4-2 through 4-5 in Section 4 of this report, and emission calculations are detailed in Attachments 1 and 2 for operation and construction, respectively.

This HRA evaluated potential human health risks associated with exposure to pollutant concentrations resulting from net increases of project-related TAC emissions estimated for construction or operation. In accordance with an approved protocol, the HRA was developed using air dispersion modeling of the project-related emissions and characterization of the resultant exposures and health risks using approved risk assessment methodology for both carcinogenic (cancer-causing) and noncarcinogenic risks from California Office of Environmental Health Hazard Assessment's (OEHHA's) *Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015), California Air Resources Board's (CARB's) *Risk Management Guidance for Stationary Sources of Air Toxics* (CARB 2015), and San Diego Air Pollution Control District's (SDAPCD's) *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments (HRAs)* (SDAPCD 2022a).

The results of the HRA are described in this report. Three different types of health risks were evaluated: the potential for an incremental increase in lifetime cancer risks, non-cancer chronic health effects, and non-cancer acute health effects. Potential exposures and health risks were estimated at residential, workplace, and sensitive receptor locations near the project site, including the point of maximum impact (PMI), maximally exposed individual resident (MEIR), maximally exposed individual worker (MEIW), and the maximally exposed sensitive receptor (MESR) near the facility. In the EIR, results of the HRA have been compared to SDAPCD's recommended significance criteria for health effects to support a finding that TAC emissions from proposed project-related construction and operational emission sources (permitted and nonpermitted) would have a less than significant impact on air quality. HRA results are summarized in Table ES-1, and additional HRA results and details are presented in Section 4.3 of this report and in Attachments 3 and 4 for operation and construction, respectively.

Table ES-1. Summary of Operational Risk Assessment Results

Operational Health Risk Impacts	Operation Result[a, b]	Construction Result[a]
Cancer PMI	17.92 in a million	11.15 in a million
Cancer MEIR	0.33 in a million	0.05 in a million
Cancer MEIW	1.85 in a million	0.64 in a million
Cancer MESR	0.18 in a million	0.09 in a million
Chronic Non-cancer Health Hazard Index (PMI)	0.80	0.10
Chronic Non-cancer Health Hazard Index (MEIR)	0.01	< 0.01
Chronic Non-cancer Health Hazard Index (MEIW)	0.17	0.02
Chronic Non-cancer Health Hazard Index (MESR)	< 0.01	< 0.01
Acute Non-cancer Health Hazard Index (PMI)	1.63	0.02
Acute Non-cancer Health Hazard Index (MEIR)	0.19	< 0.01
Acute Non-cancer Health Hazard Index (MEIW)	0.91	0.02
Acute Non-cancer Health Hazard Index (MESR)	0.11	< 0.01
Population Excess Cancer Burden	0.00	N/A

[a] Cancer risk in terms of predicted number (of persons) per one million individuals exposed, while non-cancer risk is presented as a hazard index.

[b] Risk assessment results include permitted and nonpermitted sources.

< = less than

N/A = not applicable

US Environmental Protection Agency's (EPA's) Air Dispersion Modeling Tool (AERMOD) was used in conjunction with CARB's Hot Spots Analysis and Report Program Tool (HARP) in this analysis. The most recent version of HARP2 (Version 22118) (CARB 2022), with the revised unit risk and cancer potency values, updated January 2025, was used for the analysis of potential exposures and health risks associated with project-related TAC emissions. Table ES-2 summarizes HARP2 inputs that are further discussed in Section 4 of this report.

Table ES-2. Summary of HARP2 Inputs

Analysis Type	Cancer	Non-Cancer Chronic	Non-Cancer Acute
Receptor Type	Individual resident Worker	Individual resident Worker	Worker
Model Exposure Pathways	Inhalation Soil ingestion Dermal absorption Mother's milk	Inhalation Soil ingestion Dermal absorption Mother's milk	Inhalation
Exposure Duration	30 years 25 years 70 years (burden)	30 years 25 years	N/A
Intake Rate Percentile	RMP using the derived method OEHHA-derived method	N/A	N/A
Deposition Rate	0.05 meters per second	0.05 meters per second	0.05 meters per second
Worker Adjustment Factor	4.2	4.2	N/A

Analysis Type	Cancer	Non-Cancer Chronic	Non-Cancer Acute
Exposure Frequency	250 days per year[a]	250 days per year	N/A
Dermal Climate	Warm	Warm	N/A

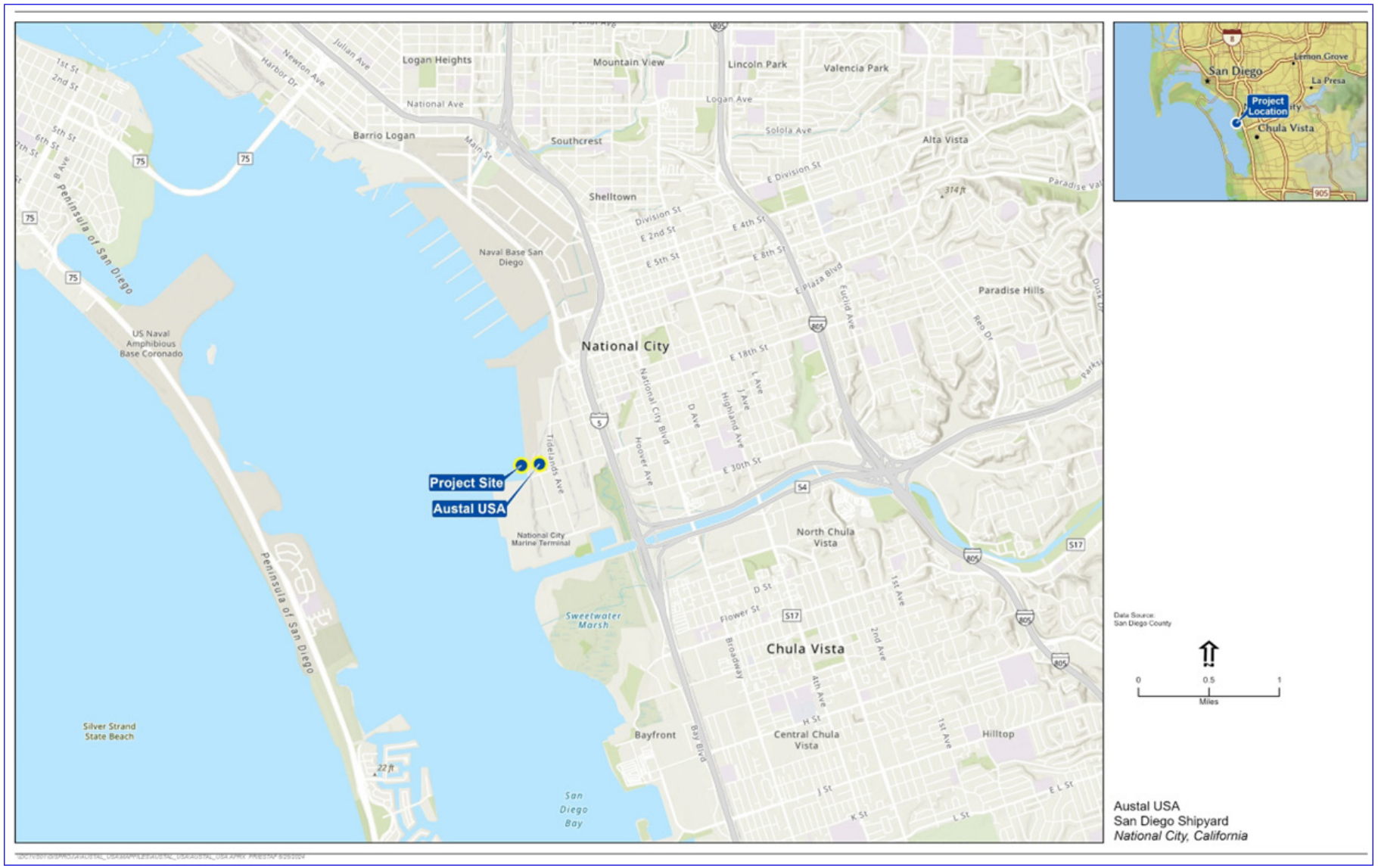
[a] Health effects for receptors at workplace locations were analyzed using the HARP default exposure frequency assumption of 250 days per year, with the following exception. For the specific worker receptor location representing the Naval Training facility north of the Austal fence line, worker cancer risk results were analyzed using a non-default exposure frequency of 125 days per year, because use of this facility is limited to infrequent training activities.

N/A = not applicable

RMP = risk management policy

A virtual meeting was held with Austal USA, Jacobs, and SDAPCD personnel on August 27, 2024, to discuss the proposed project's construction and operation, potential air emissions, and the recommended approaches for an air quality impact analysis (AQIA) and HRA. Followed by this, the AQIA and HRA Protocol (Attachment 5) was submitted to the SDAPCD on September 11, 2024, and approved by SDAPCD on October 1, 2024. Other meetings were conducted with Austal USA, Jacobs, and SDAPCD personnel throughout the duration of AQIA and HRA evaluations that are documented, as applicable, throughout this report.

Figure ES-1. Project Location



Contents

Executive Summary **ES-1**

Acronyms and Abbreviations ..... **iv**

1. Area and Facility Classification **1-1**

2. Project and Facility Description **2-1**

2.1 Emissions Information 2-1

2.1.1 Maritime Vessels 2-2

2.1.2 Adhesive Use 2-2

2.1.3 Marine Coating and Solvent Use 2-3

2.1.4 Abrasive Blasting Operations 2-3

2.1.5 Welding Operations 2-3

2.1.6 Emergency Diesel Engines 2-4

2.1.7 Mobile Sources 2-4

2.1.8 Construction Activities 2-4

2.2 Emissions Summary 2-5

3. Air Dispersion Modeling Methodology **3-1**

3.1 Dispersion Model 3-1

3.2 Operational Source Characterization 3-1

3.2.1 Maritime Vessels 3-1

3.2.2 FDD Operations 3-2

3.2.3 Pier Side Operations 3-3

3.2.4 Operations Building 3-3

3.2.5 Emergency Diesel Engines 3-4

3.2.6 Haul Road 3-4

3.3 Construction Source Characterization 3-8

3.4 Building Downwash 3-13

3.5 Ambient Air Boundary 3-14

3.6 Rural Versus Urban Option 3-16

3.7 Meteorological Data 3-16

3.8 Receptors 3-18

3.9 Operational Factor 3-19

4. Health Risk Assessment **4-1**

4.1 Environmental Analysis 4-1

4.1.1 Risk Types 4-1

4.1.2 Toxic Air Contaminant Emissions 4-2

4.2 Health Risk Assessment Methodology 4-11
4.2.1 Health Risk Impact Locations 4-12
4.2.2 Risk and Exposure Type 4-13
4.2.3 Health Risk Modeling Software 4-14
4.2.4 Project Construction 4-15
4.2.5 Project Operation 4-15
4.2.6 Project Construction 4-21
5. References 5-1

Attachments

Attachment 1 Operation Emission Calculations
Attachment 2 Construction Emission Calculations
Attachment 3 Operation Health Risk Assessment Details
Attachment 4 Construction Health Risk Assessment Details
Attachment 5 Approved Protocol
Attachment 6 Memorandum – Toxics Best Available Control Technology Evaluation

Tables

ES-1 Summary of Operational Risk Assessment Results ES-2
ES-2 Summary of HARP2 Inputs ES-2
1-1 San Diego Air Basin Attainment Status 1-1
2-1 Operational Hourly Emissions Summary (Pounds per Hour) 2-5
2-2 Operational Daily Emissions Summary (Pounds per Day) 2-5
2-3 Operational Annual Emissions Summary (Tons per Year) 2-6
2-4 Construction Hourly Emissions Summary (Pounds per Hour) 2-6
2-5 Construction Annual Emissions Summary (Tons per Year) 2-7
3-1 Maritime Vessel Source Modeling Parameters 3-2
3-2 Floating Dry Dock Source Modeling Parameters 3-2
3-3 Pier Side Source Modeling Parameters 3-3
3-4 Operations Building Source Modeling Parameters 3-4
3-5 Emergency Diesel Engines Modeling Parameters 3-4
3-6 Haul Road Source Modeling Parameters 3-5
3-7 Construction Welding Source Modeling Parameters 3-9
3-8 Construction Point Sources Modeling Parameters 3-10
3-9 Onsite Building Coordinates 3-13

3-10 Land Uses in the Proposed Project Area 3-16
3-11 Sensitive Receptors 3-18
4-1 Toxic Air Contaminants Potentially Emitted by the Proposed Project 4-3
4-2 Maximum Hourly Operations Toxic Air Contaminant Emissions Summary (Pounds per Hour) 4-4
4-3 Annual Operations Toxic Air Contaminant Emissions Summary (Pounds per Year) 4-6
4-4 Hourly Construction Toxic Air Contaminant Emissions Summary (lb/hour) 4-10
4-5 Annual Construction Toxic Air Contaminant Emissions Summary (lb/year) 4-10
4-6 Health Risk Significance Threshold Levels for SDAPCD 4-12
4-7 Summary of HARP2 Exposure Pathways 4-14
4-8 Operation HRA Summary – Proposed Project 4-16
4-9 Construction HRA Summary – Proposed Project 4-22

Figures

ES-1 Project Location ES-4
3-1 Operational Model Layout 3-8
3-2 Construction Model Layout 3-13
3-3 Project Ambient Air Boundary 3-15
3-4 Windrose for the 2020 to 2022 Meteorological Data for Sherman Elementary School 3-17
3-5 Modeled Receptors 3-19
4-1 Operational Health Risk Assessment Impact Locations for Cancer and Non-Cancer Chronic 4-17
4-2 Operational Health Risk Assessment Impact Locations for Acute 4-18
4-3 Operations Cancer Residential Risk Isopleths 4-20
4-4 Operations Cancer Worker Risk Isopleth 4-21
4-5 Construction Health Risk Assessment Impact Locations for Cancer and Non-Cancer Chronic 4-23
4-6 Construction Health Risk Assessment Impact Locations for Acute 4-24
4-7 Construction Cancer Risk Isopleths 4-25

Acronyms and Abbreviations

µ	micron(s)
µg/m^3	microgram(s) per cubic meter
AERMAP	American Meteorological Society/Environmental Protection Agency Regulatory Model Terrain Preprocessor
AERMET	American Meteorological Society/Environmental Protection Agency Regulatory Model Meteorological Processor
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AQIA	Air Quality Impact Analysis
BAAQMD	Bay Area Air Quality Management District
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAP	criteria air pollutant
CARB	California Air Resources Board
CAS	Chemical Abstracts Service
CEQA	California Environmental Quality Act
CFR	*Code of Federal Regulations*
CO	carbon monoxide
DoD	Department of Defense
EIR	Environmental Impact Report
EMFAC2021	Emission Factor Model 2021
EPA	United States Environmental Protection Agency
FDD	floating dry dock
HAP	hazardous air pollutant
HARP	Hotspots Analysis and Reporting Program
HEPA	high efficiency particulate air
HI	hazard index
HIA	acute hazard index
HIC	chronic hazard index

hp	horsepower
HRA	health risk assessment
km	kilometer(s)
kW	kilowatt(s)
ID	identification
K	Kelvin
lb	pound(s)
m	meter(s)
m/s	meter(s) per second
MEIR	maximally exposed individual resident
MEIW	maximally exposed individual worker
MESR	maximally exposed sensitive receptor
MET	meteorological data
MGBW	Marine Group Boat Works
MOVES4	Motor Vehicle Emission Simulator
N/A	not applicable
NAAQS	National Ambient Air Quality Standards
NAD83	North American Datum of 1983
Navy	United States Department of the Navy
NBSD	Naval Base San Diego
NLCD	National Land Cover Database
NIH	National Institutes of Health
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
O_3	ozone
OEHHA	California Office of Environmental Health Hazard Assessment
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
PM_{10}	particulate matter less than 10 micrometers in diameter

PMI	point of maximum impact
Port	Port of San Diego
ppb	part(s) per billion
ppm	part(s) per million
PRIME	plume rise model enhancement
REL	reference exposure level
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDS	safety data sheet
SIL	significant impact level
SO_2	sulfur dioxide
SO_X	oxides of sulfur
TAC	toxic air contaminant
ULSD	ultra-low sulfur diesel
US	United States
USAF	United States Air Force
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. Area and Facility Classification

The proposed project site is in the San Diego Air Basin (SDAB), which encompasses all of San Diego County and is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD).

Air quality monitoring data measured over time are used to evaluate an area's compliance with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Areas with air quality better than an established standard are classified as being in "attainment" for that pollutant and standard. If the measured pollutant concentrations meet or exceeds a standard, the area is classified as a "nonattainment" area for that pollutant. The severity of the nonattainment designation can vary from moderate to extreme. If data is not available or sufficient to determine whether a standard is exceeded in an area, the area is designated as "unclassified."

Table 1-1 presents the attainment/nonattainment status of the SDAB with respect to the NAAQS and CAAQS for each regulated criteria air pollutant (CAP). CAPs include ozone (O_3), carbon monoxide (CO), oxides of nitrogen (NO_x) as nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM) less than 10 micrometers in aerodynamic diameter (PM_{10}), PM less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5}$), and lead. San Diego County has been designated by the US Environmental Protection Agency (EPA) to be a severe nonattainment area for 8-hour O_3 under the 2008 and 2015 NAAQS (EPA 2021; SDAPCD n.d.). In addition, the area is nonattainment for the CAAQS for O_3, PM_{10}, and $PM_{2.5}$ (SDAPCD n.d.). San Diego County is classified as attainment/unclassified for all other NAAQS and CAAQS.

Table 1-1. San Diego Air Basin Attainment Status

Pollutant	Averaging Time	Federal Status	State Status
O_3	1-hour	Unclassified/Attainment	Nonattainment
	8-hour	Nonattainment (Severe 15)	Nonattainment
CO	All	Unclassified/Attainment	Unclassified/Attainment
NO_2	All	Unclassified/Attainment	Unclassified/Attainment
SO_2	All	Unclassified/Attainment	Unclassified/Attainment
PM_{10}	All	Unclassified/Attainment	Nonattainment
$PM_{2.5}$	All	Unclassified/Attainment	Nonattainment
Lead	All	Unclassified/Attainment	Unclassified/Attainment

The SDAPCD has not adopted quantitative thresholds for the evaluation of the significance of air quality impacts under the California Environmental Quality Act (CEQA). However, SDAPCD does recognize screening-level thresholds for AQIA as published in San Diego County's *Guidelines for Determining Significance for Air Quality* (San Diego County 2007). The San Diego County screening-level thresholds are largely based on the AQIA trigger levels for CAP emissions from new or modified stationary sources in SDAPCD Rules 20.2 and 20.3. If these incremental levels for stationary sources are exceeded, an AQIA must be performed conducted for the source. SDAPCD Rule 20.2, which outlines these trigger levels, states that any project that results in emissions increase equal to or greater than any of these levels must perform an AQIA to show that no NAAQS or CAAQS would be violated by the proposed project (SDAPCD 2019). For projects with stationary-source emissions that are below these criteria, no AQIA is typically required, and project level emissions are presumed to be less than significant.

Emissions estimates prepared to support the Draft EIR (Austal USA 2025) indicate that the estimated hourly, daily, and annual project emissions of CAP would not exceed the applicable SDAPCD thresholds of

significance; therefore, an AQIA for comparison to the NAAQS/CAAQS was not required for this analysis. This determination is further discussed in Section 2 of this report.

2. Project and Facility Description

The US Navy (Navy) has identified a projected shortfall of dry dock space at Naval Base San Diego (NBSD). The objective of the proposed project is to help the Navy address this shortfall by adding a new floating dry dock (FDD) to support operations at a location adjacent to the NBSD. Austal USA has also informed the SDAPCD that the proposed project would support Navy and government vessels in accordance with Department of Defense (DoD) Standard Practice MIL-STD 1625D, *Department of Defense Standard Practice: Safety Certification Program for Drydocking Facilities and Shipbuilding Ways for U.S. Navy Ships* (DoD 2009). Standard Practice MIL-STD 1625D is a required safety standard certification for dry docking facilities for Navy ships. This standard applies to the proposed project, because Austal USA is a Navy contractor. The proposed project would provide full docking availabilities for vessels up to 500 feet long.

Austal USA's existing facility comprises 16.05 acres of tidelands property, which contains 9.56 acres of land and 6.49 acres of water and consists of areas leased from the Port of San Diego (Port) and from the Navy. Austal USA obtained possession of the leased facility on December 15, 2021. At that time, facility operations by the previous tenant, Marine Group Boat Works (MGBW), included new construction, maintenance, repair, and alterations (such as warehousing, storing, welding, blasting, painting, and similar) of yachts, commercial, and Navy marine vessels. Service and repair work by MGBW on yachts and commercial marine vessels ceased in January 2022. Current operations at the Austal USA operations building include minor metal fabrication to support vessels at NBSD. Ship components are brought onsite from NBSD for activities such as aluminum welding, grinding, and painting, and are returned when work is complete. Current operations at the South Pier also include vessel repair and maintenance activities.

The evaluation of the proposed project for this Health Risk Assessment (HRA) includes emissions from construction and new operational activities once the proposed project is complete. Operational activities at the new FDD would include welding, blasting, and painting for maintenance, repair, and alterations of Navy and commercial marine vessels. Emissions and impacts from construction activities associated with the proposed project are evaluated separately from those for operations. Throughout this HRA, the order of discussion is to present operational emissions, sources, methods, and results, followed in each case by comparable information for construction emissions, sources, methods, and results.

2.1 Emissions Information

Operational emission sources from the operations phase of the proposed project are expected to include the following source types:

- Permitted Sources:
  - Adhesive use
  - Marine coating and solvent use
  - Abrasive blasting operations
  - Welding operations
  - Portable and stationary emergency diesel engines
- Nonpermitted Sources:
  - Worker commute vehicles and haul trucks
  - Maritime vessels (tugboats)

Emission sources associated with the construction phase of the proposed project are expected to include welding operations, and emissions from mobile sources, such as construction equipment, haul trucks, and worker commute vehicles.

The following sections describe emission source operations and the emission estimation methodology for each type of source. Emission estimates and assumptions are included in the following Air Permit Application Amendments dated April 2, 2025:

- Facility-wide portable emergency internal combustion engines, permit application APCD2023-APP-07842
- Two FDD stationary emergency generator engines, permit applications APCD2023-APP-07843 and APCD2023-APP-07844
- Facility-wide portable marine coating and solvent usage operations, permit application APCD2023-APP-07845
- Welding operation at the FDD, the existing pier, and the shipyard welding shop, permit application APCD2023-APP-07894
- Facility-wide abrasive blasting operations, permit application APCD2024-APP-08447
- Facility-wide adhesive usage operations, permit application APCD2024-APP-08445

Detailed emission calculations for operation and construction are included in Attachments 1 and 2, respectively. All sources undergoing permitting would implement control measures that would qualify as Toxics Best Available Control Technology, as described in Attachment 6 (M. S. Hatch Consulting 2025).

2.1.1 Maritime Vessels

Two 1,000-horsepower (hp) heavy fuel oil-powered tugboats are planned to be used to guide vessels into and out of the FDD. Emission calculations for this maritime transit assumed 8 hours of operation per year for each of the two 1,000-hp tugboats. Emissions calculations also assume four vessels are serviced at the FDD per year, with each vessel moved in and out of the FDD by the two 1,000-hp tugboats, with each tugboat operating for approximately 1 hour per movement in the proposed project area. CAP emissions from maritime transit using tugboats were calculated using emission factors from California Air Resources Board's (CARB's) *Port Emissions Inventory Guidance*, Appendix H (CARB 2021). TAC emissions for these sources were estimated using speciated fractions for diesel combustion from the EPA's *Ports Emissions Inventory Guidance* in Appendix D, *HAP Speciation Profiles for Commercial Marine Engines*, Table D.1 (EPA 2022).

2.1.2 Adhesive Use

Use of adhesives for ship repair is expected to occur inside vessels, outside and within the FDD structure, on the piers within enclosures, around the FDD and piers outside of enclosures, and within the operations building located inside the facility boundary. Approximately 10% of all adhesives would be used at the onsite operations buildings, 45% on the FDD, and the remaining 45% pier side. Emissions from adhesives were based on usage rates and material composition data from safety data sheets (SDSs). Emission calculations assume adhesive application across the facility is not expected to exceed 1 hour per day.

Only SDAPCD-compliant adhesives would be used. Austal USA is proposing to limit the volatile organic compounds (VOCs) emitted from this operation to 10 pounds per day, which would also effectively limit the TACs emitted from this operation. For purposes of the HRA, annual adhesive use is based on actual

calculated amounts while the hourly estimated use is based on a proposed limited amount that would allow Austal USA to emit up to this daily VOC emissions limit of 10 pounds per day.

2.1.3 Marine Coating and Solvent Use

Use of marine coatings and solvents for ship repair is expected to occur inside vessels, outside and within the FDD, on the structure, within enclosures on piers, and within the onsite operations building. Assumptions about emissions from marine coatings and solvents were based on application method and transfer efficiencies, usage rates, and material composition data from SDSs. The use of marine coatings and solvents is not expected to exceed 10 hours per day. Additionally, it is assumed that the total VOC emissions from marine coating and solvent use would not exceed 55 pounds per day.

Maritime coating and solvent use activities are not expected to occur on the FDD and pier within the same hour. Therefore, maximum hourly emissions from marine coatings and solvent use are from operations along the FDD.

Using best management practices, miscellaneous coatings and solvents would be applied by hand, brush, roller, and spray application, and only compliant coatings and solvents would be used. Specific application methods for each material are detailed in the operational emission calculations in Attachment 1.

2.1.4 Abrasive Blasting Operations

The facility-wide abrasive blasting operations would be performed either inside a vessel (for example, blasting of internal tanks) or on the surface of the vessel, underwater hull, or flight deck of the vessel within the FDD and pier side. Abrasive blasting operations are not expected to occur more than 5 hours per day. Operational limited rates, SDAPCD default emission factors, and SDS emission factors were used to estimate emissions for garnet material used for abrasive blasting.

It is assumed that only a single ship would be blasted at a single time; therefore, the facility-wide maximum hourly emissions for abrasive blasting are based on maximum hourly emissions of blasting from the FDD.

Only CARB-certified blast media or hydroblasting would be used. For work inside vessels, dry abrasive blast operations would be contained, and the blast materials would be vacuumed by a system equipped with filters. This setup would achieve a minimum particulate control efficiency of 97%. The dry blasting work on vessel surfaces would be conducted under shrouding and the exhaust would be directed to a dust collector/filter system that achieves at least 97% control of particulate TACs. Additionally, vacuum blasting would be used on non-skid flight decks, providing an additional particulate control efficiency of 99% (M.S. Hatch Consulting 2025). Specific particulate control efficiencies from shrouding with vacuum systems as well as blasting with recovery systems are included in the detailed emission calculations found in Attachment 1.

2.1.5 Welding Operations

Welding rods, wires, and fillers are expected to be used for aluminum and steel ship repair at the proposed Austal USA facility. Operational rates and SDAPCD default emission factors were used to estimate emissions for welding operations. These welding operations at the facility are expected to occur within an operations building onsite, on the proposed FDD, and on piers.

Welding emission calculations are based on welding rod type used for aluminum and steel ship repair at the proposed facility. Welding operations at the FDD account for approximately 60% of aluminum and steel ship repair, while 40% occurs at these operations along the pier.

Austal USA plans to implement controls to capture and manage welding fumes generated in the welding shop and to apply work practice standards for outdoor welding operations on the vessels. In the welding shop, a combination of hood and curtain systems—with a capture efficiency of 98%—would be used to collect welding fumes. These fumes would be routed through a baghouse with high efficiency particulate air (HEPA) filters, which provide a particulate control efficiency of 99.97%. This system would achieve an overall reduction in particulate TAC emissions of at least 97.97%. For outdoor welding operations, Austal USA would apply work practice standards recommended by EPA, as practicable, and in accordance with sound welding engineering principles to minimize TAC emissions, while maintaining weld quality (M.S. Hatch Consulting 2025). Information on control efficiencies is detailed in Attachment 1.

2.1.6 Emergency Diesel Engines

Two 600-kilowatt (kW) EPA Marine Tier 3 certified emergency diesel generators were installed and are proposed to operate at the FDD to provide backup power for the dry dock if electrical power is interrupted. The diesel generators would comply with the requirements of 40 *Code of Federal Regulations* (CFR) Part 60 Subpart IIII. In addition, each FDD generator is expected to only operate up to 52 hours per year for maintenance and testing purposes and would not exceed 1.25 hours of operation in a single day.

In addition to these two stationary diesel engines, Austal USA proposes to operate diesel-powered emergency generators and fire pumps on a temporary basis as a precautionary measure to respond to fires and other emergencies that could occur during ship repair and construction activities. Emissions were estimated assuming operation of a single portable 850-horsepower (hp) diesel generator for emergency use along the pier. This engine is not expected to operate more than 50 hours per year, would be EPA Tier 4 certified, and would comply with all requirements of 40 CFR Part 60 Subpart IIII.

Emissions estimates for combustion of diesel fuel in onsite emergency engines were based on expected hours of operation outlined above, EPA tier-certified emission rates, and speciated TAC emission factors from SDAPCD guidance.

2.1.7 Mobile Sources

Local worker commute emissions were estimated based on the number of expected employees, California Emissions Estimator Model (CalEEMod) default data for SDAPCD, and emission factors from CARB's Emission Factor Model 2021 (EMFAC2021). It is expected that 130 Austal USA employees would commute to and from the site 5 days a week, 52 weeks per year.

Emissions from local haul trucks were estimated based on the number of haul truck trips, CalEEMOD default data for SDAPCD, emission factors from CARB's EMFAC2021, and TAC fractions for the US Air Force Guide for Mobile Source (USAF 2024). It is expected that 12 haul truck trips would occur per year. These haul truck commutes would be for material and waste hauling to and from the site.

2.1.8 Construction Activities

Emissions from worker commutes and welding during the remaining construction were estimated similar to operational emissions. The calculations assume up to 20 employees for 8 work weeks to complete construction of the facility. Emissions from other non-road diesel construction equipment is based on

estimates in the Final Environmental Assessment for the FDD (Navy 2020) and includes emission factors from the Air Force Guide for Mobile Sources, SDAPCD emission factors, and the EPA's Motor Vehicle Emission Simulator (MOVES4) program. These emissions calculations conservatively assumed the use of listed equipment for 8 hours per day for 70 days. The revised estimate of remaining construction for the FDD installation assumed only 8 hours per day of construction for up to 8 weeks (or 40 days in total) in the Final Environmental Assessment for the FDD (Navy 2020). As a result, anticipated project-related construction emissions would be even lower than those used in the current analysis.

2.2 Emissions Summary

Tables 2-1, 2-2, and 2-3 summarize operational hourly, daily, and annual CAP emissions from the proposed project, respectively. These emission estimates are compared to the SDAPCD-recognized screening-level thresholds for AQIA, used for the purposes of CEQA as Thresholds of Significance (San Diego County 2007). These thresholds are set at the level an AQIA is required in SDAPCD Rule 20.2. Email correspondence with SDAPCD on December 19, 2024, confirmed that SDAPCD would not require Austal USA to prepare an AQIA because the emission estimates for the proposed project are below hourly, daily, and annual SDAPCD-recognized screening-level thresholds for AQIA. TAC emission summaries for operations and construction are included in Tables 4-2 through 4-5 and detailed emission calculations for TAC emissions from each source and source type are included in Attachments 1 and 2.

Table 2-1. Operational Hourly Emissions Summary (Pounds per Hour)

Source	VOC	NOx	CO	SOx	PM10	PM2.5
Worker commutes and haul trucks	0.23	0.86	7.52	0.02	0.13	0.05
Maritime vessels	0.86	14.81	2.68	0.02	0.43	0.42
Welding operations	--	--	--	--	0.05	0.05
Abrasive blasting operations	--	--	--	--	0.03	--
Marine coating and solvent application operations	5.50	--	--	--	0.26	0.26
Adhesive application operations	3.06	--	--	--	--	--
Facility-wide portable internal combustion engines	0.26	0.92	4.82	0.01	0.04	0.04
FDD stationary diesel emergency generators	0.47	14.21	6.05	0.02	0.24	0.24
Maximum Hourly Emissions[a]	9.52	15.99	18.40	0.05	0.75	0.63
SDAPCD Screening-Level Thresholds for AQIA	--	25	100	25	--	--
Exceeds Threshold?	--	No	No	No	--	--

[a] Maritime vessel operation and maintenance activities would not occur concurrently; therefore, maximum hourly emissions are calculated as the maximum between maritime vessel transit operations and maintenance related operations.

-- = not available or applicable

Table 2-2. Operational Daily Emissions Summary (Pounds per Day)

Source	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Worker Commutes and Haul Trucks	0.23	0.86	7.52	0.02	0.13	0.05
Maritime Vessels	0.86	14.81	2.68	0.02	0.43	0.42

Source	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Welding Operations	--	--	--	--	0.07	0.07
Abrasive Blasting Operations	--	--	--	--	0.17	--
Marine Coating and Solvent Application Operations	55.00	--	--	--	2.59	2.59
Adhesive Application Operations	10.00	--	--	--	--	--
Facility-Wide Portable Internal Combustion Engines	0.26	0.92	4.82	0.01	0.04	0.04
FDD Stationary Diesel Emergency Generators	0.59	17.77	7.57	0.02	0.30	0.30
Total Daily Emissions	**66.94**	**34.35**	**22.59**	**0.07**	**3.73**	**3.47**
SDAPCD Screening-Level Thresholds for AQIA	**75**	**250**	**550**	**250**	**100**	**55**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Table 2-3. Operational Annual Emissions Summary (Tons per Year)

Source	VOC	NOx	CO	SO_x	PM_{10}	$PM_{2.5}$
Worker Commutes and Haul Trucks	0.03	0.08	0.98	< 0.01	0.02	0.01
Maritime Vessels	< 0.01	0.03	0.01	< 0.01	< 0.01	< 0.01
Welding Operations	--	--	--	--	0.01	0.01
Abrasive Blasting Operations	--	--	--	--	0.02	--
Marine Coating and Solvent Application Operations	3.86	--	--	--	0.21	0.21
Adhesive Application Operations	< 0.01	--	--	--	--	--
Facility-Wide Portable Internal Combustion Engines	0.01	0.02	0.12	< 0.01	< 0.01	< 0.01
FDD Stationary Diesel Emergency Generators	0.01	0.37	0.16	< 0.01	0.01	0.01
Total Annual Emissions	**3.91**	**0.50**	**1.26**	**0.00**	**0.26**	**0.23**
SDAPCD Screening-Level Thresholds for AQIA	**13.7**	**40**	**100**	**40**	**15**	**10**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Tables 2-4 and 2-5 summarize construction hourly annual CAP emissions from the proposed project. Detailed emission calculations are included in Attachment 2.

Table 2-4. Construction Hourly Emissions Summary (Pounds per Hour)

Source	VOC	NOx	CO	SOx	PM10	PM2.5
Mobile sources	0.03	0.09	1.15	< 0.01	0.02	0.01
Construction equipment	0.60	7.88	3.52	0.53	0.55	0.54
Welding	--	--	--	--	0.01	0.01
Total hourly emissions	0.64	7.97	4.68	0.53	0.58	0.55

Table 2-5. Construction Annual Emissions Summary (Tons per Year)

Source	VOC	NOx	CO	SOx	PM10	PM2.5
Mobile sources	6.81E-04	1.84E-03	2.31E-02	6.95E-05	3.80E-04	1.40E-04
Construction equipment	1.58E-01	2.06E+00	9.26E-01	1.37E-01	1.45E-01	1.41E-01
Welding	--	--	--	--	2.04E-03	2.04E-03
Total annual emissions	0.16	2.06	0.95	0.14	0.15	0.14

3. Air Dispersion Modeling Methodology

3.1 Dispersion Model

Although a formal AQIA is not required to demonstrate compliance with the NAAQS and CAAQS, an air dispersion model was developed as an input into the HRA for Austal USA's proposed FDD project. The American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) (Version 24142) was used for the air quality dispersion modeling as recommended by SDAPCD for CEQA and HRA analyses, and in the EPA Appendix W, *Guideline on Air Quality Models* (EPA 2024).

AERMOD is a steady-state Gaussian plume model that simulates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. This model is recommended for short-range (less than 50 kilometers [km]) dispersion from the source. The model incorporates the plume rise model enhancement (PRIME) algorithm for modeling building downwash. AERMOD is designed to accept input data prepared by two specific preprocessor programs, AERMOD Meteorological Processer (AERMET) and AERMOD Terrain Preprocessor (AERMAP). AERMOD ran with the following options:

- Direction-specific building downwash
- Regulatory default options unless otherwise specified in this report
- Rural dispersion characteristics
- Actual receptor elevations and hill height scales obtained from AERMAP (Version 24142)
- Operational restricting hour-of-day factor

3.2 Operational Source Characterization

Operation of the proposed sources would result in emissions to the atmosphere of both CAPs and TACs. Human health risks associated with exposure to project-related TAC emissions were estimated from generating output plot files from AERMOD to be imported into the most recent version of CARB's Hotspots Analysis and Reporting Program tool (HARP2). Each source was modeled in AERMOD at 1 gram per second (g/s) or 1 g/s split by the number of sources within each source group. The following subsections describe how each source type was characterized within the AERMOD model. Data used in the characterization of these operational sources and their release parameters for modeling are included.

3.2.1 Maritime Vessels

Based on the expected operation of the maritime vessels (tugboats), these sources were modeled as a series of six adjacent 10-meter (m) by 10-m volume sources within AERMOD. Operations of the tugboats are expected to occur around the FDD and pier, with a consistent emission release height of approximately 5 m above the base elevation.

Following guidance for volume sources in the User's Guide for the AERMOD (EPA 2024), the initial lateral dimension (σ_y) of adjacent volume sources is the length of the side divided by 2.15. The initial vertical dimension (σ_z) of a volume source located upon a surface is the height of the release area divided by 2.15. The release height of the volume source is half the height of the maritime vessel. Table 3-1 includes source parameters for these sources.

Table 3-1. Maritime Vessel Source Modeling Parameters

Source ID	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
MAR_1	488,761.76	3,613,422.54	0.00	5.00	4.65	2.33
MAR_2	488,786.57	3,613,425.59	0.00	5.00	4.65	2.33
MAR_3	488,811.39	3,613,428.63	0.00	5.00	4.65	2.33
MAR_4	488,836.20	3,613,431.68	0.00	5.00	4.65	2.33
MAR_5	488,861.01	3,613,434.73	0.00	5.00	4.65	2.33
MAR_6	488,885.83	3,613,437.77	0.00	5.00	4.65	2.33

[a] Coordinates in Universal Transverse Mercator (UTM) North American Datum of 1983 (NAD83), Zone 11.

3.2.2 FDD Operations

Welding, abrasive blasting, marine coatings and solvents, and adhesive use operations that are expected to occur on the FDD were modeled as a series of 12 adjacent 25-meter by 25-meter volume sources within AERMOD. These 12 adjacent volume sources were split into two rows along the entire length of the FDD and overlay the width of the 50-meter FDD. The FDD is confined by two walls along the longest length of the dock that are approximately 10 meters in height above the base elevation. Therefore, the release height of the volume sources was modeled as 10 meters in AERMOD.

Per the User's Guide for the AERMOD (EPA 2023), the initial lateral dimension (σ_y) of adjacent volume sources is the length of the side divided by 2.15. The initial vertical dimension (σ_z) of a volume source is the height of the release area divided by 2.15 for releases on a structure. The volume sources modeled for these operations were limited to 25 meters by 25 meters (vertical by lateral initial dimensions). The release height of each volume source is half the height of the FDD. Table 3-2 includes source parameters for these FDD sources.

Table 3-2. Floating Dry Dock Source Modeling Parameters

Source ID	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
FDD_1	488,746.59	3,613,467.80	0.00	10.00	11.63	2.33
FDD_2	488,771.40	3,613,470.85	0.00	10.00	11.63	2.33
FDD_3	488,796.22	3,613,473.89	0.00	10.00	11.63	2.33
FDD_4	488,821.03	3,613,476.94	0.00	10.00	11.63	2.33
FDD_5	488,845.85	3,613,479.99	0.00	10.00	11.63	2.33
FDD_6	488,870.66	3,613,483.03	0.00	10.00	11.63	2.33
FDD_7	488,750.41	3,613,443.40	0.00	10.00	11.63	2.33
FDD_8	488,775.22	3,613,446.45	0.00	10.00	11.63	2.33
FDD_9	488,800.04	3,613,449.49	0.00	10.00	11.63	2.33

Source ID	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
FDD_10	488,824.85	3,613,452.54	0.00	10.00	11.63	2.33
FDD_11	488,849.67	3,613,455.59	0.00	10.00	11.63	2.33
FDD_12	488,874.48	3,613,458.63	0.00	10.00	11.63	2.33

[a] Coordinates in UTM NAD83, Zone 11.

3.2.3 Pier Side Operations

Welding, abrasive blasting, marine coating and solvents, and adhesive use operations that are expected to occur along the existing pier were modeled as a series of four adjacent 25-meter by 25-meter volume sources within AERMOD. These four adjacent volume sources were placed south of the pier along the entire length of the pier. Operations on marine ships along the pier are estimated to have a release height of 5 meters above base elevation.

Per the User's Guide for AERMOD (EPA 2023), the initial lateral dimension (σ_y) of adjacent volume sources is the length of the side divided by 2.15. The initial vertical dimension (σ_z) of a volume source is the height of the release area divided by 2.15. The volume sources modeled for these operations were limited to 25-meter by 25-meter (vertical by lateral initial dimensions). Table 3-3 includes source parameters for these pier sources.

Table 3-3. Pier Side Source Modeling Parameters

Source ID	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
PIER_1	488,823.75	3,613,363.43	0.00	5.00	11.63	2.33
PIER_2	488,848.56	3,613,366.48	0.00	5.00	11.63	2.33
PIER_3	488,873.38	3,613,369.52	0.00	5.00	11.63	2.33
PIER_4	488,898.19	3,613,372.57	0.00	5.00	11.63	2.33

[a] Coordinates in UTM NAD83, Zone 11.

3.2.4 Operations Building

Within the operations building onsite, welding operations and adhesive use are expected to occur. These two operations were modeled as non-adjacent single ground-based volume sources within AERMOD. The dimensions of theses volume sources were determined based on primary location of these operations within an onsite building. Welding operations is expected to occur specifically in the welding shop that is approximately 13.41 by 24.38 meters with a structure height of 6.71 meters. The room where adhesive use is expected to take place is approximately 3.66 by 6.10 meters with a structure height of 9.73 meters.

Per the User's Guide for AERMOD (EPA 2023), the initial lateral dimension (σ_y) of a single volume source is the length of the side divided by 4.3. For the case of these non-square rooms, the length for the initial

horizontal dimension was estimated based on the length of the diagonal of the room. The initial vertical dimension (σ_z) of a volume source is the height of the release area (in this case the height of the containing structure) divided by 2.15. The release height of the volume source is half the height of the containing structure. Table 3-4 includes source parameters for these operations building sources.

Table 3-4. Operations Building Source Modeling Parameters

Source ID	Source Description	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
OPS_1	Welding	489,043.52	3,613,435.54	3.35	3.35	7.21	3.12
OPS_2	Adhesives	489,063.62	3,613,448.40	3.00	4.88	1.10	4.54

[a] Coordinates in UTM NAD83, Zone 11.

3.2.5 Emergency Diesel Engines

The two 600-kW emergency diesel generators and portable diesel engine were modeled as point sources in AERMOD. Each sources' stack diameter, height, flow rate, temperature, and location were based on either manufacturer specifications or industry standards for other similar-sized equipment. The two emergency generators are built into the FDD and equipped with a rain cap. For the portable emergency engine to be used along the pier, the source location within the model was the location at the facility representing the "worst-case" scenario closest to the facility fence line. Table 3-5 includes source parameters for these engines.

Table 3-5. Emergency Diesel Engines Modeling Parameters

Source ID	Stack Release Type	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
GEN_1	POINTCAP	488,816.08	3,613,486.34	0.00	13.72	735.37	58.03	0.20
GEN_2	POINTCAP	488,822.58	3,613,443.59	0.00	13.72	735.37	58.03	0.20
GEN_FW	DEFAULT	488,813.15	3,613,379.80	0.00	3.66	718.15	72.50	0.30

[a] Coordinates in UTM NAD83, Zone 11.

K = Kelvin

m/s = meter(s) per second

3.2.6 Haul Road

The expected haul road for material and waste transport to/from the site was included in the model as a series of 88 adjacent 8-meter by 8-meter volume sources within AERMOD. These 88 adjacent volume sources were placed along the primary roadway from the Austal USA facility entrance toward Interstate 5.

The dimensions of these adjacent volume sources for haul trucks are based on the Bay Area Air Quality Management District's (BAAQMD's) *CEQA Air Quality Guidelines* Appendix E, *Recommended Methods for Screening and Modeling Local Risks and Hazards* (BAAQMD 2022). Recommended volume source for trucks includes a 3.4-meter release height, an 8-meter lateral dimension (σ_y) to represent the width of the

plume (which is divided by 2.15 for AERMOD input), and an initial vertical dimension (σ_z) of 3.16 meters. Table 3-6 includes source parameters for these haul road sources.

Table 3-6. Haul Road Source Modeling Parameters

Source ID	Easting X (m)[a]	Northing X (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
ROAD_1	489,049.73	3,613,392.33	4.00	3.4	3.72	3.16
ROAD_2	489,052.46	3,613,384.81	4.00	3.4	3.72	3.16
ROAD_3	489,055.20	3,613,377.29	4.00	3.4	3.72	3.16
ROAD_4	489,057.93	3,613,369.77	4.00	3.4	3.72	3.16
ROAD_5	489,060.67	3,613,362.26	4.00	3.4	3.72	3.16
ROAD_6	489,068.28	3,613,364.73	4.00	3.4	3.72	3.16
ROAD_7	489,075.89	3,613,367.20	4.00	3.4	3.72	3.16
ROAD_8	489,083.50	3,613,369.67	4.00	3.4	3.72	3.16
ROAD_9	489,091.10	3,613,372.14	4.00	3.4	3.72	3.16
ROAD_10	489,098.71	3,613,374.62	4.00	3.4	3.72	3.16
ROAD_11	489,106.32	3,613,377.09	4.00	3.4	3.72	3.16
ROAD_12	489,113.93	3,613,379.56	4.00	3.4	3.72	3.16
ROAD_13	489,121.54	3,613,382.03	4.00	3.4	3.72	3.16
ROAD_14	489,129.15	3,613,384.51	4.00	3.4	3.72	3.16
ROAD_15	489,136.76	3,613,386.98	4.00	3.4	3.72	3.16
ROAD_16	489,144.36	3,613,389.45	4.00	3.4	3.72	3.16
ROAD_17	489,151.97	3,613,391.92	4.00	3.4	3.72	3.16
ROAD_18	489,159.58	3,613,394.39	4.00	3.4	3.72	3.16
ROAD_19	489,167.19	3,613,396.87	4.00	3.4	3.72	3.16
ROAD_20	489,174.80	3,613,399.34	4.00	3.4	3.72	3.16
ROAD_21	489,182.41	3,613,401.81	4.00	3.4	3.72	3.16
ROAD_22	489,190.01	3,613,404.28	4.00	3.4	3.72	3.16
ROAD_23	489,197.62	3,613,406.75	4.00	3.4	3.72	3.16
ROAD_24	489,205.23	3,613,409.23	4.00	3.4	3.72	3.16
ROAD_25	489,212.84	3,613,411.70	4.00	3.4	3.72	3.16
ROAD_26	489,220.45	3,613,414.17	4.00	3.4	3.72	3.16
ROAD_27	489,228.06	3,613,416.64	4.00	3.4	3.72	3.16
ROAD_28	489,235.67	3,613,419.12	4.00	3.4	3.72	3.16
ROAD_29	489,243.27	3,613,421.59	4.00	3.4	3.72	3.16
ROAD_30	489,250.88	3,613,424.06	4.00	3.4	3.72	3.16
ROAD_31	489,258.49	3,613,426.53	4.00	3.4	3.72	3.16
ROAD_32	489,266.10	3,613,429.00	4.00	3.4	3.72	3.16
ROAD_33	489,273.71	3,613,431.48	4.00	3.4	3.72	3.16
ROAD_34	489,281.32	3,613,433.95	4.00	3.4	3.72	3.16

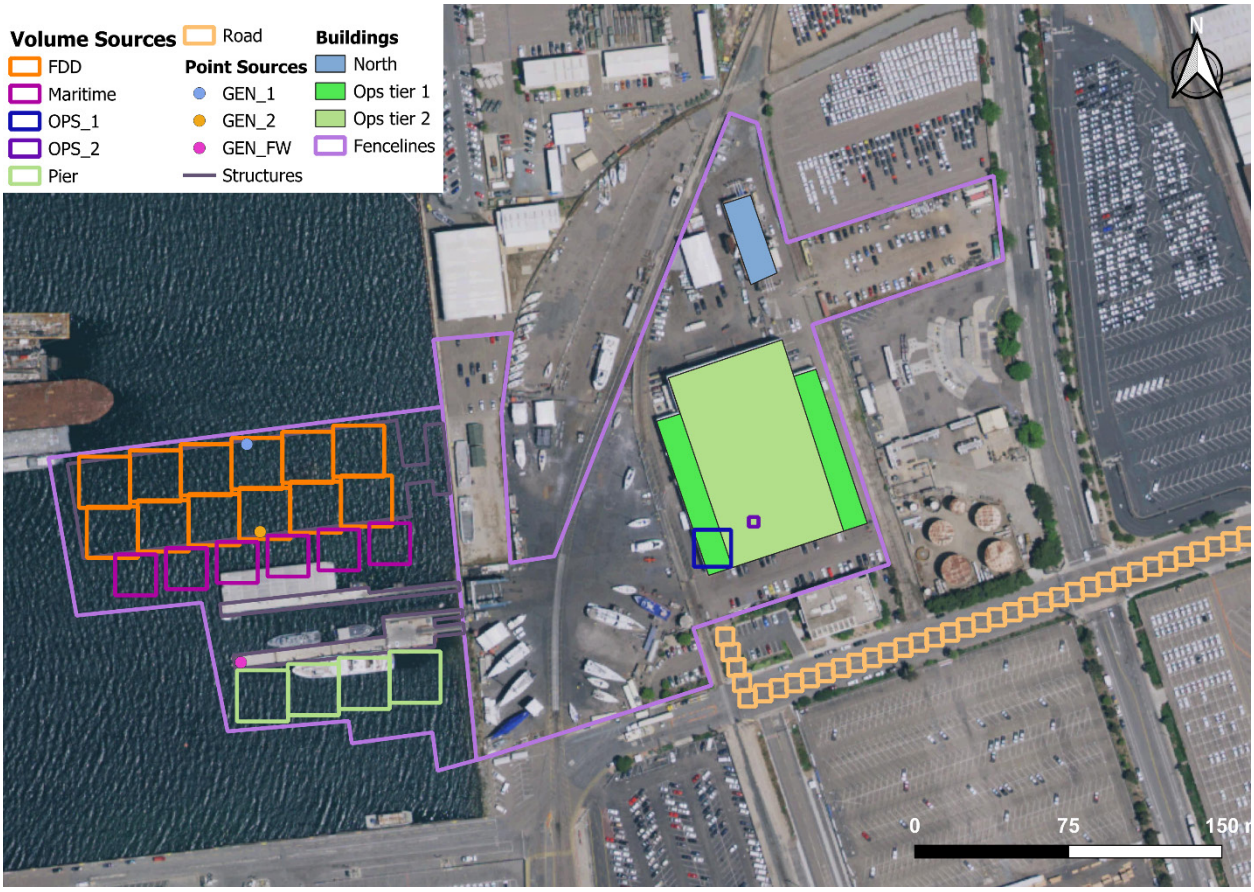
Source ID	Easting X (m)[a]	Northing X (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
ROAD_35	489,288.92	3,613,436.42	4.00	3.4	3.72	3.16
ROAD_36	489,296.53	3,613,438.89	4.00	3.4	3.72	3.16
ROAD_37	489,304.14	3,613,441.36	4.00	3.4	3.72	3.16
ROAD_38	489,311.75	3,613,443.84	4.00	3.4	3.72	3.16
ROAD_39	489,319.36	3,613,446.31	4.00	3.4	3.72	3.16
ROAD_40	489,326.97	3,613,448.78	4.00	3.4	3.72	3.16
ROAD_41	489,334.58	3,613,451.25	4.00	3.4	3.72	3.16
ROAD_42	489,342.18	3,613,453.73	4.00	3.4	3.72	3.16
ROAD_43	489,349.79	3,613,456.20	4.00	3.4	3.72	3.16
ROAD_44	489,357.40	3,613,458.67	4.00	3.4	3.72	3.16
ROAD_45	489,365.01	3,613,461.14	4.00	3.4	3.72	3.16
ROAD_46	489,372.62	3,613,463.61	4.00	3.4	3.72	3.16
ROAD_47	489,380.23	3,613,466.09	4.00	3.4	3.72	3.16
ROAD_48	489,387.83	3,613,468.56	4.00	3.4	3.72	3.16
ROAD_49	489,395.44	3,613,471.03	4.00	3.4	3.72	3.16
ROAD_50	489,403.05	3,613,473.50	4.00	3.4	3.72	3.16
ROAD_51	489,410.66	3,613,475.97	4.67	3.4	3.72	3.16
ROAD_52	489,418.27	3,613,478.45	5.00	3.4	3.72	3.16
ROAD_53	489,425.88	3,613,480.92	5.00	3.4	3.72	3.16
ROAD_54	489,433.48	3,613,483.39	5.00	3.4	3.72	3.16
ROAD_55	489,441.09	3,613,485.86	5.00	3.4	3.72	3.16
ROAD_56	489,448.70	3,613,488.34	5.00	3.4	3.72	3.16
ROAD_57	489,456.31	3,613,490.81	5.00	3.4	3.72	3.16
ROAD_58	489,463.92	3,613,493.28	5.00	3.4	3.72	3.16
ROAD_59	489,471.53	3,613,495.75	5.00	3.4	3.72	3.16
ROAD_60	489,479.14	3,613,498.22	5.00	3.4	3.72	3.16
ROAD_61	489,486.74	3,613,500.70	5.00	3.4	3.72	3.16
ROAD_62	489,494.35	3,613,503.17	5.43	3.4	3.72	3.16
ROAD_63	489,501.96	3,613,505.64	6.00	3.4	3.72	3.16
ROAD_64	489,509.57	3,613,508.11	6.00	3.4	3.72	3.16
ROAD_65	489,517.18	3,613,510.58	6.00	3.4	3.72	3.16
ROAD_66	489,524.79	3,613,513.06	6.00	3.4	3.72	3.16
ROAD_67	489,532.39	3,613,515.53	6.00	3.4	3.72	3.16
ROAD_68	489,540.00	3,613,518.00	6.00	3.4	3.72	3.16
ROAD_69	489,547.61	3,613,520.47	6.00	3.4	3.72	3.16
ROAD_70	489,555.22	3,613,522.95	6.00	3.4	3.72	3.16
ROAD_71	489,562.83	3,613,525.42	6.00	3.4	3.72	3.16

Source ID	Easting X (m)[a]	Northing X (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
ROAD_72	489,570.44	3,613,527.89	6.39	3.4	3.72	3.16
ROAD_73	489,578.05	3,613,530.36	7.00	3.4	3.72	3.16
ROAD_74	489,585.65	3,613,532.83	7.00	3.4	3.72	3.16
ROAD_75	489,593.26	3,613,535.31	7.00	3.4	3.72	3.16
ROAD_76	489,600.87	3,613,537.78	7.00	3.4	3.72	3.16
ROAD_77	489,608.48	3,613,540.25	7.38	3.4	3.72	3.16
ROAD_78	489,616.09	3,613,542.72	8.17	3.4	3.72	3.16
ROAD_79	489,623.70	3,613,545.19	8.84	3.4	3.72	3.16
ROAD_80	489,631.30	3,613,547.67	8.91	3.4	3.72	3.16
ROAD_81	489,638.91	3,613,550.14	9.56	3.4	3.72	3.16
ROAD_82	489,646.52	3,613,552.61	10.00	3.4	3.72	3.16
ROAD_83	489,654.13	3,613,555.08	10.29	3.4	3.72	3.16
ROAD_84	489,661.74	3,613,557.56	10.97	3.4	3.72	3.16
ROAD_85	489,669.35	3,613,560.03	11.75	3.4	3.72	3.16
ROAD_86	489,676.96	3,613,562.50	12.00	3.4	3.72	3.16
ROAD_87	489,684.56	3,613,564.97	12.00	3.4	3.72	3.16
ROAD_88	489,692.17	3,613,567.44	12.00	3.4	3.72	3.16

[a] Coordinates in UTM NAD83, Zone 11.

Figure 3-1 shows an operational model layout of the facility.

Figure 3-1. Operational Model Layout



3.3 Construction Source Characterization

Construction CAP and TAC emissions are expected from welding operations and mobile sources such as diesel construction equipment and worker commute vehicles. Welding operations during construction on the FDD wharf was modeled as a single 5-meter by 5-meter volume source.

Emission sources from the diesel-fueled construction equipment were evenly distributed over the construction area and modeled as a grid of point sources with horizontal stack release locations spaced approximately 25 meters apart within the facility fence line. The horizontal release type is an AERMOD option (which negates mechanical plume rise). This conservative approach was proposed because it is unknown whether all construction equipment would have vertically oriented exhaust stacks.

Table 3-7 includes the modeling parameters for the welding expected to occur during construction on the FDD wharf.

Table 3-7. Construction Welding Source Modeling Parameters

Source ID	Source Description	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Release Height (m)	Initial Horizontal Dimension (m)	Initial Vertical Dimension (m)
WELD	Welding	488,908.95	3,613,486.07	1.16	0.75	1.16	0.35

[a] Coordinates in UTM NAD83, Zone 11.

m = meters

Table 3-8 includes the modeling parameters for the grid of point sources used to represent emissions from diesel-fueled construction equipment onsite. The exhaust parameters for each point source were estimated based upon data for typical construction equipment.

Table 3-8. Construction Point Sources Modeling Parameters

Source ID	Stack Release Type	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
POINT_1	POINTHOR	489,060.00	3,613,640.00	3.03	4.60	533	18	0.13
POINT_2	POINTHOR	488,915.08	3,613,531.59	3.37	4.60	533	18	0.13
POINT_3	POINTHOR	488,919.08	3,613,513.09	3.17	4.60	533	18	0.13
POINT_4	POINTHOR	488,934.08	3,613,533.09	4.00	4.60	533	18	0.13
POINT_5	POINTHOR	488,935.00	3,613,515.00	4.00	4.60	533	18	0.13
POINT_6	POINTHOR	488,927.58	3,613,488.84	3.11	4.60	533	18	0.13
POINT_7	POINTHOR	488,929.58	3,613,463.84	3.32	4.60	533	18	0.13
POINT_8	POINTHOR	488,933.08	3,613,438.34	3.69	4.60	533	18	0.13
POINT_9	POINTHOR	488,935.00	3,613,415.00	3.45	4.60	533	18	0.13
POINT_10	POINTHOR	488,935.00	3,613,390.00	2.89	4.60	533	18	0.13
POINT_11	POINTHOR	488,935.00	3,613,365.00	2.89	4.60	533	18	0.13
POINT_12	POINTHOR	488,935.00	3,613,340.00	2.89	4.60	533	18	0.13
POINT_13	POINTHOR	488,960.00	3,613,415.00	4.00	4.60	533	18	0.13
POINT_14	POINTHOR	488,960.00	3,613,390.00	4.00	4.60	533	18	0.13
POINT_15	POINTHOR	488,960.00	3,613,365.00	4.00	4.60	533	18	0.13
POINT_16	POINTHOR	488,960.58	3,613,348.34	4.00	4.60	533	18	0.13
POINT_17	POINTHOR	488,992.08	3,613,489.59	4.00	4.60	533	18	0.13
POINT_18	POINTHOR	488,985.00	3,613,465.00	4.00	4.60	533	18	0.13
POINT_19	POINTHOR	488,985.00	3,613,440.00	4.00	4.60	533	18	0.13
POINT_20	POINTHOR	488,985.00	3,613,415.00	4.00	4.60	533	18	0.13
POINT_21	POINTHOR	488,985.00	3,613,390.00	4.00	4.60	533	18	0.13
POINT_22	POINTHOR	488,985.00	3,613,365.00	4.00	4.60	533	18	0.13
POINT_23	POINTHOR	489,014.08	3,613,540.59	3.00	4.60	533	18	0.13
POINT_24	POINTHOR	489,010.00	3,613,515.00	4.00	4.60	533	18	0.13

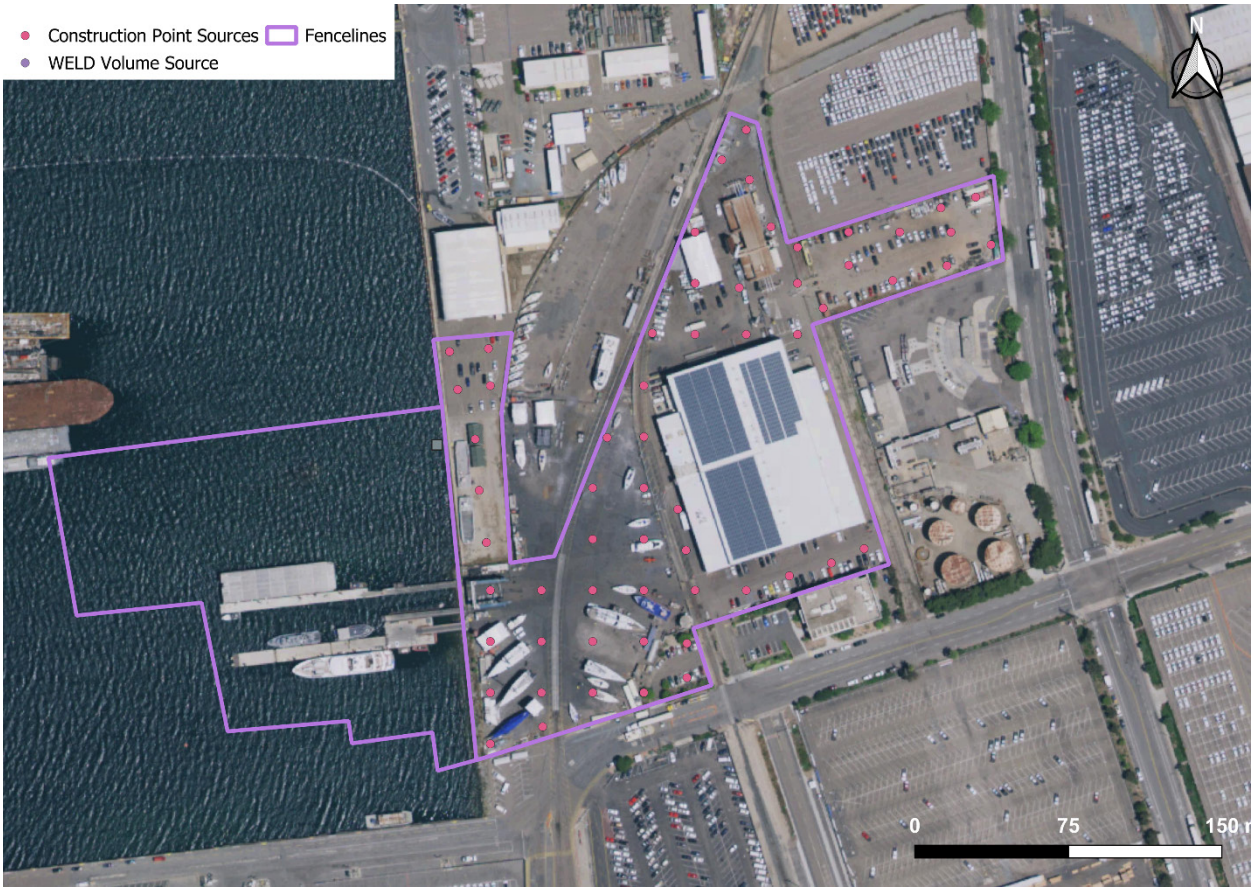
Source ID	Stack Release Type	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
POINT_25	POINTHOR	489,010.00	3,613,490.00	4.00	4.60	533	18	0.13
POINT_26	POINTHOR	489,010.00	3,613,465.00	4.00	4.60	533	18	0.13
POINT_27	POINTHOR	489,010.00	3,613,440.00	4.00	4.60	533	18	0.13
POINT_28	POINTHOR	489,010.00	3,613,415.00	4.00	4.60	533	18	0.13
POINT_29	POINTHOR	489,010.00	3,613,390.00	4.00	4.60	533	18	0.13
POINT_30	POINTHOR	489,010.00	3,613,365.00	4.00	4.60	533	18	0.13
POINT_31	POINTHOR	489,048.08	3,613,625.34	4.00	4.60	533	18	0.13
POINT_32	POINTHOR	489,035.00	3,613,590.00	3.53	4.60	533	18	0.13
POINT_33	POINTHOR	489,035.00	3,613,565.00	3.00	4.60	533	18	0.13
POINT_34	POINTHOR	489,035.00	3,613,540.00	3.41	4.60	533	18	0.13
POINT_35	POINTHOR	489,030.58	3,613,434.59	3.51	4.60	533	18	0.13
POINT_36	POINTHOR	489,035.00	3,613,415.00	4.00	4.60	533	18	0.13
POINT_37	POINTHOR	489,031.08	3,613,389.09	4.00	4.60	533	18	0.13
POINT_38	POINTHOR	489,031.08	3,613,372.34	4.00	4.60	533	18	0.13
POINT_39	POINTHOR	489,061.58	3,613,615.59	3.00	4.60	533	18	0.13
POINT_40	POINTHOR	489,072.08	3,613,592.59	3.00	4.60	533	18	0.13
POINT_41	POINTHOR	489,056.58	3,613,562.84	3.00	4.60	533	18	0.13
POINT_42	POINTHOR	489,060.00	3,613,540.00	3.41	4.60	533	18	0.13
POINT_43	POINTHOR	489,060.00	3,613,415.00	4.00	4.60	533	18	0.13
POINT_44	POINTHOR	489,085.08	3,613,582.59	3.00	4.60	533	18	0.13
POINT_45	POINTHOR	489,085.00	3,613,565.00	3.00	4.60	533	18	0.13
POINT_46	POINTHOR	489,085.00	3,613,540.00	3.00	4.60	533	18	0.13
POINT_47	POINTHOR	489,081.08	3,613,422.09	3.76	4.60	533	18	0.13
POINT_48	POINTHOR	489,110.00	3,613,590.00	3.00	4.60	533	18	0.13
POINT_49	POINTHOR	489,110.08	3,613,573.84	3.00	4.60	533	18	0.13

Source ID	Stack Release Type	Easting X (m)[a]	Northing Y (m)[a]	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
POINT_50	POINTHOR	489,097.58	3,613,552.84	3.00	4.60	533	18	0.13
POINT_51	POINTHOR	489,117.58	3,613,435.34	3.00	4.60	533	18	0.13
POINT_52	POINTHOR	489,101.58	3,613,428.34	3.10	4.60	533	18	0.13
POINT_53	POINTHOR	489,135.00	3,613,590.00	3.00	4.60	533	18	0.13
POINT_54	POINTHOR	489,131.58	3,613,566.34	3.00	4.60	533	18	0.13
POINT_55	POINTHOR	489,026.58	3,613,454.59	3.53	4.60	533	18	0.13
POINT_56	POINTHOR	489,155.08	3,613,601.84	3.00	4.60	533	18	0.13
POINT_57	POINTHOR	489,160.00	3,613,590.00	3.00	4.60	533	18	0.13
POINT_58	POINTHOR	489,158.08	3,613,573.59	3.00	4.60	533	18	0.13
POINT_59	POINTHOR	489,172.08	3,613,607.09	3.00	4.60	533	18	0.13
POINT_60	POINTHOR	489,179.58	3,613,583.84	3.00	4.60	533	18	0.13

[a] Coordinates in UTM NAD83, Zone 11.

Figure 3-2 shows a construction model layout of the facility.

Figure 3-2. Construction Model Layout



3.4 Building Downwash

Building influences on the air dispersion of emissions from point source stacks were calculated by incorporating the EPA Building Profile Input Program for use with the PRIME algorithm (BPIP-PRIME). Stack heights, building locations, and building dimensions were provided by onsite Austal USA personnel.

Table 3-9 includes onsite building heights and coordinates as included in the model.

Table 3-9. Onsite Building Coordinates

Building Name	North	Operations Tier 1	Operations Tier 2
Tier Height (m)	7.32	7.32	10.67
Number of Corners	5	9	5
Corner 1 East X (m)[a]	489,048.82	489,016.20	489,021.93
Corner 1 North Y (m)[a]	3,613,603.80	3,613,497.57	3,613,518.71
Corner 2 East X (m)[a]	489,062.10	489,027.67	489,077.51
Corner 2 North Y (m)[a]	3,613,608.07	3,613,501.17	3,613,537.41
Corner 3 East X (m)[a]	489,075.05	489,021.93	489,107.58

Building Name	North	Operations Tier 1	Operations Tier 2
Corner 3 North Y (m)[a]	3,613,570.03	3,613,518.71	3,613,443.93
Corner 4 East X (m)[a]	489,062.26	489,077.51	489,053.23
Corner 4 North Y (m)[a]	3,613,564.29	3,613,537.41	3,613,426.12
Corner 5 East X (m)[a]	489,062.26	489,083.09	489,053.23
Corner 5 North Y (m)[a]	3,613,564.29	3,613,519.53	3,613,426.12
Corner 6 East X (m)[a]	--	489,094.07	--
Corner 6 North Y (m)[a]	--	3,613,522.98	--
Corner 7 East X (m)[a]	--	489,119.15	--
Corner 7 North Y (m)[a]	--	3,613,447.73	--
Corner 8 East X (m)[a]	--	489,041.61	--
Corner 8 North Y (m)[a]	--	3,613,422.31	--
Corner 9 East X (m)[a]	--	489,041.61	--
Corner 9 North Y (m)[a]	--	3,613,422.31	--

[a] Coordinates in UTM NAD83, Zone 11.

3.5 Ambient Air Boundary

The ambient air boundary is defined by the property line that surrounds the Austal USA-leased property within which non-authorized personnel access is precluded. Figure 3-3 includes the ambient air boundary for this proposed project, which is inclusive of the Port- and Navy-leased areas.

Figure 3-3. Project Ambient Air Boundary



3.6 Rural Versus Urban Option

The land use surrounding the Austal USA facility was evaluated for classification as either urban or rural. A land use analysis was performed following the Auer land use methodology (Auer 1978) using the most recent available land use data. This data set classified land use for individual 30- by 30-meter cells into 15 primary land use categories for the proposed Austal USA facility. Of the 15 land use categories in the 2016 National Land Cover Database (NLCD) data set, the following two categories are considered urban for dispersion modeling purposes:

- Developed, Medium Intensity (NLCD Code 23)—This classification includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for approximately 20% of the total cover.
- Developed, High Intensity (NLCD Code 24)—This classification includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses, and commercial/industrial spaces. Impervious surfaces account for 27% of the total cover.

As shown in Table 3-10, less than 50% of land use surrounding the facility was classified in categories 23 and 24. Per SDAPCD guidance (SDAPCD 2022), projects located along the coastline should select rural dispersion coefficients. The proposed project is located right on the coast, with 44.5% open water surrounding the project site and prevailing winds from the west and southwest. Therefore, the rural dispersion coefficients were selected for this analysis. This is consistent with SDAPCD guidance (SDAPCD 2022).

Table 3-10. Land Uses in the Proposed Project Area

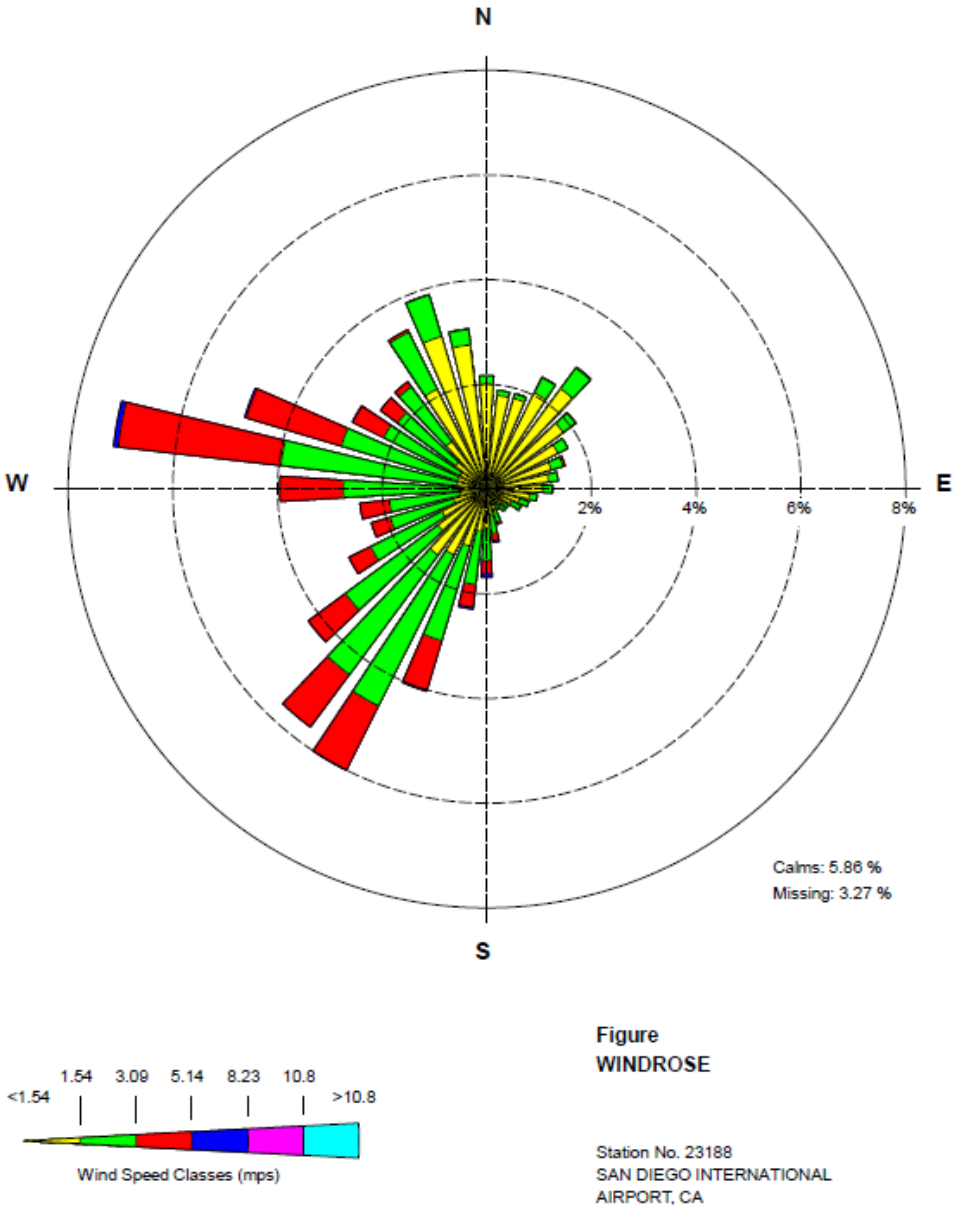
Land Use Color	Land Use Code ID	Land Use Description	Cell Count	% Land Category
	11	Open Water	13,994	44.53%
	21	Developed, Open Space	398	1.27%
	22	Developed, Low Intensity	956	3.04%
	23	Developed, Medium Intensity	6,188	19.69%
	24	Developed, High Intensity	8,548	27.20%
	31	Barren Land	170	0.14%
	52	Shrub/Scrub	44	1.24%
	71	Grasslands/Herbaceous	390	4.69%
	82	Cultivated Crops	1	0.00%
	90	Woody Wetlands	10	0.03%
	95	Emergent Herbaceous Wetlands	726	2.31%

3.7 Meteorological Data

Three years of AERMET-processed meteorological (MET) data were provided by SDAPCD personnel via email on September 4, 2024. The 3 years of data were processed by SDAPCD with AERMET Version 23132 for 2020 through 2022. The representative MET data provided by SDAPCD are from Sherman Elementary School (Air Quality Station Number 06-073-1026). This monitor is located approximately 6 km northwest

of the proposed Austal USA facility. Wind speeds and directions for this data set are presented in the wind rose shown on Figure 3-4.

Figure 3-4. Windrose for the 2020 to 2022 Meteorological Data for Sherman Elementary School



3.8 Receptors

The ambient air boundary was defined by the fence line surrounding the proposed Austal USA facility. The selection of receptors in AERMOD are as follows:

- Discrete receptors every 25 meters around the ambient air boundary (that is, fence line)
- 25-meter spacing from the fence line to 50 meters from grid origin
- 50-meter spacing from beyond 50 meters to 500 meters from the fence line
- 100-meter spacing from beyond 500 meters to 1,000 meters from the fence line
- 250-meter spacing from beyond 1,000 meters to 5,000 meters from the fence line
- 500-meter spacing from beyond 5,000 meters to 10,000 meters from the fence line

Sensitive receptors are defined as groups of individuals that may be more susceptible to health risks due to chemical exposure. Schools, both public and private, day care facilities, convalescent homes, and hospitals are of particular concern. Sensitive receptors within a 2-km radius of the facility, to be evaluated as part of the HRA, were included in the air dispersion model. Sensitive receptors are those who are especially susceptible to health impacts from exposure to TACs and include children, elderly, and the ill (SDAPCD 2022). Receptors of these types are listed in Table 3-11.

To estimate the cancer burden of the proposed project on the surrounding population as part of the HRA, 2020 census data was exported from CARB's HARP2 system within a six-mile radius of the facility. The census receptors were included in AERMOD.

All receptors and source locations are expressed in the UTM North American Datum 1983 (NAD 83), Zone 11 coordinate system. US Geological Survey National Elevation Dataset (USGS NED) one third arc second terrain data was used in conjunction with the AERMAP preprocessor (Version 24142) to determine receptor elevations and terrain maxima.

Table 3-11. Sensitive Receptors

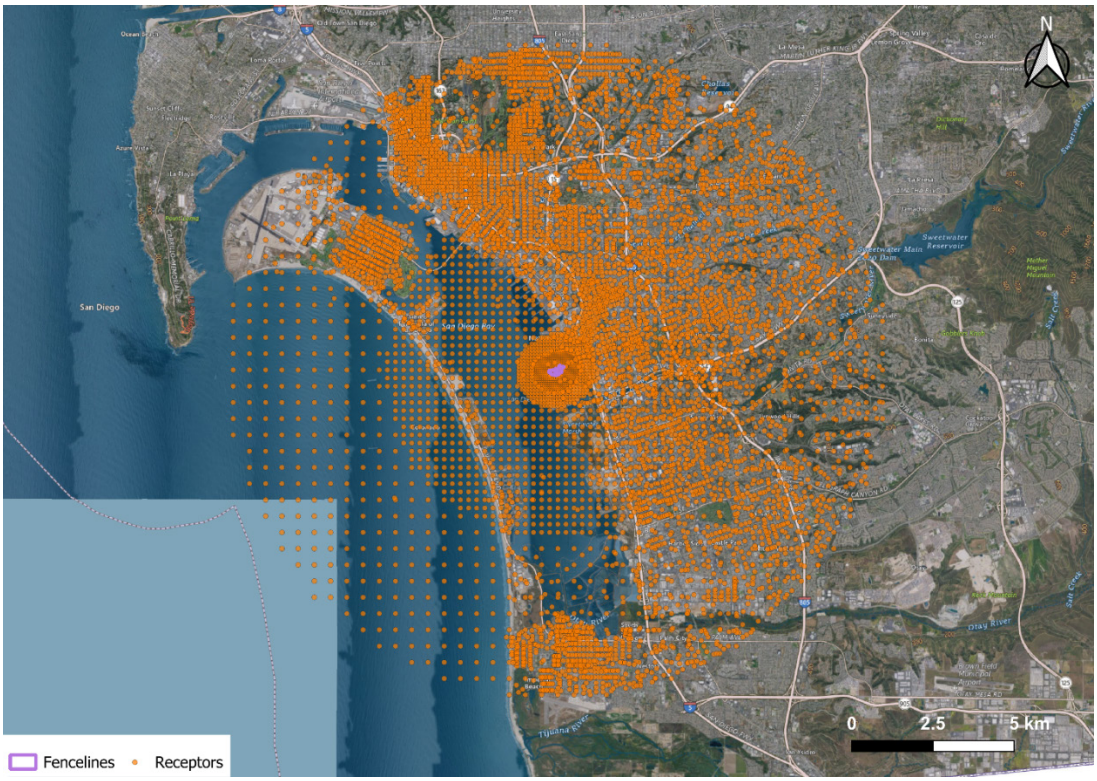
Receptor Name	Address	Easting X (m)[a]	Northing Y (m)[a]	Approximate Distance from Facility Fenceline (km)
ES Parks Child Development Center	2200 E Ave.	490,893.88	3,614,144.11	1.79
Hillcrest Manor Sanitarium	1889 National City Blvd.	490,355.70	3,614,348.16	1.39
Integrity Charter Elementary School	701 National City Blvd.	489,988.22	3,615,418.58	1.98
Kimball Elementary School	302 W 18th St.	489,961.50	3,614,226.92	1.02
Kimball Park	Kimball Park, E 12th St.	490,350.45	3,614,846.09	1.74
National City Middle School	1701 D Ave.	490,444.62	3,614,726.21	1.88
National City Public Library	1401 National City Blvd.	490,205.81	3,614,748.00	1.54
Olivewood Elementary School	2505 F Ave.	491,122.83	3,613,855.38	1.97
Paradise Creek Park	302 W 19th St.	490,037.71	3,614,126.15	1.01
San Ysidro Health National City Family Clinic	1136 D Ave.	490,437.17	3,615,111.44	1.96
South Coast Medical Clinic	408 W 8th St.	489,485.55	3,615,131.18	1.57

Receptor Name	Address	Easting X (m)[a]	Northing Y (m)[a]	Approximate Distance from Facility Fenceline (km)
Sweetwater Union High School	2900 Highland Ave.	491,186.66	3,613,574.49	2.00
Windsor Gardens Convalescent Center of San Diego	220 E 24th St.	490,748.81	3,613,872.66	1.60
John A. Otis Elementary School	621 E. 18th Street	490,879.25	3,614,625.34	1.97

[a] Coordinates in UTM NAD83, Zone 11.

Figure 3-5 illustrates all grid, sensitive, and census receptors included in the air dispersion model for the HRA.

Figure 3-5. Modeled Receptors



3.9 Operational Factor

An hour-of-day operational factor was included in AERMOD to reflect expected hours of operation of the facility, and model dispersion of emissions from permitted sources from 6 AM to 4 PM daily. A factor of 2.4 was included in AERMOD from 6 AM to 4 PM, while all other hours include a factor of 0 to treat operational restrictions for the annual average emissions input to HARP2. This factor was not included for nonpermitted sources such as maritime vessels (tugboats) and haul trucks.

4. Health Risk Assessment

This section describes and evaluates the potential health effects that may be associated with exposure to TAC emissions released during the construction and operation of the proposed project.

4.1 Environmental Analysis

The analysis of types of health risks, estimated TAC emissions, and potential health effects associated with exposure to emissions during operation and construction of the proposed project is presented in the following sections.

4.1.1 Risk Types

Three different types of health risk were evaluated for the proposed project: cancer risk, non-cancer chronic risk, and non-cancer acute risk. Each of these risk types is described below.

Cancer Risk. Cancer risk is the probability or chance of contracting cancer over a period of exposure for nearby residents or workers. Carcinogens have no threshold below which there would be no human health effect. In other words, any exposure to a carcinogen is assumed to have some probability of causing cancer; the lower the exposure, the lower the cancer risk (i.e., a linear, no threshold model). Under various state and local regulations, an incremental cancer risk greater than 10 incidents in one million population due to a project is considered to be a significant impact. For example, the 10 in one million risk level is used by the Air Toxics Hot Spots (Assembly Bill 2588) program and Proposition 65 as the public notification level for air toxic emissions from existing sources.[1]

An incremental increase in lifetime cancer risk of 1×10^{-6} (one individual in one million exposed) is typically used as a screening threshold of significance for potential exposure to carcinogenic substances in air. The incremental cancer risk level of one in one million, which has historically been judged to be an acceptable risk, originates from efforts by the Food and Drug Administration to use quantitative HRA to regulate carcinogens in food additives in light of the zero-tolerance provision of the Delany Amendment (Hutt 1985). The associated dose, known as a "virtually safe dose," has become a standard used by many policy makers and the lay public for evaluating cancer risks. However, a study of regulatory actions pertaining to carcinogens found that an acceptable risk level can often be determined on a case-by-case basis. This analysis of 132 regulatory decisions found that regulatory action was not taken to control estimated risks below one in one million, which are called *de minimis* risks. *De minimis* risks are historically considered risks of no regulatory concern. Chemical exposures with risks above 4×10^{-3} (four in ten thousand or 400 in one million), called *de manifestis* risks, were consistently regulated. *De manifestis* risks are typically risks of regulatory concern. The risks falling between these two extremes were regulated in some cases, but not in others (Travis, et al. 1987).

Since risks at low levels of exposure cannot be quantified directly by either animal or epidemiological studies, mathematical models have estimated such risks by extrapolation from high to low doses. This

[1] When evaluating cancer risks from a single facility, it is important to note some statistics on baseline cancer risks. According to the National Institute of Health National Cancer Institute (NIH), the overall lifetime risk of developing cancer for the average male in the United States is approximately 43 in 100, or 430,000 per million, and about 42 in 100, or 420,000 per million for the average female (NIH 2022). In California, from 2015 to 2019, the incidence rates for cancer were 4,883 per million for males and 4,233 per million for females. The death rates for cancer in California in the same period (2015–2019) were 1,775 per million for males, and 1,287 per million for females (NIH 2023).

mathematical modeling procedure is designed to provide a highly conservative estimate of cancer risks based on the most sensitive species of laboratory animal for extrapolation to humans. In other words, the assumption is that humans are as sensitive as the most sensitive animal species. Therefore, the true risk is not likely to be higher than risks estimated using unit risk factors and is most likely lower and could even be zero.

Non-cancer Risk. Non-cancer health effects can be classified as either chronic or acute. In determining the potential health risks associated with exposures to TACs with non-cancerous health effects, it is assumed there is a dose of the chemical of concern below which there would be no adverse effects on human health. The air concentration corresponding to this dose is called the Reference Exposure Level (REL). Non-cancer health risks are measured in terms of a hazard quotient, which is the modeled exposure level for 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 indices for each organ system. Hazard index (HI) values of less than 1.0 are assumed to reflect pollutant exposure levels with no anticipated adverse health effects. RELs used in the HI calculations of this HRA were those published in December 2022 by CARB/California Office of Environmental Health Hazard Assessment (OEHHA) (CARB 2022).

Chronic toxicity is defined as adverse health effects from prolonged chemical exposure, caused by chemicals accumulating in the body. Because chemical accumulation to toxic levels typically occurs slowly, symptoms of chronic effects usually do not appear until long after exposure commences. The lowest no effect chronic exposure level for a non-carcinogenic air toxic is the chronic REL. Below this threshold, the body is capable of eliminating or detoxifying the chemical rapidly enough to prevent its accumulation. The exposure concentrations used to calculate chronic hazard quotients are derived from modeling of annual TAC emissions.

Acute toxicity is defined as adverse health effects caused by a brief chemical exposure of no more than 24 hours. For most chemicals, the air concentration required to produce acute effects is higher than the level required to produce chronic effects because the exposure duration is shorter. Because acute toxicity is predominantly manifested in the upper respiratory system at threshold exposures, all hazard quotients are typically summed to calculate the acute HI. To obtain a hazard quotient for health effects caused by relatively high, short-term exposures to TACs, 1-hour average concentrations are divided by the acute RELs.

4.1.2 Toxic Air Contaminant Emissions

Environmental consequences associated with the operation and construction of the proposed project include potential human exposures to chemical substances that would be emitted to the air. The human health risks associated with potential exposures to these chemical substances were evaluated in this HRA. A list of chemical substances potentially emitted to the air by the proposed project are listed in Table 4-1, followed by estimated hourly and annual emissions rates for operations and construction of the proposed project. More detailed descriptions of the proposed project's emission sources are provided in Section 2.1.

Table 4-1. Toxic Air Contaminants Potentially Emitted by the Proposed Project

Acetone	Cumene	o-cresol
1,2,4 Trimethylbenzene	Cyclohexane	o-Xylene
1,3-Butadiene	Dibenzo[a,h]anthracene	Total PAHs
2,2,4-Trimethylpentane	2-(2-Methoxyethoxy)-ethanol	Polychlorinated Biphenyls
Acenaphthene	Diesel Exhaust PM	1-Methoxy 2-Propanol
Acenaphthylene	Ethylbenzene	1-Methoxy-2-propyl acetate
Acetaldehyde	Fluoranthene	p-Chloro-a,a,a-trifluorotoluene
Acrolein	Fluorene	Phenanthrene
Aluminum Oxide	Fluorspar	Phenol
Aluminum	Formaldehyde	Phosphorous
Anthracene	Hydrogen Chloride	Propionaldehyde
Antimony	Hexamethylene Diisocyanate	Propylene
Arsenic	Hexane	Pyrene
Benz[a]Anthracene	Indeno[1,2,3-c,d]Pyrene	Selenium
Benzo[a]Pyrene	Aliphatic polyisocyanate	Silica, Crystalline
Benzo[b]Fluoranthene	2-Propanol	Silica, Crystalline Tripoli
Benzo[k]Fluoranthene	Lead	Styrene
Benzene	Manganese	t-Butyl Acetate
Beryllium	4,4'-methylenediphenyl diisocyanate	Toluene
Cadmium	Methyl Ethyl Ketone	1,3,5-trimethylbenzene
Chlorobenzene	Mercury	Trimethyl benzene
Chromium Nonhexavalent	Methyl Isobutyl Ketone	1,2,3-Trimethylbenzene
Chrysene	Naphthalene	Vanadium
Cobalt 2-Ethylhexanoate	1-Butanol	Xylenes (Mixed Isomers)
Copper	Ammonia	Zinc
Copper Oxide (Cupric Oxide)	Nickel	Zinc Oxide
Copper Oxide (Cuprous Oxide)	Garnet	
Chromium Hexavalent		

The following tables summarize TAC hourly and annual TAC emissions for operation and construction of the proposed project. The tables are organized by emission process type and location. Table 4-2 shows maximum hourly operational emissions in pounds per hour, Table 4-3 shows annual operational emissions in pounds per year, Table 4-4 shows hourly construction emissions in pounds per hour, and Table 5-5 shows annual construction emissions in pounds per year. Detailed TAC emission calculations for operation and construction are included in Attachments 1 and 2, respectively.

Table 4-2. Maximum Hourly Operations Toxic Air Contaminant Emissions Summary (Pounds per Hour)

Toxic Air Contaminant	CAS Number	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources
			Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier			
Acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	1.13E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00
*1,2,4 Trimethylbenzene	95-63-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-01	5.19E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106-99-0	8.73E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-03	1.81E-02	0.00E+00
2,2,4-Trimethylpentane	540-84-1	6.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-05
Acenaphthene	83-32-9	4.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	208-96-8	1.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75-07-0	8.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-02	6.55E-02	0.00E+00
Acrolein	107-02-8	1.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	2.83E-03	0.00E+00
Aluminum Oxide	1344-28-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum (Al)	7429-90-5	0.00E+00	2.64E-04	3.35E-03	2.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	120-12-7	2.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	7440-36-0	2.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	7440-38-2	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E-05	1.34E-04	0.00E+00
Benz[a]Anthracene	56-55-3	3.69E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo[a]Pyrene	50-32-8	1.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo[b]Fluoranthene	205-99-2	3.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo[k]Fluoranthene	207-08-9	1.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71-43-2	4.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-03	1.55E-02	0.00E+00
Beryllium	7440-41-7	0.00E+00	2.79E-10	3.54E-09	2.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	7440-43-9	9.88E-05	0.00E+00	0.00E+00	0.00E+00	1.63E-05	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-05	1.25E-04	0.00E+00
Chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-06	1.67E-05	0.00E+00
Chromium Nonhexavalent	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	4.18E-05	0.00E+00
Chrysene	218-01-9	6.82E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt 2-Ethylhexanoate	136-52-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-05	3.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	7440-50-8	0.00E+00	1.05E-04	1.33E-03	8.87E-04	1.47E-05	9.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-04	3.43E-04	0.00E+00
Copper Oxide (Cupric Oxide)	1317-38-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper Oxide (Cuprous Oxide)	1317-39-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium Hexavalent	18540-29-9	3.03E-09	1.49E-06	1.90E-05	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-06	8.36E-06	0.00E+00
Cumene	98-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-02	4.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cyclohexane	110-82-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.68E-05
Dibenzo[a,h]anthracene	53-70-3	3.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-(2-Methoxyethoxy)-ethanol	111-77-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-03	1.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Toxic Air Contaminant	CAS Number	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources
			Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier			
Diesel Exhaust PM	9901	4.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-02	2.37E-01	6.53E-03
Ethylbenzene	100-41-4	3.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01	5.49E-02	3.35E-02	1.51E-01	1.51E-01	4.73E-04	9.11E-04	5.76E-05
Fluoranthene	206-44-0	3.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorene	86-73-7	1.41E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorspar	7789-75-5	0.00E+00	5.45E-09	2.42E-07	1.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50-00-0	3.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-03	1.41E-02	1.41E-02	7.51E-02	1.45E-01	0.00E+00
Hydrogen Chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-03	1.55E-02	0.00E+00
Hexamethylene Diisocyanate	822-06-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-04	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110-54-3	2.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-01	7.07E-01	7.07E-01	1.17E-03	2.25E-03	1.07E-04
Indeno[1,2,3-c,d]Pyrene	193-39-5	3.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aliphatic polyisocyanate	28182-81-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	1.59E-02	3.51E-02	1.58E-01	1.58E-01	0.00E+00	0.00E+00	0.00E+00
2-Propanol	67-63-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	7439-92-1	5.23E-05	6.60E-09	8.36E-08	5.57E-08	1.47E-05	9.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-04	6.94E-04	0.00E+00
Manganese	7439-96-5	1.35E-06	7.07E-06	1.40E-04	9.36E-05	1.65E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-04	2.59E-04	0.00E+00
4,4'-methylenediphenyl diisocyanate	101-68-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-08	1.51E-07	1.51E-07	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-02	1.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	7439-97-6	1.75E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-05	1.67E-04	0.00E+00
Methyl Isobutyl Ketone	108-10-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91-20-3	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-04	1.65E-03	0.00E+00
1-Butanol	71-36-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664-41-7	8.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	7440-02-0	2.88E-04	6.66E-05	8.45E-04	5.63E-04	1.65E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	3.26E-04	0.00E+00
Garnet	97-56-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-02	2.19E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o-cresol	95-48-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-03	1.41E-02	1.41E-02	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95-47-6	4.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total PAHs	1150	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-03	3.03E-03	0.00E+00
Polychlorinated Biphenyls	1336-36-3	1.75E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-Methoxy 2-Propanol	107-98-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-02	1.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-Methoxy-2-propyl acetate	108-65-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-02	5.49E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p-Chloro-a,a,a-trifluorotoluene	98-56-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-01	3.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	85-01-8	1.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenol	108-95-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-02	1.57E-01	1.57E-01	0.00E+00	0.00E+00	0.00E+00
Phosphorous (P)	7723-14-0	0.00E+00	4.67E-08	9.40E-07	6.27E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Toxic Air Contaminant	CAS Number	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources
			Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier			
Propionaldehyde	123-38-6	1.31E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-02	3.90E-02	0.00E+00
Pyrene	129-00-0	1.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	7782-49-2	1.83E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.56E-05	1.84E-04	0.00E+00
Silica, Crystalline	14808-60-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-04	3.66E-04	8.75E-04	4.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Silica, Crystalline Tripoli	1317-95-9	0.00E+00	2.18E-09	9.67E-08	6.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.11E-05
t-Butyl Acetate	540-88-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108-88-3	1.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-03	1.90E-03	6.01E-01	2.70E+00	2.70E+00	4.56E-03	8.78E-03	0.00E+00
1,3,5-trimethylbenzene	108-67-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-01	1.71E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trimethyl benzene	25551-13-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-01	2.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-04
1,2,3-Trimethylbenzene	526-73-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-02	5.88E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vanadium (V)	7440-62-2	0.00E+00	1.77E-08	7.83E-07	5.22E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes (Mixed Isomers)	1330-20-7	1.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.70E-01	2.70E-01	1.68E-01	7.54E-01	7.54E-01	1.84E-03	3.54E-03	0.00E+00
Zinc	7440-66-6	0.00E+00	2.79E-08	3.54E-07	2.36E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.73E-04	1.87E-03	0.00E+00
Zinc Oxide	1314-13-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

CAS = Chemical Abstracts Service

Table 4-3. Annual Operations Toxic Air Contaminant Emissions Summary (Pounds per Year)

Toxic Air Contaminant	CAS Number	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources
			Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier			
Acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-01	6.38E-01	6.38E-01	0.00E+00	0.00E+00	0.00E+00
*1,2,4 Trimethylbenzene	95-63-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E+02	3.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106-99-0	3.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-01	9.43E-01	0.00E+00
2,2,4-Trimethylpentane	540-84-1	2.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04
Acenaphthene	83-32-9	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	208-96-8	4.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75-07-0	3.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E+00	3.40E+00	0.00E+00
Acrolein	107-02-8	6.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-02	1.47E-01	0.00E+00

Toxic Air Contaminant	CAS Number	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources
			Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier			
Aluminum Oxide	1344-28-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+03	9.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum (Al)	7429-90-5	0.00E+00	1.49E-03	3.14E-02	2.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	120-12-7	1.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	7440-36-0	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	7440-38-2	4.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-03	6.96E-03	0.00E+00
Benz[a]Anthracene	56-55-3	1.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo[a]Pyrene	50-32-8	7.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo[b]Fluoranthene	205-99-2	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo[k]Fluoranthene	207-08-9	7.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71-43-2	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01	8.09E-01	0.00E+00
Beryllium	7440-41-7	0.00E+00	1.50E-09	2.95E-08	1.97E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	7440-43-9	3.95E-04	0.00E+00	0.00E+00	0.00E+00	9.14E-03	6.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-03	6.52E-03	0.00E+00
Chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-04	8.69E-04	0.00E+00
Chromium Nonhexavalent	7440-47-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-02	6.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-03	2.17E-03	0.00E+00
Chrysene	218-01-9	2.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt 2-Ethylhexanoate	136-52-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E-03	5.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	7440-50-8	0.00E+00	1.15E-03	1.77E-02	1.18E-02	8.28E-03	6.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-03	1.78E-02	0.00E+00
Copper Oxide (Cupric Oxide)	1317-38-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper Oxide (Cuprous Oxide)	1317-39-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium Hexavalent	18540-29-9	1.21E-08	1.81E-05	3.32E-04	2.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-04	4.35E-04	0.00E+00
Cumene	98-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.78E+01	3.48E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cyclohexane	110-82-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.22E-04
Dibenzo[a,h]anthracene	53-70-3	1.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-(2-Methoxyethoxy)-ethanol	111-77-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-01	1.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel Exhaust PM	9901	1.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+00	1.23E+01	7.84E-02
Ethylbenzene	100-41-4	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+02	5.06E+01	1.89E-02	8.51E-02	8.51E-02	2.37E-02	4.74E-02	6.91E-04
Fluoranthene	206-44-0	1.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorene	86-73-7	5.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fluorspar	7789-75-5	0.00E+00	4.36E-06	1.93E-04	1.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50-00-0	1.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-03	7.98E-03	7.98E-03	3.76E+00	7.52E+00	0.00E+00
Hydrogen Chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01	8.09E-01	0.00E+00
Hexamethylene Diisocyanate	822-06-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-02	4.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110-54-3	9.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E-02	3.99E-01	3.99E-01	5.84E-02	1.17E-01	1.29E-03

Toxic Air Contaminant	CAS Number	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources
			Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier			
Indeno[1,2,3-c,d]Pyrene	193-39-5	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aliphatic polyisocyanate	28182-81-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E+00	4.99E+00	1.98E-02	8.90E-02	8.90E-02	0.00E+00	0.00E+00	0.00E+00
2-Propanol	67-63-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	7439-92-1	2.09E-04	6.60E-08	8.36E-07	5.57E-07	8.28E-03	6.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-02	3.61E-02	0.00E+00
Manganese	7439-96-5	5.39E-06	1.33E-03	5.75E-02	3.83E-02	9.24E-02	6.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-03	1.35E-02	0.00E+00
4,4'-methylenediphenyl diisocyanate	101-68-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-08	8.51E-08	8.51E-08	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E+00	3.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	7439-97-6	7.00E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-03	8.69E-03	0.00E+00
Methyl Isobutyl Ketone	108-10-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91-20-3	1.08E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E-02	8.56E-02	0.00E+00
1-Butanol	71-36-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+03	1.23E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664-41-7	3.22E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	7440-02-0	1.15E-03	6.90E-04	9.50E-03	6.33E-03	9.24E-02	6.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.47E-03	1.70E-02	0.00E+00
Garnet	97-56-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E+01	1.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o-cresol	95-48-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-03	7.98E-03	7.98E-03	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95-47-6	1.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total PAHs	1150	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.86E-02	1.57E-01	0.00E+00
Polychlorinated Biphenyls	1336-36-3	7.00E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-Methoxy 2-Propanol	107-98-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+01	1.39E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1-Methoxy-2-propyl acetate	108-65-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E+01	1.32E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
p-Chloro-a,a,a-trifluorotoluene	98-56-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+02	1.52E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	85-01-8	4.67E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenol	108-95-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-02	8.86E-02	8.86E-02	0.00E+00	0.00E+00	0.00E+00
Phosphorous (P)	7723-14-0	0.00E+00	9.15E-06	3.95E-04	2.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propionaldehyde	123-38-6	5.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propylene	115-07-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+00	2.03E+00	0.00E+00
Pyrene	129-00-0	5.64E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	7782-49-2	7.33E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E-03	9.56E-03	0.00E+00
Silica, Crystalline	14808-60-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-01	2.31E-01	6.03E-01	7.48E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Silica, Crystalline Tripoli	1317-95-9	0.00E+00	1.74E-06	7.74E-05	5.16E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100-42-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-03
t-Butyl Acetate	540-88-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Toxic Air Contaminant	CAS Number	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources
			Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier			
Toluene	108-88-3	7.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+00	1.16E+00	3.39E-01	1.52E+00	1.52E+00	2.28E-01	4.56E-01	0.00E+00
1,3,5-trimethylbenzene	108-67-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E+02	1.79E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trimethyl benzene	25551-13-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E+02	2.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-03
1,2,3-Trimethylbenzene	526-73-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.78E+01	4.95E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vanadium (V)	7440-62-2	0.00E+00	1.41E-05	6.26E-04	4.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes (Mixed Isomers)	1330-20-7	4.90E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.69E+02	2.50E+02	9.45E-02	4.25E-01	4.25E-01	9.21E-02	1.84E-01	0.00E+00
Zinc	7440-66-6	0.00E+00	1.50E-07	2.95E-06	1.97E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-02	9.74E-02	0.00E+00
Zinc Oxide	1314-13-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.37E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table 4-4. Hourly Construction Toxic Air Contaminant Emissions Summary (Pounds per hour)

Toxic Air Contaminant	CAS Number	Construction Equipment Hourly Emissions (lb/hour)	Welding Hourly Emissions (lb/hour)
1,3-Butadiene	106-99-0	4.02E-04	0.00E+00
Acetaldehyde	75-07-0	4.96E-03	0.00E+00
Acrolein	107-02-8	7.82E-04	0.00E+00
Arsenic	7440-38-2	3.04E-06	0.00E+00
Benzene	71-43-2	2.02E-03	0.00E+00
Cadmium	7440-43-9	2.30E-06	0.00E+00
Chlorobenzene	108-90-7	3.06E-07	0.00E+00
Chromium Hexavalent	18540-29-9	1.55E-07	4.14E-06
Chromium Nonhexavalent	7440-47-3	7.65E-07	2.44E-06
Copper	7440-50-8	6.27E-06	6.57E-06
Diesel Particulate	9901	1.15E-02	0.00E+00
Ethyl Benzene	100-41-4	2.16E-04	0.00E+00
Formaldehyde	50-00-0	1.31E-02	0.00E+00
Hexane	110-54-3	6.90E-05	0.00E+00
Hydrogen Chloride	7647-01-0	2.85E-04	0.00E+00
Lead	7439-92-1	1.27E-05	6.57E-06
Manganese	7439-96-5	5.53E-06	7.62E-06
Mercury	7439-97-6	3.06E-06	0.00E+00
Naphthalene	91-20-3	1.96E-04	0.00E+00
Nickel	7440-02-0	7.33E-06	6.57E-06
Total PAHs	1151	7.78E-05	0.00E+00
Propylene	115-07-1	7.15E-04	0.00E+00
Selenium	7782-49-2	3.37E-06	0.00E+00
Toluene	108-88-3	1.45E-03	0.00E+00
Xylenes	1330-20-7	7.26E-04	0.00E+00
Zinc	7440-66-6	3.43E-05	6.57E-06
2,2,4-Trimethylpentane	540-84-1	3.01E-04	0.00E+00

lb = pound(s)

Table 4-5. Annual Construction Toxic Air Contaminant Emissions Summary (Pounds per year)

Toxic Air Contaminant	CAS Number	Construction Equipment Annual Emissions (lb/year)	Welding Annual Emissions (lb/year)
1,3-Butadiene	106-99-0	2.20E-01	0.00E+00
Acetaldehyde	75-07-0	2.51E+00	0.00E+00

Acrolein	107-02-8	3.78E-01	0.00E+00
Arsenic	7440-38-2	1.69E-03	0.00E+00
Benzene	71-43-2	1.03E+00	0.00E+00
Cadmium	7440-43-9	1.29E-03	0.00E+00
Chlorobenzene	108-90-7	1.71E-04	0.00E+00
Chromium Hexavalent	18540-29-9	8.67E-05	2.32E-03
Chromium Nonhexavalent	7440-47-3	4.28E-04	1.37E-03
Copper	7440-50-8	3.51E-03	3.68E-03
Diesel Particulate	9901	5.91E+00	0.00E+00
Ethyl Benzene	100-41-4	1.05E-01	0.00E+00
Formaldehyde	50-00-0	6.57E+00	0.00E+00
Hexane	110-54-3	3.44E-02	0.00E+00
Hydrogen Chloride	7647-01-0	1.59E-01	0.00E+00
Lead	7439-92-1	7.11E-03	3.68E-03
Manganese	7439-96-5	3.08E-03	4.27E-03
Mercury	7439-97-6	1.71E-03	0.00E+00
Naphthalene	91-20-3	9.88E-02	0.00E+00
Nickel	7440-02-0	4.07E-03	3.68E-03
Total PAHs	1151	4.18E-02	0.00E+00
Propylene	115-07-1	4.00E-01	0.00E+00
Selenium	7782-49-2	1.88E-03	0.00E+00
Toluene	108-88-3	7.30E-01	0.00E+00
Xylenes	1330-20-7	3.60E-01	0.00E+00
Zinc	7440-66-6	1.92E-02	3.68E-03
2,2,4-Trimethylpentane	540-84-1	1.46E-01	0.00E+00

For HARP2 input, diesel PM was included for annual emission rates of diesel combustion sources, while speciated diesel exhaust TACs were included for hourly emission rates. HARP2 emission inputs for operation and construction are included in Attachments 3 and 4, respectively.

4.2 Health Risk Assessment Methodology

A HRA was conducted to evaluate potential human health risks associated with exposure to pollutant concentrations resulting from project-related operational emissions of TACs. The HRA was developed using air dispersion modeling of the project-related emissions and characterization of the resultant exposures and health risks using approved risk assessment methodology for both carcinogenic and noncarcinogenic risks from the California OEHHA (OEHHA 2015), CARB risk management guidance (CARB 2015), and SDAPCD's *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments* (SDAPCD 2022).

This HRA followed four general steps to estimate health impacts:

1. Identification and quantification of project-related TAC emissions.

2. Evaluation of pollutant transport (using air dispersion modeling) to estimate ground-level TAC concentrations at each receptor location in the plotted receptor grid and at sensitive receptor locations.
3. Assessment of human exposures.
4. Use of a risk characterization model to estimate the potential health risks at each receptor location.

4.2.1 Health Risk Impact Locations

Health risks were evaluated for a hypothetical receptor at the point of maximum impact (PMI), the location where the highest offsite concentrations of air pollutants associated with the project emissions are predicted to occur, based on the air dispersion modeling. Risks estimated for this location were assumed to be equivalent to a residential receptor exposed for the maximum project lifetime of 30 years. Human health risks associated with emissions from the proposed project are unlikely to be higher at any other receptor location than at the location of the PMI. If there are no significant effects associated with concentrations in air at the PMI location, it is unlikely that there would be significant effects in any receptor location in the vicinity of the proposed project.

Health risks were also evaluated at the following receptor locations: the maximally exposed individual resident (MEIR), maximally exposed individual worker (MEIW), and maximally exposed sensitive receptor (MESR). These locations correspond to the location of the modeled residence, industrial/commercial business, and sensitive receptor, respectively, with the highest estimated health risk impacts.

As recommended by the 2015 OEHHA, CARB Guidance and 2022 SDAPCD Supplemental Guidance, a Tier 1 assessment was performed. The Tier 1 assessment is the most conservative of the four tier assessment methodologies identified in the OEHHA guidance and uses a standard point-estimate approach with standard OEHHA assumptions. The 2015 OEHHA guidance uses AERMOD-predicted pollutant concentrations, exposure assumptions, and approved health values (that is, pollutant-specific cancer potency values and RELs from OEHHA to predict potential health impacts). Health risk results were presented in terms of the incremental increase in lifetime cancer risk, chronic hazard index (HIC), acute hazard index (HIA), and cancer burden.

Risk was evaluated for each of the four receptor types:

- PMI
- MEIR
- MEIW
- MESR

Results of the HRA were compared to the SDAPCD's recommended thresholds of significance as shown in Table 4-6.

Table 4-6. Health Risk Significance Threshold Levels for SDAPCD

Category	Risk Threshold	Source
Proposed Project (Facility-wide)	Incremental Cancer Risk $\geq$ 10×10^{-6} HIC $\geq$ 1.0 HIA $\geq$ 1.0 Cancer Burden $\geq$ 1.0	SDAPCD Threshold of Significance (SDAPCD 2022)

4.2.2 Risk and Exposure Type

4.2.2.1 Carcinogenic (Cancer) Risk

Cancer risks were evaluated based on the estimated annual project-related TAC emission rates, ground-level concentrations obtained from the dispersion modeling analysis, and values for inhalation cancer potency, oral slope factor, frequency and duration of exposure at the receptor, age-specific sensitivity factors, and breathing rates of the exposed persons from the HARP2 model. For carcinogens, the toxicity criterion, or health guidance value, is the cancer potency factor, which describes the potential risk of developing cancer per unit of average daily dose over a 70-year lifetime. Cancer risk results were expressed as the incremental increase in lifetime cancer risk above baseline levels of risk, typically as a predicted number (of persons) per 1 million individuals.

Potential excess lifetime cancer risks for residential and sensitive receptors were evaluated using the 30-year continuous exposure duration scenario and potential cancer risks for workers were evaluated using the 25-year exposure duration (8 hours per day starting at age 16 years old) as recommended in the OEHHA guidelines (OEHHA 2015). Based on the OEHHA guidelines, the derived (adjusted) method in HARP2 was used for the residential cancer risk evaluation, which uses the 95th percentile breathing rate from the third trimester to 2 years and the 80th percentile inhalation rate from 2 years to 70 years (CARB 2015). The 30-year and 25-year exposure durations for residential and commercial/industrial receptors, respectively, are obtained from the OEHHA guidelines (OEHHA 2015).

4.2.2.2 Noncarcinogenic Chronic Exposure

Chronic toxicity is defined as adverse health effects from prolonged chemical exposure caused by chemicals accumulating in the body. To assess chronic non-cancer exposures, annual TAC ground-level concentrations are compared with the RELs developed by OEHHA to obtain a HIC. The REL is a concentration in ambient air at, or below which, no adverse health effects are anticipated. Non-cancer chronic health risks for individual TACs are calculated as 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 summed with the resulting totals expressed as HIs for each organ system. HIC values less than 1 are assumed to reflect pollutant exposure concentrations with no anticipated adverse health effects.

4.2.2.3 Noncarcinogenic Acute Exposure

Acute toxicity is defined as adverse health effects caused by a brief chemical exposure of no more than 24 hours. To assess acute non-cancer exposures, 1-hour TAC ground-level concentrations are compared with the acute REL to obtain an acute HIA. Similar to assessing chronic non-cancer health risks, acute non-cancer health risks are calculated as 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 summed with the resulting totals expressed as HIs for each organ system. Again, HIA values less than 1 are assumed to reflect exposures with no anticipated adverse health effects.

4.2.2.4 Cancer Burden

To evaluate population risk, regulatory agencies have used the cancer burden as a method to account for the increased number of incremental cancer cases that could potentially occur in a population. The population burden can be calculated by multiplying the estimated increase in incremental cancer risk at a census block centroid multiplied by the number of people who live in the census block, and summing the

cancer cases across the zone of impact. A census block is defined as the smallest entity for which the Census Bureau collects and tabulates decennial census information; it is bounded on all sides by visible and non-visible features shown on Census Bureau maps. A centroid is defined as the central location within a specified geographic area.

Cancer burden is calculated on the basis of OEHHA (70-year) risks and is independent of how many people move in or out of the vicinity of an individual facility. The number of cancer cases is considered dependent on the number of people exposed, within some lower limits of exposed population size, and the length of exposure (within reason). For example, if 10,000 people are exposed to carcinogens at concentrations with an estimated incremental cancer risk of $1x10^{-5}$ for a lifetime, the cancer burden is calculated as 0.1, and if 100,000 people are exposed to a $1×10^{-5}$ risk, the cancer burden is 1.0.

4.2.3 Health Risk Modeling Software

The most recent version of HARP2 (Version 22118) (CARB 2022), with the revised unit risk and cancer potency values, updated January 2025, was used for the analysis of potential exposures and health risks associated with project-related TAC emissions. The updated sensitivity factors were applied in accordance with the *Risk Management Guidance for Stationary Sources of Air Toxics* (CARB 2015).

The following non-default adjustments were made to calculate risk in HARP2:

- A worker adjustment factor of 4.2 for MEIW analysis was included, which assumes that the surrounding worker receptors would be exposed to TAC emissions released from operations of the proposed project during the same schedule of operation. The factor of 4.2 was calculated based on (24 hours per day/8 hours per shift) × (7 days in a week/5 days in a work week). This is consistent with SDAPCD's Supplemental Guidelines (SDAPCD 2022).
- For the cancer risk at specific receptors north of the Austal facility, the worker exposure frequency was reduced from 250 days per year to 125 days per year. This is explained further in Section 4.3.1.
- The dermal pathway was set to warm based on the surrounding climate in San Diego and as required by SDAPCD.

Risk characterization for TACs emitted by the proposed project was carried out according to the procedures specified by OEHHA guidance for both carcinogenic and noncarcinogenic risks (OEHHA 2015), as summarized above.

The exposure pathways included for each risk scenario in this HRA are summarized in Table 4-7. The dose-risk assessment values and RELs used to characterize health risks associated with modeled concentrations in the air, as well as from other pathways, were obtained from the Consolidated Table of OEHHA/CARB Approved Risk Assessment Health Values (CARB 2022a).

Table 4-7. Summary of HARP2 Exposure Pathways

Risk Analysis	Model Exposure Pathways	Intake Rate Percentile
Acute	Inhalation	N/A
Non-cancer Chronic	Inhalation Soil ingestion Dermal absorption Mother's milk	N/A

Risk Analysis	Model Exposure Pathways	Intake Rate Percentile
Cancer	Inhalation Soil ingestion Dermal absorption Mother's milk	RMP using the derived method for residential OEHHA-derived method for non-residential

The fish pathway would not be enabled in HARP2 because the nearest body of water to the Austal USA facility is the Pacific Ocean. As such, any quantification of exposures due to the fish pathway is likely to be highly speculative and inaccurate.

4.2.4 Project Construction

Construction-related emissions would occur over a period of 70 days and would have localized exposure impacts and therefore are not expected to result in long-term chronic effects on the public. However, an HRA of construction-related emissions was conservatively conducted to estimate potential health risks associated with public exposure to welding and construction equipment during the remaining project construction. The same methodology for determining the health risks and hazard indices as described above for the operations phase of the proposed project was also applied to construction emissions. The remaining construction duration is expected to be 70 days, and the annual TAC emissions were annualized over 30 and 25 years for estimating residential and worker cancer risks and non-cancer chronic hazard, respectively.

OEHHA recommends modeling projects from 2 to 6 months as a 6-month exposure, not the full 25- or 30-year exposure (OEHHA 2015). Therefore, the approach taken for this construction analysis is conservative. Air Toxics Exposure Assessment Results

4.2.5 Project Operation

Estimates of the incremental lifetime cancer risks and non-cancer chronic and acute risks associated with exposures to operational-related concentrations in air for the PMI, MEIR, MEIW, and MESR are presented in Table 4-8 for comparison to the SDAPCD significance thresholds. The locations associated with these impacts are shown on Figures 4-1 and 4-2.

When calculating non-cancer acute risk impacts from a single hour exposure, it was assumed that not all project sources would operate in a single hour. When the nonpermitted maritime vessels are moving large marine vessels into the FDD area, it is expected that no other maintenance activities would occur onsite. Conservatively, the acute HI results (PMI, MEIR, and MESR) represent impacts from hourly emissions from all sources except maintenance operations on the FDD (abrasive blasting, marine coating and solvent use, adhesive use, and welding operations). For estimating the acute HI at worker locations (MEIW), a refined nickel analysis was conducted that conservatively assumed all project operations could occur within a single hour. This analysis is described in more detail further in this section.

Table 4-8. Operation HRA Summary – Proposed Project

Risk Type	Risk Analysis	Receptor No.	Easting X (m)[a]	Northing Y (m)[a]	Risk/Hazard Index[b]	Thresholds
Cancer	PMI	23	488,867.33	3,613,340.21	17.92	--
	MEIR	703	489,600.00	3,613,800.00	0.33	10
	MEIW	157	489,000.00	3,613,350.00	1.85	10
	MESR	3,369	490,037.71	3,614,126.15	0.18	10
Non-Cancer Chronic	PMI	23	488,867.33	3,613,340.21	0.80	--
	MEIR	703	489,600.00	3,613,800.00	0.01	1.0
	MEIW	157	489,000.00	3,613,350.00	0.17	1.0
	MESR	3,369	490,037.71	3,614,126.15	< 0.01	1.0
Non-Cancer Acute	PMI	165	488,800.00	3,613,375.00	1.63	--
	MEIR	992	489,700.00	3,613,800.00	0.19	1.0
	MEIW [c]	139	488,900.00	3,613,300.00	0.91	1.0
	MESR	3,364	489,961.50	3,614,226.92	0.11	1.0

[a] Coordinates in UTM NAD83, Zone 11.

[b] Cancer risk in terms of predicted number (of persons) per one million individuals exposed, while non-cancer risk is presented as an HI.

[c] The non-cancer acute risk required a refined nickel analysis.

Figure 4-1. Operational Health Risk Assessment Impact Locations for Cancer and Non-Cancer Chronic

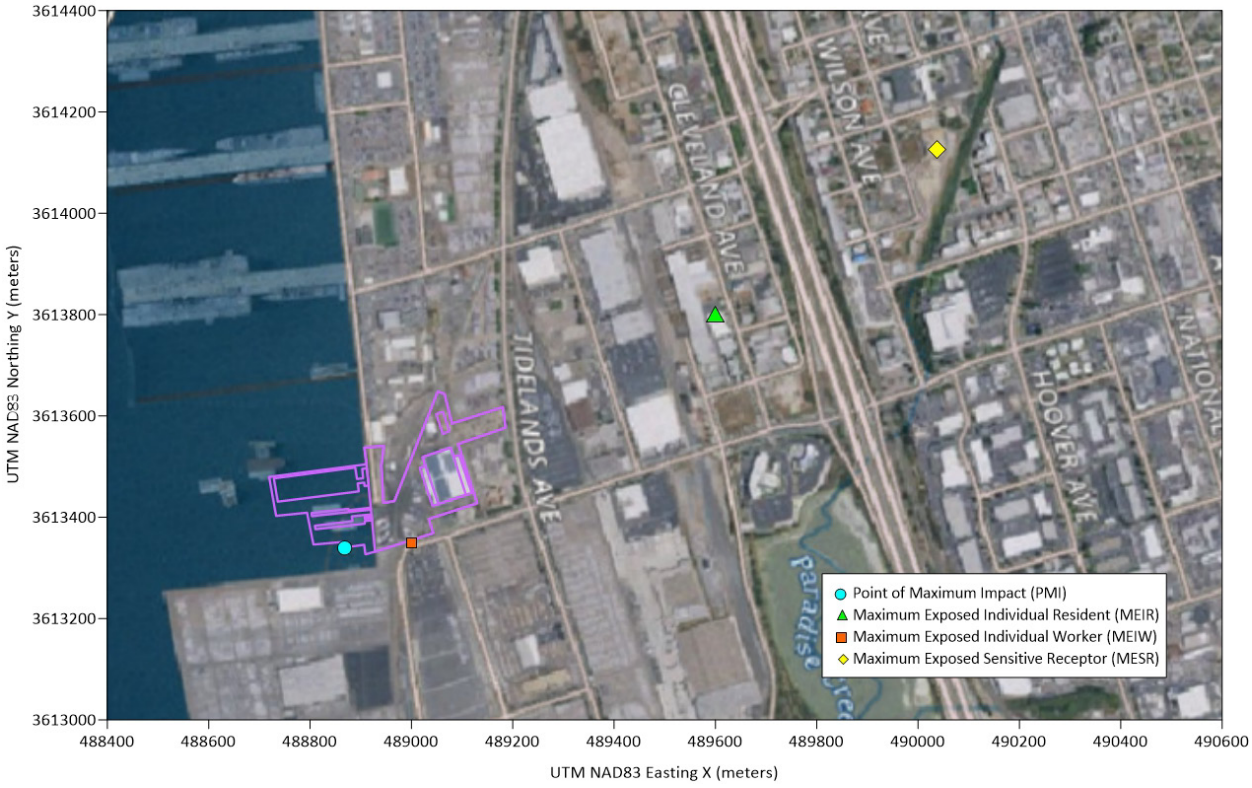
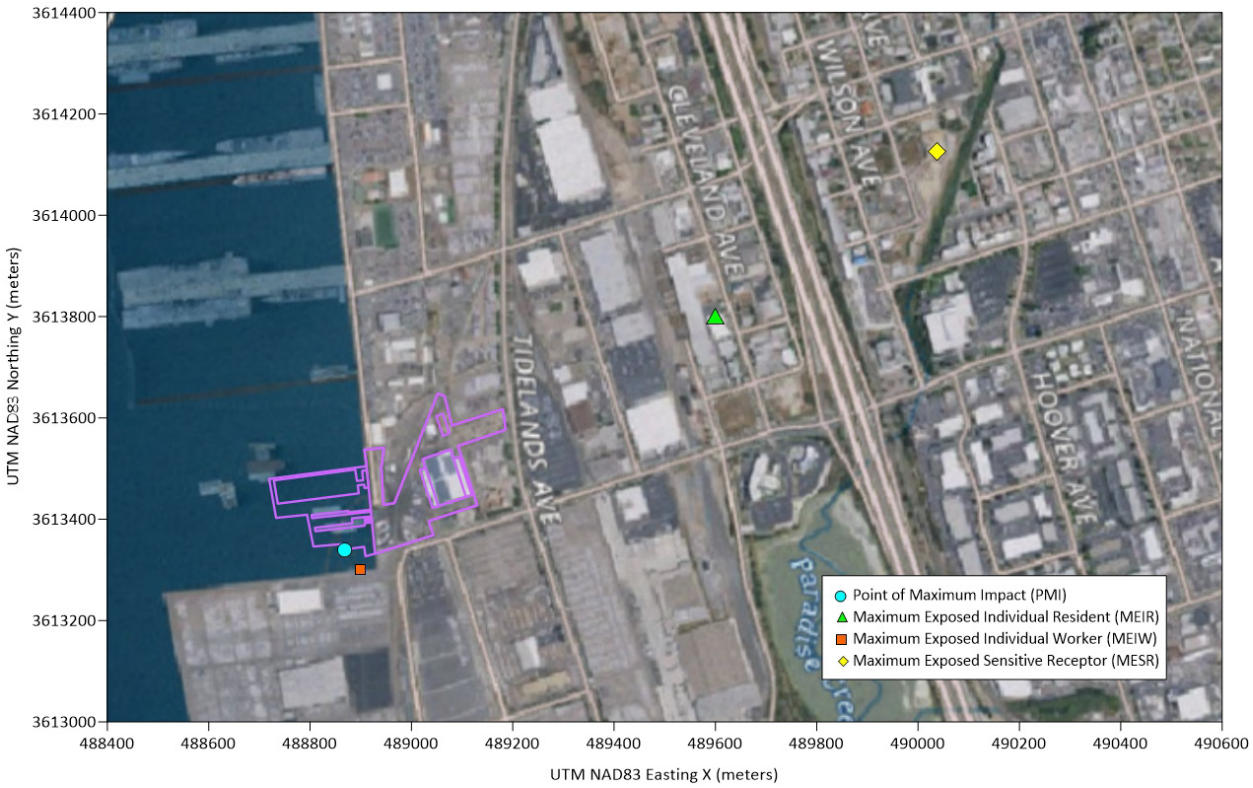


Figure 4-2. Operational Health Risk Assessment Impact Locations for Acute



As shown in Table 4-8, predicted facility-wide impacts for the proposed project are below the cancer risk significance threshold of 10 in one million at all locations, with the exception of the estimated cancer risk at the hypothetical PMI. The PMI does not constitute an actual receptor a location with potential for long-term exposure and it is typically located along the proposed project fence line where no offsite individual would live or work. No long-term exposure is expected to occur at the PMI; therefore, the predicted result at the hypothetical PMI is not considered appropriate for comparison to SDAPCD's CEQA significance thresholds. Cancer risks at locations other than the PMI are lower, which is seen in the summary of cancer risks at the MEIR and MESR. The results of the risk assessment are considered to be conservative due to the Tier 1 approach to assumptions used in risk estimation, the size of the potentially exposed population, and conservative estimates of the toxicity of the risk-driving chemicals.

The receptor location for the MEIW would have been located over a building directly north of the Austal USA facility. However, the two buildings directly north of the Austal USA facility are associated with a training facility owned and operated by the Navy. SDAPCD confirmed with Lieutenant Jackson Morton (Navy) that worker activities in this training facility are expected to be infrequent (that is, approximately one to two times per week for 4 to 6 hours per session). The default worker exposure frequency in HARP2 is 250 days (that is, 5 days per week, 50 weeks per year), but that level of exposure is not expected for workers at the training facility. Via email on March 27, 2025, SDAPCD recommended a non-default worker exposure frequency value of 125 days per year for this training facility, based on the conservative assumption that the trainer is onsite fewer than 2.5 days per week (Amberg, pers. comm. 2025a). The non-default worker exposure frequency adjustment was applied only to the evaluation of worker cancer risk at this training facility receptor location, per OEHHA guidance (OEHHA 2015). The MEIW cancer risk presented in Table 4-8 is for receptor number 157 at a nearby guard shack location more representative of the default worker exposure assumption of 250 days per year.

The estimated non-cancer chronic impacts for the proposed project are below the HIC threshold of 1.0 at all locations, including the PMI. Therefore, the predicted chronic health risks associated with proposed project operation are less than significant.

The estimated acute non-cancer impacts for the proposed project are below the HI threshold of 1.0 at all residential, worker, and sensitive receptors, but exceed the HI threshold of 1.0 at the PMI.

A refined non-cancer acute impact analysis was conducted for the non-cancer acute MEIW presented in Table 4-8. Non-cancer acute HI is based on an outside worker's exposure within any single hour and is a sum of estimated hazard quotients from all TACs emitted at the facility. Non-cancer acute MEIW HI results above 1.0 were shown at receptors on the wharf directly south of Austal USA's fence line where an outside worker may be exposed to project emissions for 1 hour; however, this method is conservative and combines the worst-case hour for each individual modeled source, which would often occur at different hours. A refined acute analysis is a more accurate method of determining risk because it is the worst-case individual hour for all sources operating.

The refined analysis estimated the ground-level concentration of nickel at receptor locations along the south wharf. For the non-cancer acute impact analysis, the primary driver of the non-cancer acute hazard is nickel emissions from various operational sources. The HI was calculated based on the maximum ground-level hourly concentration of nickel estimated by AERMOD using nickel hourly emission rates from all nickel-emitting sources. These emission rates are presented in Table 4-2. To calculate the MEIW acute hazard quotient, the maximum hourly ground-level concentration was divided by the nickel REL of 0.2 microgram per cubic meter (µg/m^3) (CARB 2022a). The maximum hourly ground-level concentration of nickel was found to be 0.182 µg/m^3. The maximum ground-level concentration of nickel was divided by the nickel REL and the hazard quotient for nickel was found to be 0.91 non-cancer acute HI. This analysis approach was agreed upon by SDAPCD via email on March 25, 2025 (Amberg, pers. comm. 2025b).

As described previously, human health risks associated with operational impacts from the proposed project are not higher at any location other than that of the PMI. Cancer risk at all receptors associated with worker or residential populations of individuals exposed to the project's emissions are lower (and in most cases, substantially lower) than at the PMI, as illustrated in the residential cancer risk isopleths provided on Figure 4-3, which show the risk isopleths of one, five, and ten in one million, representing the areas exposed to those levels of risk. Figure 4-4 includes the worker cancer risk isopleth of one in a million based on the adjusted worker exposure frequency. The estimated cancer burden is 0.00. This cancer burden indicates that impacts from the proposed project would not be associated with any significant increase in cancer cases in the previously defined population. Predicted impacts associated with the proposed project operational activities would be less than significant.

Figure 4-3. Operations Cancer Residential Risk Isopleths

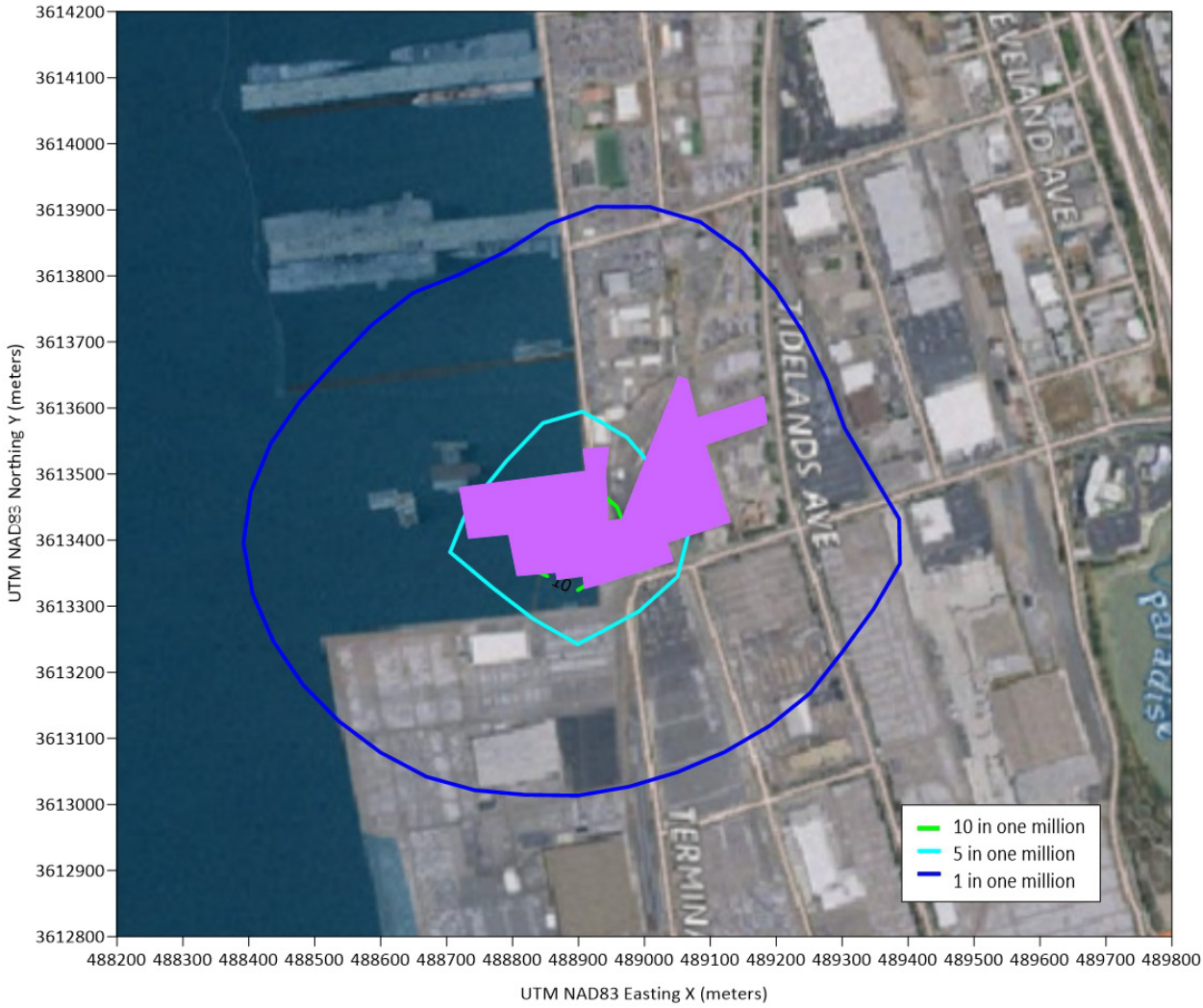
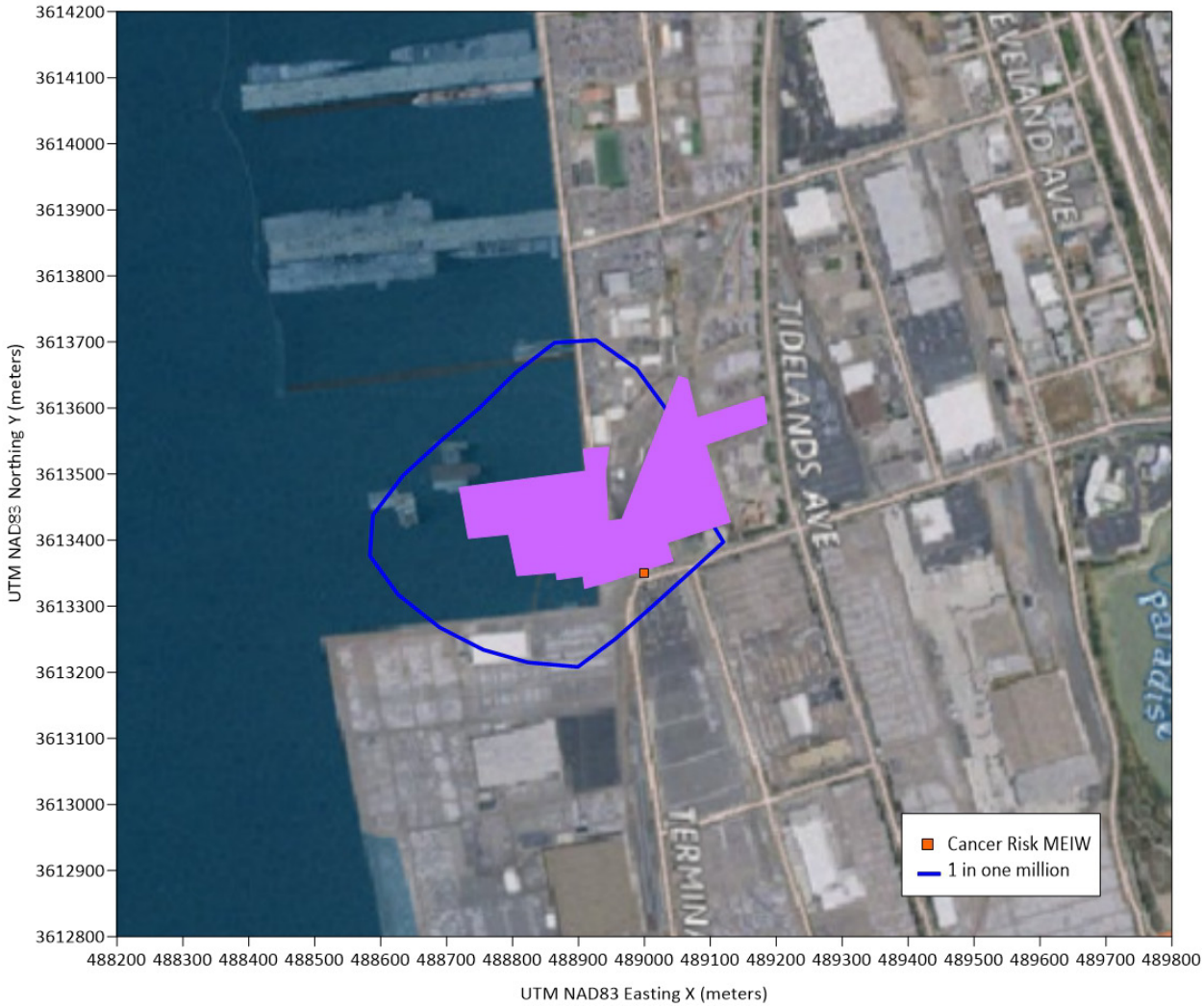


Figure 4-4. Operations Cancer Worker Risk Isopleth



4.2.6 Project Construction

Estimates of the incremental lifetime cancer risks and non-cancer chronic and acute impacts associated with exposures to construction-related TAC concentrations in air for the PMI, MEIR, MEIW, and MESR are presented in Table 4-9 for comparison to the SDAPCD significance thresholds. Receptor locations are shown on Figures 4-5 and 4-6. The estimated risks are below the SDAPCD CEQA significance thresholds of 10 in one million and 1.0, respectively, with the exception of the estimated cancer risk at the hypothetical PMI. An isopleth showing the residential cancer risk values of one in one million are provided on Figure 4-7. The construction period would be a finite duration, during which no long-term exposure is expected to occur at the PMI; as such, the predicted result at the hypothetical PMI is not considered appropriate for comparison to SDAPCD's CEQA significance thresholds. Predicted impacts associated with the finite construction activities would be less than significant.

Table 4-9. Construction HRA Summary – Proposed Project

Risk Type	Risk Analysis	Receptor No.	Easting X (m)[a]	Northing Y (m)[a]	Risk/Hazard Index[b]	Thresholds
Cancer	PMI	1	488,911.43	3,613,504.61	11.15	--
	MEIR	992	489,700.00	3,613,800.00	0.05	10
	MEIW	227	488,925.00	3,613,550.00	0.64	10
	MESR	3,361	490,893.88	3,614,144.11	0.09	10
Non-Cancer Chronic	PMI	1	488,911.43	3,613,504.61	0.10	--
	MEIR	992	489,700.00	3,613,800.00	< 0.01	1.0
	MEIW	227	488,925.00	3,613,550.00	0.02	1.0
	MESR	3,361	490,893.88	3,614,144.11	< 0.01	1.0
Non-Cancer Acute	PMI	1	488,911.43	3,613,504.61	0.02	--
	MEIR	703	489,600.00	3,613,800.00	< 0.01	1.0
	MEIW	1	488,911.43	3,613,504.61	0.02	1.0
	MESR	3,364	489,961.50	3,614,226.92	< 0.01	1.0

[a] Coordinates in UTM NAD83, Zone 11.

[b] Cancer risk in terms of predicted number (of persons) per one million individuals exposed, while non-cancer risk is presented as an HI.

Figure 4-5. Construction Health Risk Assessment Impact Locations for Cancer and Non-Cancer Chronic

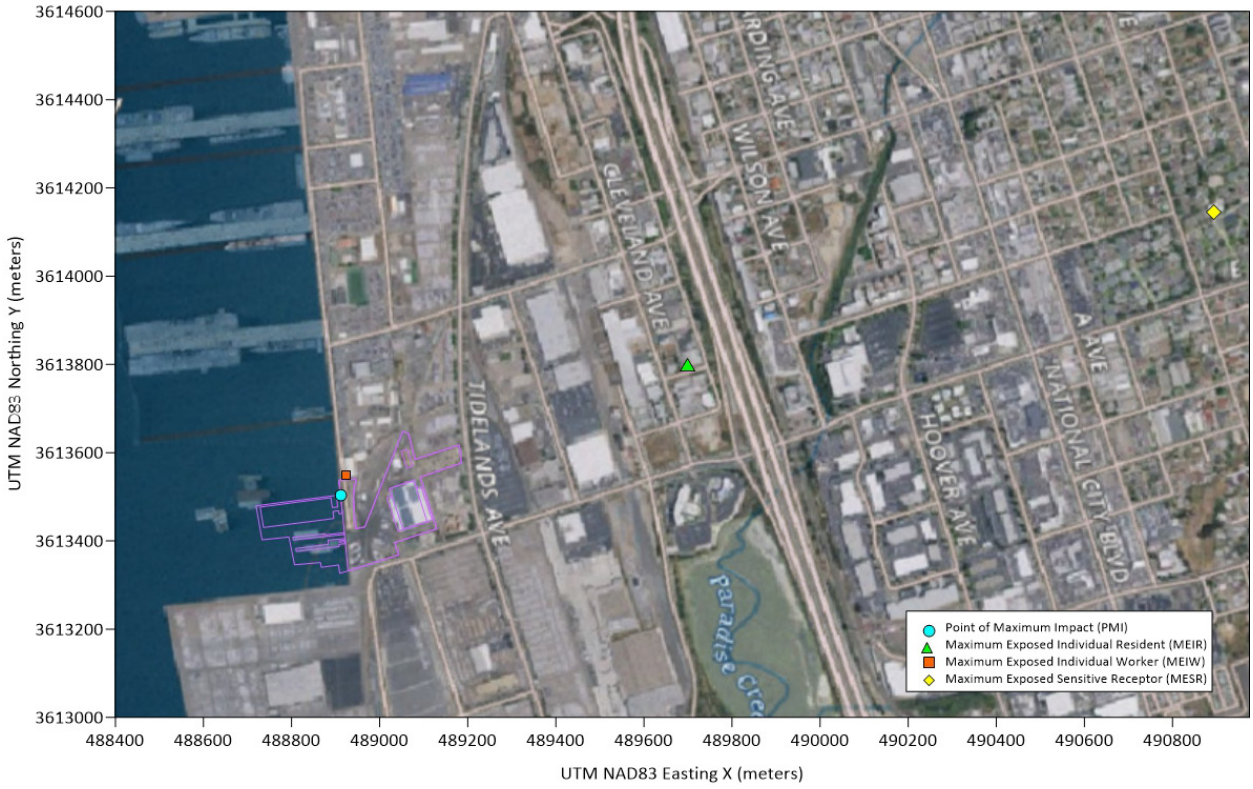
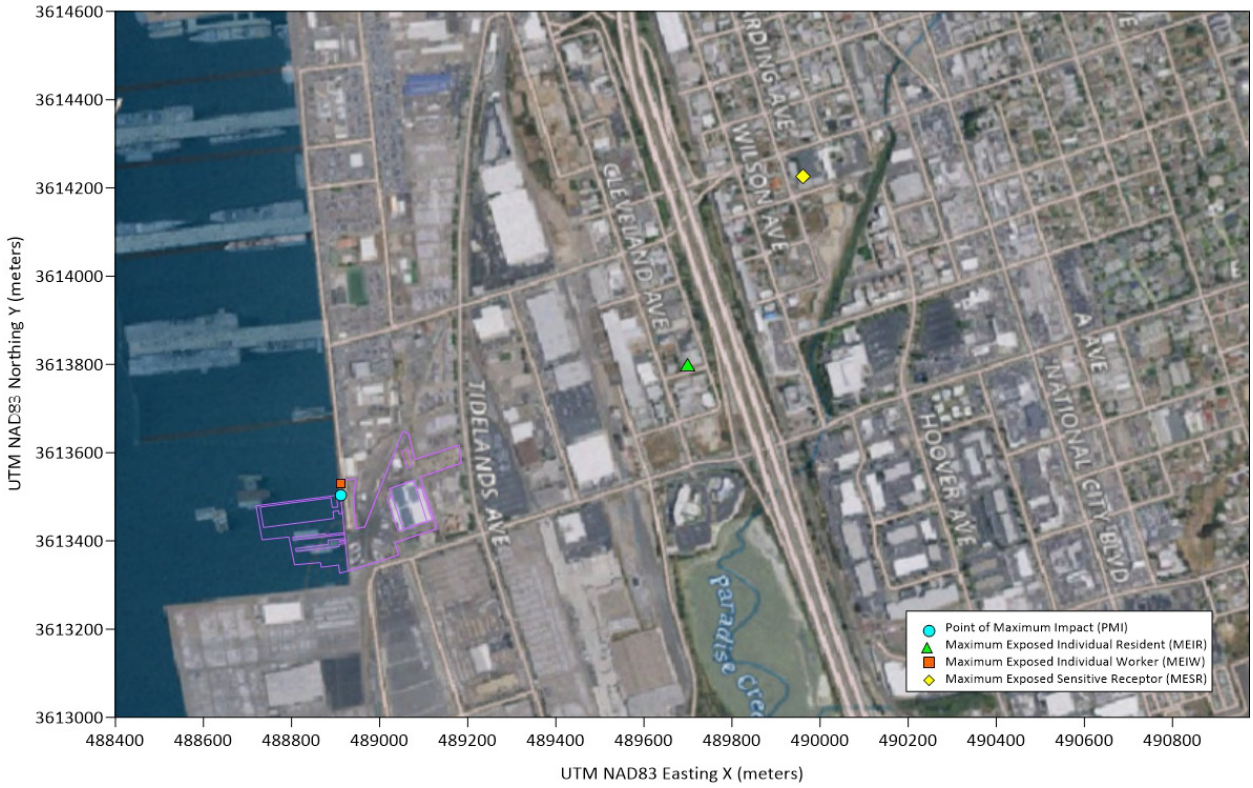


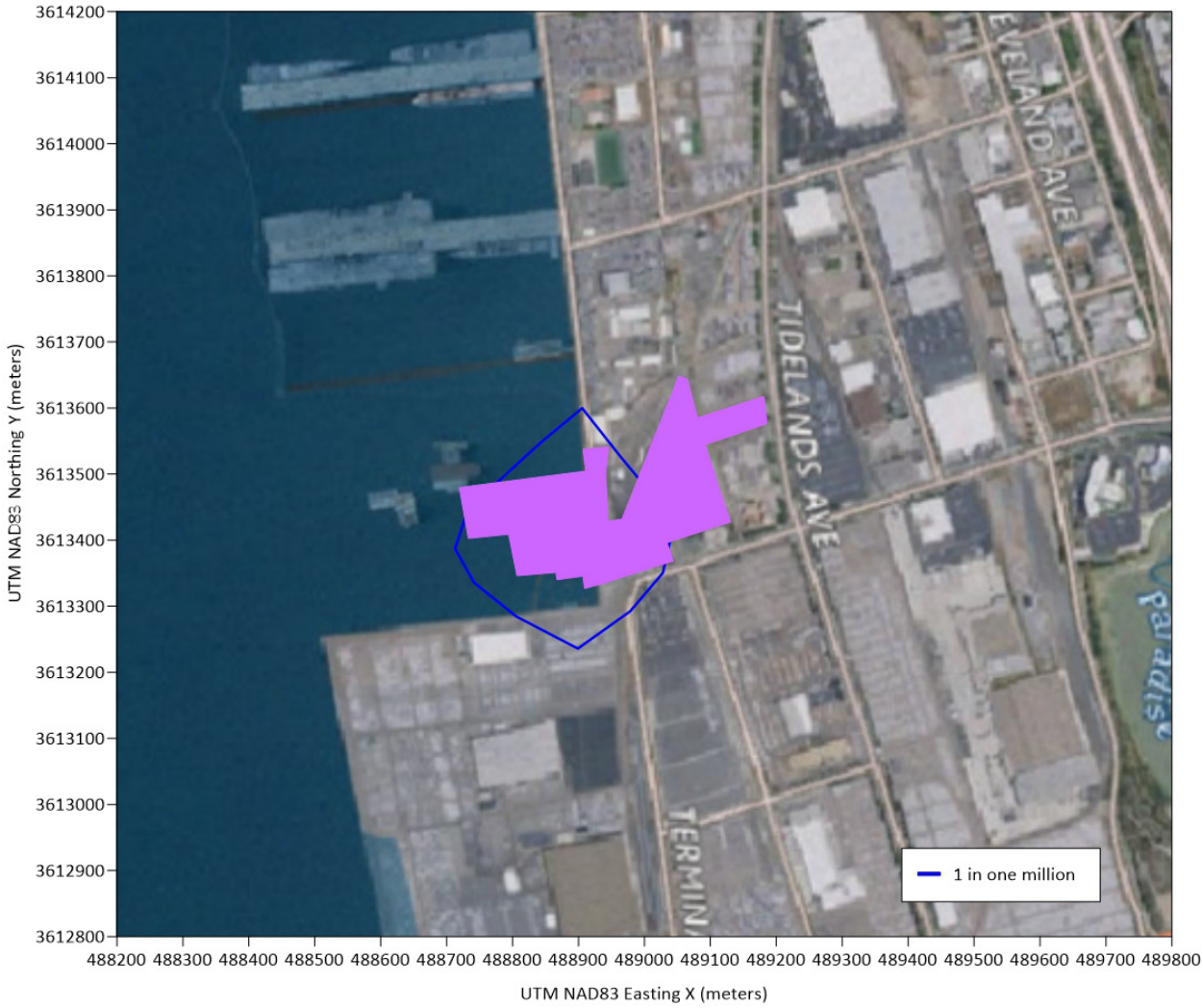
Figure 4-6. Construction Health Risk Assessment Impact Locations for Acute



A cancer burden analysis was not performed for the construction phase of the proposed project as it is a temporary phase and would occur for no longer than 70 days. This duration is far less than the 70-year exposure period assumed for a cancer burden analysis. Therefore, it is assumed project construction would have negligible impacts on cancer burden in the area.

Detailed risk and hazard values for operation and construction are provided in Attachments 3 and 4. respectively. The list of census receptors is not included in these appendices but can be provided upon request.

Figure 4-7. Construction Cancer Risk Isopleths



5. References

Amberg, Stephen, San Diego Air Pollution Control District. 2025a. Personal communication (email) with Melanie Dickison, Jacobs. March 25.

Amberg, Stephen, San Diego Air Pollution Control District. 2025b. Personal communication (email) with Melanie Dickison, Jacobs. March 27.

Auer, A.H. 1978. "Correlation of Land Use and Cover with Meteorological Anomalies." *Journal of Applied Meteorology*. No. 17. pp. 636-643.

Austal USA. 2025. *Austal USA Floating Dry Dock Project Draft Environmental Impact Report*. Prepared by Jacobs. April.

Bay Area Air Quality Management District (BAAQMD). 2022. *Air Quality Guidelines* Appendix E, *Recommended Methods for Screening and Modeling Local Risks and Hazards*. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/appendix-e-recommended-methods-for-screening-and-modeling-local-risks-and-hazards_final-pdf.pdf.

California Air Resources Board (CARB). 2024. *Ambient Air Quality Standards*. July. Table of Ambient Air Quality Standards.

California Air Resources Board (CARB). 2021. Appendix H, *2021 Update to the Emission Inventory for Commercial Harbor Craft: Methodology and Results* in *Staff Report: Initial Statement of Reasons*. September. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/apph.pdf.

California Air Resources Board (CARB). 2025. *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*. January. https://ww2.arb.ca.gov/sites/default/files/classic/toxics/harp/software2/healthupdate012025.zip.

California Air Resources Board (CARB). 2015. *Risk Management Guidance for Stationary Sources of Air Toxics.* California Air Pollution Control Officers Association. July.

California Air Resources Board (CARB). 2022. "HARP Air Dispersion Modeling and Risk Tool." April 28 release. https://ww2.arb.ca.gov/resources/documents/harp-air-dispersion-modeling-and-risk-tool.

Hutt, P.B. 1985. *Use of Quantitative Risk Assessment in Regulatory Decision Making Under Federal Health and Safety Statutes*. Risk Quantitation and Regulatory Policy. Eds. D.G. Hoel, R.A. Merrill and F.P. Perera. Banbury Report 19, Cold Springs Harbor Laboratory.

M.S. Hatch Consulting. 2025. Toxics – Best Available Control Technology Evaluation. Technical Memorandum prepared for Mr. Hugo Bermudez, Austal USA. April 23.

National Institute of Health National Cancer Institute (NIH). 2022. *SEER 22 Registries Incidence and Mortality 2000-2019, with Kaposi Sarcoma and Mesothelioma*. April. https://surveillance.cancer.gov/devcan/canques.html.

National Institute of Health National Cancer Institute (NIH). 2024. "State Cancer Profiles. Quick Profiles: California." Accessed December 2024. https://statecancerprofiles.cancer.gov/quick-profiles/index.php?statename=california#t=3.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Guidance Manual for Preparation of Health Risk Assessments.* Air, Community, and Environmental Research Branch. February.

Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB). 2022. *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values.* September.

San Diego Air Pollution Control District (SDAPCD). 2019. SDAPCD Rule 20.2 New Source Review for Non-Major Stationary Sources. June.

San Diego Air Pollution Control District (SDAPCD). 2022. *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments (HRAs)*. July.

San Diego Air Pollution Control District (SDAPCD). n.d. "Attainment Status." Accessed September 4, 2024. https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html#:~:text=An%20area%20is%20designated%20in%20attainment%20when%20it,effects%20on%20human%20health%20or%20the%20public%20welfare.

San Diego County. 2007. *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality*. Prepared by the Land Use and Environment Group, Department of Planning and Land Use. March. https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf.

Travis, C.C., E.A.C. Crouch, R. Wilson and E.D. Klema (Travis, et al.). 1987. "Cancer Risk Management: A Review of 132 Federal Regulatory Cases." *Environ. Sci. Technol.* 21: 415-420.

US Air Force (USAF). 2023. Air Emissions Guide for Air Force Mobile Sources, Methods for Estimating Emissions of Air Pollutants for Mobile Sources at United States Air Force Installations. June. https://www.aqhelp.com/Documents/Archives/2023%20Mobile%20Guide%20-%20FINAL.pdf.

US Department of Defense (DoD). 2009. Standard Practice MIL-STD 1625D, Department of Defense Standard Practice: Safety Certification Program (SCP) for Drydocking Facilities and Shipbuilding Ways for US Navy Ships. August. http://everyspec.com/MIL-STD/MIL-STD-1600-1699/MIL-STD-1625D_28499/.

US Department of the Navy, Naval Facilities Engineering Command Southwest (NAVFAC SW). 2020. *Final Environmental Assessment for the Floating Dry Dock Project at Naval Base San Diego*. May. https://cnrsw.cnic.navy.mil/Portals/84/CNRSW/Documents/Environmental_Support/Final%20EA_NBSD%20FDD_051420_For%20Print%20compressed.pdf?ver=okK7MlVNTOqGXGZ2rub7lg%3D%3D.

US Environmental Protection Agency (EPA). 2022. *Ports Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions.* April. https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1014J1S.pdf.

US Environmental Protection Agency (EPA). 2021. *Designation of Areas for Air Quality Planning Purposes; California; San Diego County Ozone Nonattainment Area; Reclassification to Severe*. June.

US Environmental Protection Agency (EPA). 2023. *User's Guide for the AMS/EPA Regulatory Model (AERMOD).* October.

US Environmental Protection Agency (EPA). 2024. *Appendix W of 40 CFR Part 51—Guideline on Air Quality Models (Revised)*. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. November.

Attachment 1
Operation Emission Calculations

Austal USA
San Diego Floating Dry Dock (FDD)
Criteria Air Pollutant Emission Summary
April 2025

Maximum Hourly Emissions Summary

Emission Process	Maximum Hourly Emissions (lbs/hour)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Worker Commutes and Haul Trucks	0.23	0.86	7.52	0.02	0.13	0.05
Maritime Vessels	0.86	14.81	2.68	0.02	0.43	0.42
Welding Operations	--	--	--	--	0.05	0.05
Abrasive Blasting Operations	--	--	--	--	0.03	--
Marine Coating and Solvent Application Operations	5.50	--	--	--	0.26	0.26
Adhesive Application Operations	3.06	--	--	--	--	--
Facility-Wide Portable Internal Combustion Engines	0.26	0.92	4.82	0.01	0.04	0.04
Floating Dry Dock Stationary Diesel Emergency Generators	0.47	14.21	6.05	0.02	0.24	0.24
Maximum Hourly Emissions [a]	**9.52**	**15.99**	**18.40**	**0.05**	**0.75**	**0.63**
SDAPCD Screening-Level Thresholds for AQIA	**--**	**25**	**100**	**25**	**--**	**--**

[a] Maritime vessel operation and maintenance activities would not occur concurrently; therefore, maximum hourly emissions are calculated as the max between maritime vessel transit operations and maintenance related operations.

Daily Emissions Summary

Emission Process	Daily Emissions (lbs/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Worker Commutes and Haul Trucks	0.23	0.86	7.52	0.02	0.13	0.05
Maritime Vessels	0.86	14.81	2.68	0.02	0.43	0.42
Welding Operations	--	--	--	--	0.07	0.07
Abrasive Blasting Operations	--	--	--	--	0.17	--
Marine Coating and Solvent Application Operations	55.00	--	--	--	2.59	2.59
Adhesive Application Operations	10.00	--	--	--	--	--
Facility-Wide Portable Internal Combustion Engines	0.26	0.92	4.82	0.01	0.04	0.04
Floating Dry Dock Stationary Diesel Emergency Generators	0.59	17.77	7.57	0.02	0.30	0.30
Total Daily Emissions	**66.94**	**34.35**	**22.59**	**0.07**	**3.73**	**3.47**
SDAPCD Screening-Level Thresholds for AQIA	**75**	**250**	**550**	**250**	**100**	**55**

Annual Emissions Summary

Emission Process	Annual Emissions (tons/year)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Worker Commutes and Haul Trucks	0.03	0.08	0.98	0.00	0.02	0.01
Maritime Vessels	0.00	0.03	0.01	0.00	0.00	0.00
Welding Operations	--	--	--	--	0.01	0.01
Abrasive Blasting Operations	--	--	--	--	0.02	--
Marine Coating and Solvent Application Operations	3.86	--	--	--	0.21	0.21
Adhesive Application Operations	0.005	--	--	--	--	--
Facility-Wide Portable Internal Combustion Engines	0.01	0.02	0.12	0.00	0.00	0.00
Floating Dry Dock Stationary Diesel Emergency Generators	0.01	0.37	0.16	0.00	0.01	0.01
Total Annual Emissions	**3.91**	**0.50**	**1.26**	**0.00**	**0.26**	**0.23**
SDAPCD Screening-Level Thresholds for AQIA	**13.7**	**40**	**100**	**40**	**15**	**10**

lbs/hour = pound(s) per hour

lbs/day = pound(s) per day

tons/year = ton(s) per year

VOC = volatile organic compound(s)

NOx = oxides of nitrogen

CO = carbon monoxide

SO_2 = sulfur dioxide

PM_{10} = Particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

Austal USA
San Diego Floating Dry Dock (FDD)
Toxic Air Contaminant Emission Summary
April 2025

		Maximum Hourly Emissions (lbs/hour)															Annual Emissions (lbs/year)														
		Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources	Total Hourly Emissions	Maritime Vessels	Welding Operations			Abrasive Blasting Operations		Marine Coating and Solvent Application Operations		Adhesive Application Operations			Facility-Wide Portable Internal Combustion Engines	FDD Stationary Diesel Emergency Generators	Haul Road - Mobile Sources	Total Annual Emissions	Total Annual Emissions
Emission Process	CAS Number		Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier						Operations Building - Welding Shop	FDD	Pier	FDD	Pier	FDD	Pier	Operations Building	FDD	Pier					
Toxic Air Contaminant		lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	tons/year
Acetone	67-64-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	1.13E+00	1.13E+00	0.00E+00	0.00E+00	0.00E+00	**2.51E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-01	6.38E-01	6.38E-01	0.00E+00	0.00E+00	0.00E+00	**1.42E+00**	**7.09E-04**
*1,2,4-Trimethylbenzene	95-63-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-01	5.19E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.14E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E+02	3.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**7.86E+02**	**3.93E-01**
1,3-Butadiene	106-99-0	8.73E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-03	1.81E-02	0.00E+00	**2.84E-02**	3.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-01	9.43E-01	0.00E+00	**1.42E+00**	**7.09E-04**
2,2,4-Trimethylpentane	540-84-1	6.13E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**6.15E-03**	2.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-04	**2.47E-02**	**1.23E-05**
Acenaphthene	83-32-9	4.39E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**4.39E-05**	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.75E-04**	**8.77E-08**
Acenaphthylene	208-96-8	1.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.02E-04**	4.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**4.07E-04**	**2.03E-07**
Acetaldehyde	75-07-0	8.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-02	6.55E-02	0.00E+00	**1.08E-01**	3.37E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E+00	3.40E+00	0.00E+00	**5.14E+00**	**2.57E-03**
Acrolein	107-02-8	1.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-03	2.83E-03	0.00E+00	**5.90E-03**	6.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-02	1.47E-01	0.00E+00	**2.27E-01**	**1.14E-04**
Aluminum Oxide	1344-28-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E+00	1.02E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.25E+00**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E+03	9.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.20E+03**	**1.10E+00**
Aluminum (Al)	7429-90-5	0.00E+00	2.64E-04	3.35E-03	2.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**5.85E-03**	0.00E+00	1.49E-03	3.14E-02	2.10E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**5.39E-02**	**2.69E-05**
Anthracene	120-12-7	2.96E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.96E-04**	1.19E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.19E-03**	**5.93E-07**
Antimony	7440-36-0	2.57E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.57E-04**	1.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.03E-03**	**5.15E-07**
Arsenic	7440-38-2	1.08E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E-05	1.34E-04	0.00E+00	**2.14E-04**	4.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-03	6.96E-03	0.00E+00	**1.05E-02**	**5.24E-06**
Benz[a]Anthracene	56-55-3	3.69E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.69E-06**	1.48E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.48E-05**	**7.38E-09**
Benzo[a]Pyrene	50-32-8	1.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.75E-06**	7.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**7.00E-06**	**3.50E-09**
Benzo[b]Fluoranthene	205-99-2	3.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.49E-06**	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.40E-05**	**6.99E-09**
Benzo[k]Fluoranthene	207-08-9	1.75E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.75E-06**	7.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**7.00E-06**	**3.50E-09**
Benzene	71-43-2	4.08E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-03	1.55E-02	0.00E+00	**2.77E-02**	1.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01	8.09E-01	0.00E+00	**1.23E+00**	**6.14E-04**
Beryllium	7440-41-7	0.00E+00	2.79E-10	3.54E-09	2.36E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**6.18E-09**	0.00E+00	1.50E-09	2.95E-08	1.97E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**5.07E-08**	**2.53E-11**
Cadmium	7440-43-9	9.88E-05	0.00E+00	0.00E+00	0.00E+00	1.63E-05	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-05	1.25E-04	0.00E+00	**3.16E-04**	3.95E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E-03	6.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-03	6.52E-03	0.00E+00	**2.62E-02**	**1.31E-05**
Chlorobenzene	108-90-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-06	1.67E-05	0.00E+00	**2.54E-05**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-04	8.69E-04	0.00E+00	**1.30E-03**	**6.52E-07**
Chromium Nonhexavalent	7440-47-3	3.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	4.18E-05	0.00E+00	**3.38E-04**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-03	2.17E-03	0.00E+00	**1.65E-01**	**8.25E-05**
Chrysene	218-01-9	6.82E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**6.82E-06**	2.73E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.73E-05**	**1.36E-08**
Cobalt 2-Ethylhexanoate	136-52-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-05	3.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**6.39E-05**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.86E-03	5.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.17E-02**	**5.86E-06**
Copper	7440-50-8	0.00E+00	1.05E-04	1.33E-03	8.87E-04	1.47E-05	9.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-04	3.43E-04	0.00E+00	**2.87E-03**	0.00E+00	1.15E-03	1.77E-02	1.18E-02	8.28E-03	6.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.90E-03	1.78E-02	0.00E+00	**7.19E-02**	**3.60E-05**
Copper Oxide (Cupric Oxide)	1317-38-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.01E-03**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.80E+00**	**9.02E-04**
Copper Oxide (Cuprous Oxide)	1317-39-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.63E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.37E+01**	**1.18E-02**
Chromium Hexavalent	18540-29-9	3.03E-09	1.49E-06	1.90E-05	1.26E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-06	8.36E-06	0.00E+00	**4.58E-05**	1.21E-08	1.81E-05	3.32E-04	2.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-04	4.35E-04	0.00E+00	**1.22E-03**	**6.12E-07**
Cumene	98-82-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-02	4.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.08E-01**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.78E+01	3.48E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.03E+02**	**5.13E-02**
Cyclohexane	110-82-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.68E-05	**7.68E-05**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.22E-04	**9.22E-04**	**4.61E-07**
Dibenzo[a,h]anthracene	53-70-3	3.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.62E-06**	1.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.45E-05**	**7.24E-09**
2-(2-Methoxyethoxy)-ethanol	111-77-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-03	1.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.03E-03**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-01	1.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.72E-01**	**1.86E-04**
Diesel Exhaust PM	9901	4.31E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-02	2.37E-01	6.53E-03	**7.16E-01**	1.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+00	1.23E+01	7.84E-02	**1.62E+01**	**8.09E-03**
Ethylbenzene	100-41-4	3.78E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01	5.49E-02	3.35E-02	1.51E-01	1.51E-01	4.73E-04	9.11E-04	5.76E-05	**6.05E-01**	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+02	5.06E+01	1.89E-02	8.51E-02	8.51E-02	2.37E-02	4.74E-02	6.91E-04	**2.42E+02**	**1.21E-01**
Fluoranthene	206-44-0	3.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.75E-05**	1.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.50E-04**	**7.51E-08**
Fluorene	86-73-7	1.41E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.41E-04**	5.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**5.65E-04**	**2.83E-07**
Fluorspar	7789-75-5	0.00E+00	5.45E-09	2.42E-07	1.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**4.08E-07**	0.00E+00	4.36E-06	1.93E-04	1.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.27E-04**	**1.63E-07**
Formaldehyde	50-00-0	3.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.14E-03	1.41E-02	1.41E-02	7.51E-02	1.45E-01	0.00E+00	**2.88E-01**	1.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-03	7.98E-03	7.98E-03	3.76E+00	7.52E+00	0.00E+00	**1.14E+01**	**5.72E-03**
Hydrogen Chloride	7647-01-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.08E-03	1.55E-02	0.00E+00	**2.36E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01	8.09E-01	0.00E+00	**1.21E+00**	**6.06E-04**
Hexamethylene Diisocyanate	822-06-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-04	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.18E-04**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E-02	4.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**9.98E-02**	**4.99E-05**
Hexane	110-54-3	2.40E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-01	7.07E-01	7.07E-01	1.17E-03	2.25E-03	1.07E-04	**1.58E+00**	9.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E-02	3.99E-01	3.99E-01	5.84E-02	1.17E-01	1.29E-03	**1.07E+00**	**5.36E-04**
Indeno[1,2,3-c,d]Pyrene	193-39-5	3.49E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.49E-06**	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.40E-05**	**6.99E-09**
Aliphatic polyisocyanate	28182-81-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-02	1.59E-02	3.51E-02	1.58E-01	1.58E-01	0.00E+00	0.00E+00	0.00E+00	**3.82E-01**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.99E+00	4.99E+00	1.98E-02	8.90E-02	8.90E-02	0.00E+00	**1.02E+01**	**5.09E-03**
2-Propanol	67-63-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.27E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**7.50E+02**	**3.75E-01**
Lead	7439-92-1	5.23E-05	6.60E-09	8.36E-08	5.57E-08	1.47E-05	9.83E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-04	6.94E-04	0.00E+00	**1.13E-03**	2.09E-04	6.60E-08	8.36E-07	5.57E-07	8.28E-03	6.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-02	3.61E-02	0.00E+00	**6.88E-02**	**3.44E-05**
Manganese	7439-96-5	1.35E-06	7.07E-06	1.40E-04	9.36E-05	1.65E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-04	2.59E-04	0.00E+00	**9.10E-04**	5.39E-06	1.33E-03	5.75E-02	3.83E-02	9.24E-02	6.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-03	1.35E-02	0.00E+00	**2.79E-01**	**1.40E-04**
4,4'-methylenediphenyl diisocyanate	101-68-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-08	1.51E-07	1.51E-07	0.00E+00	0.00E+00	0.00E+00	**3.35E-07**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E-08	8.51E-08	8.51E-08	0.00E+00	0.00E+00	0.00E+00	**1.89E-07**	**9.45E-11**
Methyl Ethyl Ketone	78-93-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-02	1.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**4.29E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E+00	3.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**7.94E+00**	**3.97E-03**
Mercury	7439-97-6	1.75E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-05	1.67E-04	0.00E+00	**2.54E-04**	7.00E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.34E-03	8.69E-03	0.00E+00	**1.30E-02**	**6.52E-06**
Methyl Isobutyl Ketone	108-10-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**1.92E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.15E+01**	**1.07E-02**
Naphthalene	91-20-3	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-04	1.65E-03	0.00E+00	**2.95E-02**	1

Austal USA
San Diego Floating Dry Dock (FDD)
Maritime Vessel Emission Calculations
April 2025

Tugboat A: 1,000 Horsepower Tug Vessel Data

Tug Operation Type	Occurrences Per Year [a]	Propulsion Engine Size (hp) [a]	Auxiliary Engine Size (hp) [b]	Hours of Operation Per Occurrence	Propulsion Engine Load Adjustment Factor [c]	Auxiliary Engine Load Adjustment Factor [c]	Propulsion Engine Load Activity Factor [d]	Auxiliary Engine Load Activity Factor [d]	Propulsion Engine Low Load Adjustment Factor [e]	Auxiliary Engine Low Load Adjustment Factor [e]	Propulsion Engine BSFC (g/kWh)	Auxiliary Engine BSFC (g/kWh)
Incoming Vessel Docking from Naval Base San Diego	4	1,000	306	1	0.33	0.37	1.0	1.0	N/A	N/A	305	227
Outgoing Vessel Release to Naval Base San Diego	4	1,000	306	1	0.33	0.37	1.0	1.0	N/A	N/A	305	227

[a] Data developed by estimates based upon estimated vessel size and planned dry dock operations.
[b] Data obtained from Port of Long Beach 2021 Air Emission Inventory Table 3.4 for ATB Tug average auxiliary engine.
[c] Data obtained from California Air Resources Board Port Emissions Inventory Guidance Appendix H for Tugboat push/tow.
[d] Activity factor assumed to be 1.0 in lack of site specific data.
[e] Low load adjustment factors not applicable as the propulsion engine will be greater than 20% load and the adjustment factor is not applicable to auxiliary engines
hp = horsepower
g/kWh = gram(s) per kilowatt-hour

Tugboat B: 1,000 Horsepower Tug Vessel Data

Tug Operation Type	Occurrences Per Year [a]	Propulsion Engine Size (hp) [a]	Auxiliary Engine Size (hp) [b]	Hours of Operation Per Occurrence	Propulsion Engine Load Adjustment Factor [c]	Auxiliary Engine Load Adjustment Factor [c]	Propulsion Engine Load Activity Factor [d]	Auxiliary Engine Load Activity Factor [d]	Propulsion Engine Low Load Adjustment Factor [e]	Auxiliary Engine Low Load Adjustment Factor [e]	Propulsion Engine BSFC (g/kWh)	Auxiliary Engine BSFC (g/kWh)
Incoming Vessel Docking from Naval Base San Diego	4	1,000	306	1	0.33	0.37	1.0	1.0	N/A	N/A	305	227
Outgoing Vessel Release to Naval Base San Diego	4	1,000	306	1	0.33	0.37	1.0	1.0	N/A	N/A	305	227

[a] Data developed by estimates based upon estimated vessel size and planned dry dock operations.
[b] Data obtained from Port of Long Beach 2021 Air Emission Inventory Table 3.4 for ATB Tug average auxiliary engine.
[c] Data obtained from California Air Resources Board Port Emissions Inventory Guidance Appendix H for Tugboat push/tow.
[d] Activity factor assumed to be 1.0 in lack of site specific data.
[e] Low load adjustment factors not applicable as the propulsion engine will be greater than 20% load and the adjustment factor is not applicable to auxiliary engines
hp = horsepower
g/kWh = gram(s) per kilowatt-hour

Maritime Vessel Emission Factors

Vessel and Engine Type	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
1,000 Horsepower Tugboat A						
Main Engine (g/kWh) [a]	0.296	5.080	0.919	0.006	0.148	0.144
Auxiliary Engine (g/kWh) [a]	0.296	5.080	0.919	0.006	0.148	0.144
1,000 Horsepower Tugboat B						
Main Engine (g/kWh) [a]	0.296	5.080	0.919	0.006	0.148	0.144
Auxiliary Engine (g/kWh) [a]	0.296	5.080	0.919	0.006	0.148	0.144

[a] Data obtained from California Air Resources Board Port Emissions Inventory Guidance Appendix H for Tier 2 CHC engines greater than 800 hp.
lbs/gal = pound(s) per gallon
g/kWh = gram(s) per kilowatt-hour

Maritime Vessel Maximum Hourly Emissions (lbs/hour) [a]

Vessel and Engine Type	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Between 0 nm and 3 nm of San Diego, California						
1,000 Horsepower Tugboat A						
Main Engine	3.21E-01	5.51E+00	9.97E-01	6.78E-03	1.61E-01	1.56E-01
Auxiliary Engine	1.10E-01	1.89E+00	3.42E-01	2.33E-03	5.51E-02	5.35E-02
1,000 Horsepower Tugboat B						
Main Engine	3.21E-01	5.51E+00	9.97E-01	6.78E-03	1.61E-01	1.56E-01
Auxiliary Engine	1.10E-01	1.89E+00	3.42E-01	2.33E-03	5.51E-02	5.35E-02
Subtotal Maritime Emissions between 0 nm and 3 nm of San Diego, California	**0.862**	**14.806**	**2.678**	**0.018**	**0.431**	**0.419**

[a] Maximum hourly emissions assume that two tugboats could operate at a single time.

Austal USA
San Diego Floating Dry Dock (FDD)
Maritime Vessel Emission Calculations
April 2025

Maritime Vessel Annual Emissions (tons/year)

Vessel and Engine Type	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Between 0 nm and 3 nm of San Diego, California						
1,000 Horsepower Tugboat A						
Main Engine	6.41E-04	1.10E-02	1.99E-03	1.36E-05	3.21E-04	3.12E-04
Auxiliary Engine	2.20E-04	3.78E-03	6.84E-04	4.65E-06	1.10E-04	1.07E-04
1,000 Horsepower Tugboat B						
Main Engine	6.41E-04	1.10E-02	1.99E-03	1.36E-05	3.21E-04	3.12E-04
Auxiliary Engine	2.20E-04	3.78E-03	6.84E-04	4.65E-06	1.10E-04	1.07E-04
Subtotal Maritime Emissions between 0 nm and 3 nm of San Diego, California	**0.002**	**0.030**	**0.01**	**3.64E-05**	**8.63E-04**	**8.37E-04**

tons/year = ton(s) per year
nm = nautical-mile(s)
VOC = volatile organic compound(s)
NOx = oxides of nitrogen
CO = carbon monoxide
SO_2 = sulfur dioxide
PM_{10} = Particulate matter less than 10 micrometers in diameter
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

Data Conversion

pounds per gallon of heavy fuel oil	8.42
grams per pound	453.6
pounds per kilogram	2.2
gallons per tonne of heavy fuel oil	261.8
gallons per pound of heavy fuel oil	0.131

Austal USA
San Diego Floating Dry Dock (FDD)
Maritime Vessel Emission Calculations
April 2025

Toxic Air Contaminant (TAC) Emissions Summary

Chemical Name	CAS Number	Pollutant Basis [a]	Fraction [a]	Maximum Hourly Emissions (lbs/hour)	Annual Emissions (lbs/year)	Annual Emissions (tons/year)
1,3-Butadiene	106-99-0	VOC	1.01E-03	8.73E-04	3.49E-03	1.75E-06
2,2,4-Trimethylpentane	540-84-1	VOC	7.12E-03	6.13E-03	2.45E-02	1.23E-05
Acenaphthene	83-32-9	VOC	5.09E-05	4.39E-05	1.75E-04	8.77E-08
Acenaphthylene	208-96-8	VOC	1.18E-04	1.02E-04	4.07E-04	2.03E-07
Acetaldehyde	75-07-0	VOC	9.78E-03	8.43E-03	3.37E-02	1.69E-05
Acrolein	107-02-8	VOC	1.85E-03	1.59E-03	6.37E-03	3.18E-06
Ammonia	7664-41-7	$PM_{2.5}$	1.92E-02	8.06E-03	3.22E-02	1.61E-05
Anthracene	120-12-7	VOC	3.44E-04	2.96E-04	1.19E-03	5.93E-07
Antimony	7440-36-0	$PM_{2.5}$	6.15E-04	2.57E-04	1.03E-03	5.15E-07
Arsenic	7440-38-2	$PM_{2.5}$	2.59E-05	1.08E-05	4.34E-05	2.17E-08
Benz[a]Anthracene	56-55-3	$PM_{2.5}$	8.82E-06	3.69E-06	1.48E-05	7.38E-09
Benzene	71-43-2	VOC	4.74E-03	4.08E-03	1.63E-02	8.17E-06
Benzo[a]Pyrene	50-32-8	$PM_{2.5}$	4.18E-06	1.75E-06	7.00E-06	3.50E-09
Benzo[b]Fluoranthene	205-99-2	$PM_{2.5}$	8.35E-06	3.49E-06	1.40E-05	6.99E-09
Benzo[k]Fluoranthene	207-08-9	$PM_{2.5}$	4.18E-06	1.75E-06	7.00E-06	3.50E-09
Benzo(g,h,i)Fluoranthene	203-12-3	$PM_{2.5}$	1.32E-04	5.52E-05	2.21E-04	1.10E-07
Cadmium	7440-43-9	$PM_{2.5}$	2.36E-04	9.88E-05	3.95E-04	1.98E-07
Chrysene	218-01-9	$PM_{2.5}$	1.63E-05	6.82E-06	2.73E-05	1.36E-08
Chromium (VI)	18540-29-9	$PM_{2.5}$	7.24E-09	3.03E-09	1.21E-08	6.06E-12
Dibenzo[a,h]anthracene	53-70-3	$PM_{2.5}$	8.65E-06	3.62E-06	1.45E-05	7.24E-09
Diesel Exhaust PM	9901	PM2.5	--	4.31E-01	1.73E+00	8.63E-04
Ethyl Benzene	100-41-4	VOC	4.39E-04	3.78E-04	1.51E-03	7.56E-07
Fluoranthene	206-44-0	$PM_{2.5}$	8.97E-05	3.75E-05	1.50E-04	7.51E-08
Fluorene	86-73-7	VOC	1.64E-04	1.41E-04	5.65E-04	2.83E-07
Formaldehyde	50-00-0	VOC	4.27E-02	3.68E-02	1.47E-01	7.36E-05
Indeno[1,2,3-c,d]Pyrene	193-39-5	$PM_{2.5}$	8.35E-06	3.49E-06	1.40E-05	6.99E-09
Lead	7439-92-1	$PM_{2.5}$	1.25E-04	5.23E-05	2.09E-04	1.05E-07
Manganese	7439-96-5	$PM_{2.5}$	3.22E-06	1.35E-06	5.39E-06	2.70E-09
Mercury	7439-97-6	$PM_{2.5}$	4.18E-08	1.75E-08	7.00E-08	3.50E-11
Naphthalene	91-20-3	VOC	3.13E-02	2.70E-02	1.08E-01	5.39E-05
Hexane	110-54-3	VOC	2.79E-03	2.40E-03	9.62E-03	4.81E-06
Nickel	7440-02-0	$PM_{2.5}$	6.87E-04	2.88E-04	1.15E-03	5.75E-07
Polychlorinated Biphenyls	1336-36-3	$PM_{2.5}$	4.18E-07	1.75E-07	7.00E-07	3.50E-10
Phenanthrene	85-01-8	VOC	1.36E-03	1.17E-03	4.67E-03	2.34E-06
Propionaldehyde	123-38-6	VOC	1.52E-03	1.31E-03	5.23E-03	2.61E-06
Pyrene	129-00-0	$PM_{2.5}$	3.37E-05	1.41E-05	5.64E-05	2.82E-08
Selenium	7782-49-2	$PM_{2.5}$	4.38E-08	1.83E-08	7.33E-08	3.67E-11
Toluene	108-88-3	VOC	2.04E-03	1.75E-03	7.01E-03	3.51E-06
Xylenes (Mixed Isomers)	1330-20-7	VOC	1.42E-03	1.23E-03	4.90E-03	2.45E-06
o-Xylene	95-47-6	VOC	5.13E-04	4.42E-04	1.77E-03	8.84E-07

[a] TAC emissions were estimated using fractions in the U.S. EPA's Ports Emissions Inventory Guidance, Appendix D HAP Speciation Profiles for Commercial Marine Engines, Table D.1 (April 2022).

Austal USA
San Diego Floating Dry Dock (FDD)
Welding Usage
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

		Aluminum GMAW			Stainless Steel GTAW			Copper Nickel GTAW			ER70S-X GMAW			E71T-1 FCAW			EM12K SAW			ER70S-X GTAW		
		Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr)	Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr)	Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr)	Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr)	Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr)	Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr)	Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr)
Other Misc. Shipyard Welding	**Welding Shop**	1.80	3.60	7.50	1.00	1.00	10.00	1.00	1.00	10.00												
Aluminum Ship		1.80	3.60	15.00	1.00	1.00	10.00	1.00	1.00	10.00												
	Welding Shop	0.72	1.44	6.00	0.40	0.40	4.00	0.40	0.40	4.00												
	Ship	1.08	2.16	9.00	0.60	0.60	6.00	0.60	0.60	6.00												
Steel Ship	**Total**										0.94	11.25	750.00	0.94	11.25	750.00	0.94	11.25	750.00	0.94	11.25	750.00
	Welding Shop										0.38	4.50	300.00	0.38	4.50	300.00	0.38	4.50	300.00	0.38	4.50	300.00
	Ship										0.56	6.75	450.00	0.56	6.75	450.00	0.56	6.75	450.00	0.56	6.75	450.00

Notes: (Source: from email. See the last two screenshots at the bottom)

Aluminum Ships

40% of the rods used for aluminum ship will be welded at the welding shop;
60% of the rods used for aluminum ship will be welded on the ships

Steel Ships

40% of the total usage of each rod will be welded at the welding shop
60% of the total usage of each rod will be welded on the ships
25% of total steel weld filler (3000#) is the annual usage (for each steel ships related weld)
1.5% of annual usage is the daily usage (for each steel ships related weld)
0.083 of daily usage is the hourly usage (for each steel ships related weld)

Austal USA
San Diego Floating Dry Dock (FDD)
Welding Emission Factors
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Emission Factors

SDAPCD EF Set	G99	T99	T99	G99	F99	A100	T99
Process	GMAW	GTAW	GTAW	GMAW	FCAW	SAW	GTAW
Rod	Aluminum	Stainless Steel	Copper Nickel	ER70S-X	E71T-1	EM12K	ER70S-X
Total Particulates (TSP)	1.00E-02	1.00E-02	1.00E-02	1.00E-02	2.00E-02	5.00E-05	1.00E-02
Particulate Matter (PM10)	1.00E-02	1.00E-02	1.00E-02	1.00E-02	2.00E-02	5.00E-05	1.00E-02
Chromium Hexavalent (Cr VI)*	1.64E-07	5.19E-05		1.53E-07	2.29E-07		1.53E-07
Manganese (Mn)	3.01E-05	9.84E-05	4.02E-05	5.85E-05	9.28E-05	7.16E-07	5.85E-05
Nickel (Ni)		6.56E-04	1.69E-03	1.69E-06	5.73E-07		1.69E-06
Phosphorous (P)		1.09E-06	1.64E-07	4.64E-07	5.16E-07		4.64E-07
Copper (Cu)	5.46E-06	5.46E-06	3.67E-03	6.83E-06	2.87E-06	1.43E-07	6.83E-06
Cadmium (Cd)							
Silver (Ag)							
Zinc (Zn)	5.46E-07						
Aluminum (Al)	5.16E-03			5.74E-06	1.66E-06		5.74E-06
Cobalt (Co)							
Lead (Pb)			2.32E-07				
Vanadium (V)				3.01E-07	1.72E-06		3.01E-07
Beryllium (Be)	5.46E-09						
Molybdenum (Mo)		1.42E-04		1.42E-06	5.73E-07		1.42E-06
Iron (Fe)	2.73E-06		2.73E-05			1.40E-05	
Silicon (Si)	2.73E-06	2.19E-05	9.56E-07	3.01E-05	3.04E-05	2.87E-07	3.01E-05
Titanium (Ti)	1.09E-06		1.86E-05	4.64E-06	5.44E-06		4.64E-06
OET							
C		5.46E-07	1.64E-06	2.16E-06	3.55E-06		2.16E-06
S		5.46E-07	5.46E-08	1.64E-07	3.44E-07		1.64E-07
Magnesium (Mg)	2.57E-04						
Calcium Carbonate						7.16E-07	
Fluorspar						7.16E-07	
Lithium Oxide						1.43E-07	
Barium							
Titanium Dioxide							
Lithium							
Magnesium Oxide							
Aluminum Oxide							
Zirconium				2.73E-06			2.73E-06
Silica,Crystalline Tripoli						2.87E-07	
Potassium							

*Converted from Cr total

Cr to Cr+6 conversion rate

0.05	GMAW
0.05	GTAW
0.55	SMAW
0.0005	SAW
0.10	FCAW

Fume Correction Factor

0.2865	SMAW
0.2865	FCAW
0.2865	SAW
0.5464	GMAW
0.5464	GTAW

Fume Generation Rate

0.02	SMAW
0.02	FCAW
0.00005	SAW
0.01	GMAW
0.01	GTAW

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/welding/APCD-Welding-EF-SAW-EM12K.pdf (Version: 07/07/2022)

Austal USA
San Diego Floating Dry Dock (FDD)
Welding Emission Calculations - Upated by SDAPCD on 4/18/2025
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

		Steel Ships								Other Misc. Shipyard Welding				Aluminum Ships								Total (see notes below)			
		Welding Shop				Ships				Welding Shop				Welding Shop				Ships							
Pollutants	**CAS Number**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**	**Max. Hourly (lbs/hour) [a]**	**Average Daily (lbs/day) [b]**	**Annual (lbs/year) [c]**	**Annual (tons/year) [c]**
Total Particulates (TSP)	--	3.05E-04	3.66E-03	2.44E-01	1.22E-04	2.25E-02	2.70E-01	1.80E+01	9.01E-03	7.71E-04	1.14E-03	5.58E-03	2.79E-06	3.08E-04	4.55E-04	2.84E-03	1.42E-06	2.28E-02	3.36E-02	2.10E-01	1.05E-04	4.67E-02	7.39E-02	1.85E+01	9.24E-03
Particulate Matter (PM10)	--	3.05E-04	3.66E-03	2.44E-01	1.22E-04	2.25E-02	2.70E-01	1.80E+01	9.01E-03	7.71E-04	1.14E-03	5.58E-03	2.79E-06	3.08E-04	4.55E-04	2.84E-03	1.42E-06	2.28E-02	3.36E-02	2.10E-01	1.05E-04	4.67E-02	7.39E-02	1.85E+01	9.24E-03
Chromium, Hexavalent (Cr VI)	18540-29-9	4.07E-09	4.89E-08	3.26E-06	1.63E-09	3.01E-07	3.61E-06	2.41E-04	1.20E-07	1.06E-06	1.07E-06	1.06E-05	5.28E-09	4.24E-07	4.26E-07	4.23E-06	2.12E-09	3.13E-05	3.15E-05	3.13E-04	1.56E-07	3.31E-05	2.29E-06	5.72E-04	2.86E-07
Manganese (Mn)	7439-96-5	1.60E-06	1.92E-05	1.28E-03	6.41E-07	1.18E-04	1.42E-03	9.47E-02	4.74E-05	3.91E-06	5.01E-06	3.27E-05	1.63E-08	1.56E-06	2.00E-06	1.49E-05	7.45E-09	1.16E-04	1.48E-04	1.10E-03	5.51E-07	2.41E-04	3.89E-04	9.71E-02	4.86E-05
Nickel (Ni)	7440-02-0	3.01E-08	3.62E-07	2.41E-05	1.21E-08	2.23E-06	2.67E-05	1.78E-03	8.91E-07	4.75E-05	4.75E-05	4.75E-04	2.38E-07	1.90E-05	1.90E-05	1.90E-04	9.51E-08	1.41E-03	1.41E-03	1.41E-02	7.03E-06	1.47E-03	6.61E-05	1.65E-02	8.26E-06
Phosphorous (P)	7723-14-0	1.10E-08	1.32E-07	8.79E-06	4.40E-09	8.13E-07	9.75E-06	6.50E-04	3.25E-07	2.55E-08	2.55E-08	2.55E-07	1.28E-10	1.02E-08	1.02E-08	1.02E-07	5.10E-11	7.54E-07	7.54E-07	7.54E-06	3.77E-09	1.61E-06	2.67E-06	6.67E-04	3.33E-07
Copper (Cu)	7440-50-8	1.27E-07	1.52E-06	1.01E-04	5.07E-08	9.38E-06	1.13E-04	7.50E-03	3.75E-06	7.47E-05	7.49E-05	7.46E-04	3.73E-07	2.99E-05	3.00E-05	2.99E-04	1.49E-07	2.21E-03	2.21E-03	2.21E-02	1.10E-05	2.32E-03	1.23E-04	3.07E-02	1.54E-05
Cadmium (Cd)	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Silver (Ag)	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc (Zn)	7440-66-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-08	3.99E-08	8.32E-08	4.16E-11	7.98E-09	1.60E-08	6.65E-08	3.33E-11	5.90E-07	1.18E-06	4.92E-06	2.46E-09	6.18E-07	2.03E-08	5.07E-06	2.53E-09
Aluminum (Al)	7429-90-5	1.00E-07	1.20E-06	8.00E-05	4.00E-08	7.39E-06	8.87E-05	5.91E-03	2.96E-06	1.89E-04	3.77E-04	7.86E-04	3.93E-07	7.54E-05	1.51E-04	6.29E-04	3.14E-07	5.58E-03	1.12E-02	4.65E-02	2.32E-05	5.85E-03	2.16E-04	5.39E-02	2.69E-05
Cobalt (Co)	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead (Pb)	7439-92-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-09	4.71E-09	4.71E-08	2.36E-11	1.89E-09	1.89E-09	1.89E-08	9.43E-12	1.39E-07	1.39E-07	1.39E-06	6.97E-10	1.46E-07	5.84E-09	1.46E-06	7.30E-10
Vanadium (V)	7440-62-2	1.77E-08	2.12E-07	1.41E-05	7.06E-09	1.31E-06	1.57E-05	1.04E-03	5.22E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-06	4.23E-06	1.06E-03	5.29E-07
Beryllium (Be)	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-10	3.99E-10	8.32E-10	4.16E-13	7.98E-11	1.60E-10	6.65E-10	3.33E-13	5.90E-09	1.18E-08	4.92E-08	2.46E-11	6.18E-09	2.03E-10	5.07E-08	2.53E-11
Molybdenum (Mo)	7439-98-7	2.60E-08	3.12E-07	2.08E-05	1.04E-08	1.92E-06	2.30E-05	1.54E-03	7.68E-07	2.88E-06	2.88E-06	2.88E-05	1.44E-08	1.15E-06	1.15E-06	1.15E-05	5.77E-09	8.52E-05	8.52E-05	8.52E-04	4.26E-07	9.12E-05	9.80E-06	2.45E-03	1.22E-06
Iron (Fe)	7439-89-6	1.07E-07	1.28E-06	8.55E-05	4.27E-08	7.90E-06	9.48E-05	6.32E-03	3.16E-06	6.54E-07	7.54E-07	5.96E-06	2.98E-09	2.62E-07	3.02E-07	2.55E-06	1.28E-09	1.93E-05	2.23E-05	1.89E-04	9.43E-08	2.83E-05	2.64E-05	6.60E-03	3.30E-06
Silicon (Si)	7440-21-3	6.91E-07	8.29E-06	5.53E-04	2.76E-07	5.11E-05	6.13E-04	4.08E-02	2.04E-05	5.63E-07	6.63E-07	5.05E-06	2.52E-09	2.25E-07	2.65E-07	2.18E-06	1.09E-09	1.66E-05	1.96E-05	1.61E-04	8.07E-08	6.92E-05	1.66E-04	4.16E-02	2.08E-05
Titanium (Ti)	7440-32-6	1.12E-07	1.35E-06	8.97E-05	4.48E-08	8.29E-06	9.94E-05	6.63E-03	3.31E-06	4.17E-07	4.57E-07	3.94E-06	1.97E-09	1.67E-07	1.83E-07	1.64E-06	8.21E-10	1.23E-05	1.35E-05	1.21E-04	6.07E-08	2.13E-05	2.74E-05	6.85E-03	3.42E-06
OET	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C	--	5.99E-08	7.19E-07	4.79E-05	2.40E-08	4.43E-06	5.31E-05	3.54E-03	1.77E-06	4.44E-08	4.44E-08	4.44E-07	2.22E-10	1.77E-08	1.77E-08	1.77E-07	8.87E-11	1.31E-06	1.31E-06	1.31E-05	6.56E-09	5.86E-06	1.44E-05	3.60E-03	1.80E-06
S	--	5.11E-09	6.13E-08	4.09E-06	2.04E-09	3.78E-07	4.53E-06	3.02E-04	1.51E-07	1.22E-08	1.22E-08	1.22E-07	6.10E-11	4.88E-09	4.88E-09	4.88E-08	2.44E-11	3.61E-07	3.61E-07	3.61E-06	1.80E-09	7.61E-07	1.24E-06	3.10E-04	1.55E-07
Magnesium (Mg)	7439-95-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.38E-06	1.88E-05	3.91E-05	1.95E-08	3.75E-06	7.50E-06	3.13E-05	1.56E-08	2.77E-04	5.55E-04	2.31E-03	1.16E-06	2.90E-04	9.53E-06	2.38E-03	1.19E-06
Calcium Carbonate	471-34-1	5.45E-09	6.54E-08	4.36E-06	2.18E-09	4.03E-07	4.83E-06	3.22E-04	1.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-07	1.31E-06	3.27E-04	1.63E-07
Fluorspar	7789-75-5	5.45E-09	6.54E-08	4.36E-06	2.18E-09	4.03E-07	4.83E-06	3.22E-04	1.61E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-07	1.31E-06	3.27E-04	1.63E-07
Lithium Oxide	12057-24-8	1.09E-09	1.31E-08	8.72E-07	4.36E-10	8.06E-08	9.67E-07	6.45E-05	3.22E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-08	2.61E-07	6.53E-05	3.27E-08
Barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Titanium Dioxide	13463-67-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lithium	7439-93-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Magnesium Oxide	1309-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum Oxide	1344-28-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium	7440-67-7	4.16E-08	4.99E-07	3.33E-05	1.66E-08	3.07E-06	3.69E-05	2.46E-03	1.23E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E-06	9.97E-06	2.49E-03	1.25E-06
Silica, Crystalline Tripoli	1317-95-9	2.18E-09	2.62E-08	1.74E-06	8.72E-10	1.61E-07	1.93E-06	1.29E-04	6.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1/0/1900	0.00E+00	0.00E+00	0.00E+00	1/0/1900	0.00E+00	0.00E+00	0.00E+00	1.63E-07	5.23E-07	1.31E-04	6.53E-08
Potassium	7440-09-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
																					Total	1.04E-01	1.49E-01	3.72E+01	1.86E-02

[a] Max hourly emissions: conservatively estimated as the total of max hourly emissions for aluminum ship (shop+ship), steel ship (shop+ship), and regular welding operation at the welding shop based on the max hourly rod usage provided by Austal.

[b] Average daily emissions: calculated as the annual emissions divided by annual operating days.

[c] Annual emissions: the total of annual emissions for aluminum ship (shop+ship), steel ship (shop+ship), and regular welding operation at the welding shop based on the annual rod usage provided by Austal.

250 operational days/year

lbs/hour = pound(s) per hour
lbs/day = pound(s) per day
lbs/year = pound(s) per year
tons/year = ton(s) per year

Conversions
2000 lbs/ton

		Welding Shop - Operations Building				South Pier				Floating Dry Dock			
Pollutants	**CAS Number**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**	**Max. Hourly (lbs/hour)**	**Daily (lbs/day)**	**Annual (lbs/year)**	**Annual (tons/year)**
Total Particulates (TSP)	--	1.38E-03	5.25E-03	2.52E-01	1.26E-04	1.81E-02	1.22E-01	7.29E+00	3.65E-03	2.72E-02	1.82E-01	1.09E+01	5.47E-03
Particulate Matter (PM10)	--	1.38E-03	5.25E-03	2.52E-01	1.26E-04	1.81E-02	1.22E-01	7.29E+00	3.65E-03	2.72E-02	1.82E-01	1.09E+01	5.47E-03
Chromium, Hexavalent (Cr VI)	18540-29-9	1.49E-06	1.54E-06	1.81E-05	9.03E-09	1.26E-05	1.40E-05	2.22E-04	1.11E-07	1.90E-05	2.11E-05	3.32E-04	1.66E-07
Manganese (Mn)	7439-96-5	7.07E-06	2.62E-05	1.33E-03	6.64E-07	9.36E-05	6.27E-04	3.83E-02	1.92E-05	1.40E-04	9.41E-04	5.75E-02	2.87E-05
Nickel (Ni)	7440-02-0	6.66E-05	6.69E-05	6.90E-04	3.45E-07	5.63E-04	5.73E-04	6.33E-03	3.17E-06	8.45E-04	8.59E-04	9.50E-03	4.75E-06
Phosphorous (P)	7723-14-0	4.67E-08	1.68E-07	9.15E-06	4.58E-09	6.27E-07	4.20E-06	2.63E-04	1.32E-07	9.40E-07	6.30E-06	3.95E-04	1.97E-07
Copper (Cu)	7440-50-8	1.05E-04	1.06E-04	1.15E-03	5.73E-07	8.87E-04	9.31E-04	1.18E-02	5.92E-06	1.33E-03	1.40E-03	1.77E-02	8.87E-06
Cadmium (Cd)	7440-43-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Silver (Ag)	7440-22-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc (Zn)	7440-66-6	2.79E-08	5.59E-08	1.50E-07	7.48E-11	2.36E-07	4.72E-07	1.97E-06	9.84E-10	3.54E-07	7.08E-07	2.95E-06	1.48E-09
Aluminum (Al)	7429-90-5	2.64E-04	5.29E-04	1.49E-03	7.47E-07	2.23E-03	4.50E-03	2.10E-02	1.05E-05	3.35E-03	6.75E-03	3.14E-02	1.57E-05
Cobalt (Co)	7440-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead (Pb)	7439-92-1	6.60E-09	6.60E-09	6.60E-08	3.30E-11	5.57E-08	5.57E-08	5.57E-07	2.79E-10	8.36E-08	8.36E-08	8.36E-07	4.18E-10
Vanadium (V)	7440-62-2	1.77E-08	2.12E-07	1.41E-05	7.06E-09	5.22E-07	6.26E-06	4.18E-04	2.09E-07	7.83E-07	9.40E-06	6.26E-04	3.13E-07
Beryllium (Be)	7440-41-7	2.79E-10	5.59E-10	1.50E-09	7.48E-13	2.36E-09	4.72E-09	1.97E-08	9.84E-12	3.54E-09	7.08E-09	2.95E-08	1.48E-11
Molybdenum (Mo)	7439-98-7	4.06E-06	4.35E-06	6.11E-05	3.06E-08	3.49E-05	4.33E-05	9.56E-04	4.78E-07	5.23E-05	6.50E-05	1.43E-03	7.17E-07
Iron (Fe)	7439-89-6	1.02E-06	2.34E-06	9.40E-05	4.70E-08	1.09E-05	4.68E-05	2.60E-03	1.30E-06	1.63E-05	7.02E-05	3.90E-03	1.95E-06
Silicon (Si)	7440-21-3	1.48E-06	9.22E-06	5.60E-04	2.80E-07	2.71E-05	2.53E-04	1.64E-02	8.20E-06	4.06E-05	3.79E-04	2.46E-02	1.23E-05
Titanium (Ti)	7440-32-6	6.96E-07	1.98E-06	9.53E-05	4.76E-08	8.25E-06	4.52E-05	2.70E-03	1.35E-06	1.24E-05	6.78E-05	4.05E-03	2.03E-06
OET	--	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C	--	1.22E-07	7.81E-07	4.85E-05	2.43E-08	2.30E-06	2.18E-05	1.42E-03	7.11E-07	3.44E-06	3.27E-05	2.13E-03	1.07E-06
S	--	2.22E-08	7.84E-08	4.26E-06	2.13E-09	2.95E-07	1.96E-06	1.22E-04	6.12E-08	4.43E-07	2.94E-06	1.84E-04	9.18E-08
Magnesium (Mg)	7439-95-4	1.31E-05	2.63E-05	7.04E-05	3.52E-08	1.11E-04	2.22E-04	9.25E-04	4.62E-07	1.66E-04	3.33E-04	1.39E-03	6.93E-07
Calcium Carbonate	471-34-1	5.45E-09	6.54E-08	4.36E-06	2.18E-09	1.61E-07	1.93E-06	1.29E-04	6.45E-08	2.42E-07	2.90E-06	1.93E-04	9.67E-08
Fluorspar	7789-75-5	5.45E-09	6.54E-08	4.36E-06	2.18E-09	1.61E-07	1.93E-06	1.29E-04	6.45E-08	2.42E-07	2.90E-06	1.93E-04	9.67E-08
Lithium Oxide	12057-24-8	1.09E-09	1.31E-08	8.72E-07	4.36E-10	3.22E-08	3.87E-07	2.58E-05	1.29E-08	4.83E-08	5.80E-07	3.87E-05	1.93E-08
Barium	7440-39-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Titanium Dioxide	13463-67-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lithium	7439-93-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Magnesium Oxide	1309-48-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aluminum Oxide	1344-28-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zirconium	7440-67-7	4.16E-08	4.99E-07	3.33E-05	1.66E-08	1.23E-06	1.48E-05	9.84E-04	4.92E-07	1.84E-06	2.21E-05	1.48E-03	7.38E-07
Silica, Crystalline Tripoli	1317-95-9	2.18E-09	2.62E-08	1.74E-06	8.72E-10	6.45E-08	7.74E-07	5.16E-05	2.58E-08	9.67E-08	1.16E-06	7.74E-05	3.87E-08
Potassium	7440-09-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Welding Operation Location:

Welding Shop - Operations Bldg	100%	* Emissions from Welding Shop.
South Pier	40%	* Emissions equal to 40% of aluminum and steel ship emissions.
Floating Dry Dock	60%	* Emissions equal to 60% of aluminum and steel ship emissions.

Austal USA

San Diego Floating Dry Dock (FDD)
Abrasive Blasting Emission Calculations - Updated by SDAPCD on 4/18/2025
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Abrasive Blasting Material Usage

Blasting Area	Hydroblast (100%)	Full or Sweep Dry Blast	Total Dry Blast (tons)	Blast Media Type	Containment Efficiency	Max. Daily Usage (8 hr Shift)	Max. Annual Usage/2 Vessels	Pounds per Square Foot	Pound per Hour	Pounds per Day	Days
Floating Dry Dock											
Hull	Yes	Sweep	**20**	Garnet	100%	5	**40**	1.47	285	1,928	28
Flight Deck	Yes	Sweep	**10**	Garnet	100%	5	**20**	0.74	285	1,928	12
Tanks	No	Full	**20**	Garnet	100%	5	**40**	1.79	285	1,928	42
South Pier											
Deck House	Yes	Sweep	**10**	Garnet	100%	5	**20**	1.47	285	1,928	28
Flight Deck	Yes	Sweep	**10**	Garnet	100%	5	**20**	0.74	285	1,928	12
Tanks	No	Full	**20**	Garnet	100%	5	**40**	1.79	285	1,928	42

[a] Annual usage of blasting materials estimated based upon similar Austal USA operated drydock operations, as provided by Austal (Att B_Blasting Emissions_Austal Amendment_w additional control.xlsx).

Calculated Usage

Blasting Area	Hourly Usage (tons)	Daily Usage (tons)	Annual Usage (tons)
Floating Dry Dock			
Hull	0.14	0.71	**20**
Flight Deck	0.17	0.83	**10**
Tanks	0.10	0.48	**20**
South Pier			
Deck House	0.07	0.36	**10**
Flight Deck	0.17	0.83	**10**
Tanks	0.10	0.48	**20**

Operating Schedule for a Single Ship

5	hours/shift/day
1	shift/day
28	days/ship (hull, deck house)
12	days/ship (deck)
42	days/ship (tank)

Project Scope/Capacity

Floating Dry dock

2	vessels/year

South Pier

2	vessels/year

Control Information

	Control Efficiency
Shrouding w/ vacuum systems and baghouse[1]	97%
Blast w/recovery system[2]	99%

1. For blasting operations on the site, Austal uses the same contractors as other shipyards and stationary sources with waterfront activities.
A minimum control efficiency of 99% is conservatively assumed for the control system including shrouding, ducting system, and baghouse. (Source: https://www3.epa.gov/ttnchie1/mkb/documents/ff-pulse.pdf)

2. For dry blasting operations at non-skid flight deck, blast w/ recovery system is used. Thus, additional particulate control efficiency shall be applied.

Abrasive Blasting Emission Factors [a, b]		SDAPCD Default Factors	Factors Calculated from SDS
Pollutant	CAS Number	Garnet lbs/tons blast material	Garnet lbs/tons blast material
TSP	--	8	--
PM_{10}	--	8	--
Cadmium	7440-43-9	3.80E-03	--
Nonhexavalent Chromium	7440-47-3	3.84E-02	--
Copper	7440-50-8	3.44E-03	--
Lead	7439-92-1	3.44E-03	--
Manganese	7439-96-5	3.84E-02	--
Nickel	7440-02-0	3.84E-02	--
Silica, Crystalline [c]	14808-60-7	1.28E-01	0.08
Garnet	97-56-3	--	7.68
Other Minerals	--	--	0.64

Garnet SDAPCD default emission factor A03 - Abrasive Blasting, Garnet, Uncontrolled.

[a] TACs listed in SDS are for the abrasive material only. TACs included in APCD default factors are based on spent abrasive material, which would provide some general estimate of TACs from paints blasted.

[b] TAC emissions were conservatively estimated, TAC from both abrasive materials based on SDS documents and spent abrasive based on on the SDAPCD default emission factors for garnet and silica sand are considered and the SDS information.

[c] For silica, which is included in both abrasive materials used and spent abrasive, the higher emission factor from spent abrasive is was used for calculation calculate the emissions, since it represented a higher emission factor compared to the SDS data.

PM_{10} = Particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

lbs/ton = pound(s) per ton of blast material

Abrasive Blasting Maximum Hourly Emissions [a]

Pollutant	CAS Number	Floading Dry Dock			South Pier			Floating Dry Dock Maximum	South Pier Maximum	Facility-Wide Maximum [b]
		Underwater Hull	Non-Skid Flight Deck	Tanks	Deck House	Non-Skid Flight Deck	Tanks			
		Garnet	Garnet	Garnet	Garnet	Garnet	Garnet			
		lbs/hour								
TSP	--	3.43E-02	4.00E-04	2.29E-02	1.71E-02	4.00E-04	2.29E-02	**3.43E-02**	**2.29E-02**	**3.43E-02**
PM_{10}	--	3.43E-02	4.00E-04	2.29E-02	1.71E-02	4.00E-04	2.29E-02	**3.43E-02**	**2.29E-02**	**3.43E-02**
Cadmium	7440-43-9	1.63E-05	1.90E-07	1.09E-05	8.14E-06	1.90E-07	1.09E-05	**1.63E-05**	**1.09E-05**	**1.63E-05**
Nonhexavalent Chromium	7440-47-3	1.65E-04	1.92E-06	1.10E-04	8.23E-05	1.92E-06	1.10E-04	**1.65E-04**	**1.10E-04**	**1.65E-04**
Copper	7440-50-8	1.47E-05	1.72E-07	9.83E-06	7.37E-06	1.72E-07	9.83E-06	**1.47E-05**	**9.83E-06**	**1.47E-05**
Lead	7439-92-1	1.47E-05	1.72E-07	9.83E-06	7.37E-06	1.72E-07	9.83E-06	**1.47E-05**	**9.83E-06**	**1.47E-05**
Manganese	7439-96-5	1.65E-04	1.92E-06	1.10E-04	8.23E-05	1.92E-06	1.10E-04	**1.65E-04**	**1.10E-04**	**1.65E-04**
Nickel	7440-02-0	1.65E-04	1.92E-06	1.10E-04	8.23E-05	1.92E-06	1.10E-04	**1.65E-04**	**1.10E-04**	**1.65E-04**
Silica, Crystalline	14808-60-7	5.49E-04	6.40E-06	3.66E-04	2.74E-04	6.40E-06	3.66E-04	**5.49E-04**	**3.66E-04**	**5.49E-04**
Garnet	97-56-3	3.29E-02	3.84E-04	2.19E-02	1.65E-02	3.84E-04	2.19E-02	**3.29E-02**	**2.19E-02**	**3.29E-02**
Other Minerals	--	2.74E-03	3.20E-05	1.83E-03	1.37E-03	3.20E-05	1.83E-03	**2.74E-03**	**1.83E-03**	**2.74E-03**

[a] At the future floating dry dock, based on hull blasting for an hour for 1 ship; At the existing pier, based on tank blasting for an hour for 1 ship.

[b] It is assumed that only a single ship can be blasted at a single time; therefore, the facility-wide maximum hourly emissions are based on maximum hourly emissions of blasting from the FDD.

Abrasive Blasting Maximum Daily Emissions [a]

Pollutant	CAS Number	Floading Dry Dock			South Pier			Floating Dry Dock Maximum	South Pier Maximum	Facility-Wide Maximum [b]
		Underwater Hull	Non-Skid Flight Deck	Tanks	Deck House	Non-Skid Flight Deck	Tanks			
		Garnet	Garnet	Garnet	Garnet	Garnet	Garnet			
		lbs/day								
TSP	--	1.71E-01	2.00E-03	1.14E-01	8.57E-02	2.00E-03	1.14E-01	**1.71E-01**	**1.14E-01**	**1.71E-01**
PM_{10}	--	1.71E-01	2.00E-03	1.14E-01	8.57E-02	2.00E-03	1.14E-01	**1.71E-01**	**1.14E-01**	**1.71E-01**
Cadmium	7440-43-9	8.14E-05	9.50E-07	5.43E-05	4.07E-05	9.50E-07	5.43E-05	**8.14E-05**	**5.43E-05**	**8.14E-05**
Nonhexavalent Chromium	7440-47-3	8.23E-04	9.60E-06	5.49E-04	4.11E-04	9.60E-06	5.49E-04	**8.23E-04**	**5.49E-04**	**8.23E-04**
Copper	7440-50-8	7.37E-05	8.60E-07	4.91E-05	3.69E-05	8.60E-07	4.91E-05	**7.37E-05**	**4.91E-05**	**7.37E-05**
Lead	7439-92-1	7.37E-05	8.60E-07	4.91E-05	3.69E-05	8.60E-07	4.91E-05	**7.37E-05**	**4.91E-05**	**7.37E-05**
Manganese	7439-96-5	8.23E-04	9.60E-06	5.49E-04	4.11E-04	9.60E-06	5.49E-04	**8.23E-04**	**5.49E-04**	**8.23E-04**
Nickel	7440-02-0	8.23E-04	9.60E-06	5.49E-04	4.11E-04	9.60E-06	5.49E-04	**8.23E-04**	**5.49E-04**	**8.23E-04**
Silica, Crystalline	14808-60-7	2.74E-03	3.20E-05	1.83E-03	1.37E-03	3.20E-05	1.83E-03	**2.74E-03**	**1.83E-03**	**2.74E-03**
Garnet	97-56-3	1.65E-01	1.92E-03	1.10E-01	8.23E-02	1.92E-03	1.10E-01	**1.65E-01**	**1.10E-01**	**1.65E-01**
Other Minerals	--	1.37E-02	1.60E-04	9.14E-03	6.86E-03	1.60E-04	9.14E-03	**1.37E-02**	**9.14E-03**	**1.37E-02**

[a] At the future floating dry dock, based on hull blasting for 5 hours per day for 1 ship; At the existing pier, based on tank blasting for 5 hours per day for 1 ship.

[b] It is assumed that only a single ship can be blasted within a 5-hour time period; therefore, the facility-wide maximum daily emissions are based on maximum daily emissions of blasting from the FDD.

Abrasive Blasting Annual Emissions [a]		Floading Dry Dock			South Pier			Floating Dry Dock Total	South Pier Total	Facility-Wide Total
		Underwater Hull	Non-Skid Flight Deck	Tanks	Deck House	Non-Skid Flight Deck	Tanks			
Pollutant	CAS Number	Garnet	Garnet	Garnet	Garnet	Garnet	Garnet			
		lbs/year								
TSP	--	9.60E+00	4.80E-02	9.60E+00	4.80E+00	4.80E-02	9.60E+00	**1.92E+01**	**1.44E+01**	**3.37E+01**
PM_{10}	--	9.60E+00	4.80E-02	9.60E+00	4.80E+00	4.80E-02	9.60E+00	**1.92E+01**	**1.44E+01**	**3.37E+01**
Cadmium	7440-43-9	4.56E-03	2.28E-05	4.56E-03	2.28E-03	2.28E-05	4.56E-03	**9.14E-03**	**6.86E-03**	**1.60E-02**
Nonhexavalent Chromium	7440-47-3	4.61E-02	2.30E-04	4.61E-02	2.30E-02	2.30E-04	4.61E-02	**9.24E-02**	**6.94E-02**	**1.62E-01**
Copper	7440-50-8	4.13E-03	2.06E-05	4.13E-03	2.06E-03	2.06E-05	4.13E-03	**8.28E-03**	**6.21E-03**	**1.45E-02**
Lead	7439-92-1	4.13E-03	2.06E-05	4.13E-03	2.06E-03	2.06E-05	4.13E-03	**8.28E-03**	**6.21E-03**	**1.45E-02**
Manganese	7439-96-5	4.61E-02	2.30E-04	4.61E-02	2.30E-02	2.30E-04	4.61E-02	**9.24E-02**	**6.94E-02**	**1.62E-01**
Nickel	7440-02-0	4.61E-02	2.30E-04	4.61E-02	2.30E-02	2.30E-04	4.61E-02	**9.24E-02**	**6.94E-02**	**1.62E-01**
Silica, Crystalline	14808-60-7	1.54E-01	7.68E-04	1.54E-01	7.68E-02	7.68E-04	1.54E-01	**3.08E-01**	**2.31E-01**	**5.39E-01**
Garnet	97-56-3	9.22E+00	4.61E-02	9.22E+00	4.61E+00	4.61E-02	9.22E+00	**1.85E+01**	**1.39E+01**	**3.23E+01**
Other Minerals	--	7.68E-01	3.84E-03	7.68E-01	3.84E-01	3.84E-03	7.68E-01	**1.54E+00**	**1.16E+00**	**2.70E+00**

[a] At the future floating dry dock, based on blasting of all three blasting areas (hull, deck, tank) at their respective proposed annual usage per ship and 2 ships per year; At the existing pier, based on blasting of all three blasting areas (deck house, deck, tank) at their respective proposed annual usage per ship and 2 ships per year.

Abrasive Blasting Annual Emissions		Floading Dry Dock			South Pier			Floating Dry Dock Total	South Pier Total	Facility-Wide Total
		Underwater Hull	Non-Skid Flight Deck	Tanks	Deck House	Non-Skid Flight Deck	Tanks			
Pollutant	CAS Number	Garnet	Garnet	Garnet	Garnet	Garnet	Garnet			
		tons/year								
TSP	--	4.80E-03	2.40E-05	4.80E-03	2.40E-03	2.40E-05	4.80E-03	**9.62E-03**	**7.22E-03**	**1.68E-02**
PM_{10}	--	4.80E-03	2.40E-05	4.80E-03	2.40E-03	2.40E-05	4.80E-03	**9.62E-03**	**7.22E-03**	**1.68E-02**
Cadmium	7440-43-9	2.28E-06	1.14E-08	2.28E-06	1.14E-06	1.14E-08	2.28E-06	**4.57E-06**	**3.43E-06**	**8.00E-06**
Nonhexavalent Chromium	7440-47-3	2.30E-05	1.15E-07	2.30E-05	1.15E-05	1.15E-07	2.30E-05	**4.62E-05**	**3.47E-05**	**8.09E-05**
Copper	7440-50-8	2.06E-06	1.03E-08	2.06E-06	1.03E-06	1.03E-08	2.06E-06	**4.14E-06**	**3.11E-06**	**7.24E-06**
Lead	7439-92-1	2.06E-06	1.03E-08	2.06E-06	1.03E-06	1.03E-08	2.06E-06	**4.14E-06**	**3.11E-06**	**7.24E-06**
Manganese	7439-96-5	2.30E-05	1.15E-07	2.30E-05	1.15E-05	1.15E-07	2.30E-05	**4.62E-05**	**3.47E-05**	**8.09E-05**
Nickel	7440-02-0	2.30E-05	1.15E-07	2.30E-05	1.15E-05	1.15E-07	2.30E-05	**4.62E-05**	**3.47E-05**	**8.09E-05**
Silica, Crystalline	14808-60-7	7.68E-05	3.84E-07	7.68E-05	3.84E-05	3.84E-07	7.68E-05	**1.54E-04**	**1.16E-04**	**2.70E-04**
Garnet	97-56-3	4.61E-03	2.30E-05	4.61E-03	2.30E-03	2.30E-05	4.61E-03	**9.24E-03**	**6.94E-03**	**1.62E-02**
Other Minerals	--	3.84E-04	1.92E-06	3.84E-04	1.92E-04	1.92E-06	3.84E-04	**7.70E-04**	**5.78E-04**	**1.35E-03**

1. For each blasting area at each location, hydro blasting with water is used first. If extra blasting is required at certain areas after hydro blasting, dry blasting with garnet is used.

2. Emissions from hydro blasting with water is minimal, thus not included in the emissions calculation.

3. For non-skid deck blasting, besides hydro blasting, blast & recovery system is used to blast w/ garnet.

4. When TACs are included in both abrasives used and paints blasted (for example, silica, crystalline with CAS No. of 14808-60-7), the higher EF is used to calculate emissions.

lbs/hour = pound(s) per hour

lbs/day = pound(s) per day

lbs/year = pound(s) per year

tons/year = ton(s) per year

Austal USA
San Diego Floating Dry Dock (FDD)
Marine Coating and Solvent Usage Emission Calculations
Originally Prepared by M.S. Hatch Consulting, LLC
See 'Att B_Coating Emissions Calculation_2025 Amend_2025-02-06_Jacobs.xlsx' for detailed calculations.
April 2025

Marine Coating and Solvent Use Information

Coating Type	Daily Use (hours/day)	Weekly Use (days/week)	Annual Use (weeks/year)	Annual Use (hours/year)	Annual Use (days/year)
Miscellaneous coatings and solvents applied by hand, brush, roller, and spray application	10	5	50	2,500	250

Marine Coating and Solvent Criteria Pollutant Controlled Emissions [a]

	Facility-Wide Controlled Emissions		
Coating Type	**VOC Emissions**	**PM_{10} Emissions**	**$PM_{2.5}$ Emissions** [b]
Hourly Emissions (lbs/hr)			
Miscellaneous coatings and solvents applied by hand, brush, roller, and spray application	5.50	0.26	0.26
Maximum Daily Emissions (lbs/day)			
Miscellaneous coatings and solvents applied by hand, brush, roller, and spray application	55	2.59	2.59
Annual Emissions (tons/year)			
Miscellaneous coatings and solvents applied by hand, brush, roller, and spray application	3.86	0.21	0.21
Facility-Wide Maximum Hourly Emissions (lbs/hour)	**5.50**	**0.26**	**0.26**
Facility-Wide Maximum Daily Emissions (lbs/day)	**55.00**	**2.59**	**2.59**
Facility-Wide Total Annual Emissions (tons/year)	**3.86**	**0.21**	**0.21**

[a] Annual emissions were calculated based on maximum daily emissions with an operation of 5 days per week and 50 weeks per year. Hourly emissions were estimated based on the maximum daily emissions divided by an operation schedule of 10 hours per day.

[b] $PM_{2.5}$ emissions assumed equal to PM_{10} emissions.

VOC = volatile organic compound(s)

PM_{10} = Particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

lbs/hr = pound(s) per hour

lbs/day = pound(s) per day

tons/year = ton(s) per year

grams per pound 453.6

Parameters for Daily PM Emissions Calculation

Average VOC content of all coatings (lbs/gal)	1.56
Average daily usage of all coatings (gal)	35.34
Average solid content of all coatings (wt%)	86.41%
Average density of all coatings (lbs/gal)	12.10
Percent of coatings to be sprayed	0.50
Total number of coatings	102

* Coatings include solvent

PM Control Efficiency

Shrouding 90%

Conversion Factor

2000	lbs/ton

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	LARGE SURFACES		MEDIUM SURFACES		SMALL SURFACES	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	50%	75%	65%	60%	70%	40%
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	0%	100%	0%	100%	0%	100%

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/instructions/Painting-and-Surface-Coating-Operations.pdf

Marine Coating and Solvent Toxic Air Contaminant Emissions [a]

Toxic Air Contaminant	CAS Number	Maximum Hourly	Daily	Annual	Annual
		lbs/hour	lbs/day	lbs/year	tons/year
Crystalline Silica - Quartz	14808-60-7	1.28E-03	1.28E-02	6.77E-01	3.39E-04
Ethylbenzene	100-41-4	2.68E-01	2.68E+00	2.41E+02	1.21E-01
Hexamethylene Diisocyanate	822-06-0	3.18E-04	3.18E-03	9.98E-02	4.99E-05
Methyl Ethyl Ketone	78-93-3	4.29E-02	4.29E-01	7.94E+00	3.97E-03
p-Chloro-a,a,a-trifluorotoluene	98-56-6	6.94E-01	6.94E+00	3.04E+02	1.52E-01
t-Butyl Acetate	540-88-5	3.46E-02	3.46E-01	3.76E+01	1.88E-02
Xylene	1330-20-7	1.24E+00	1.24E+01	1.22E+03	6.10E-01
1-Methoxy 2-Propanol	107-98-2	3.03E-02	3.03E-01	2.78E+01	1.39E-02
Cobalt 2-Ethylhexanoate	136-52-7	6.39E-05	6.39E-04	1.17E-02	5.86E-06
Toluene	108-88-3	3.80E-03	3.80E-02	2.32E+00	1.16E-03
Aluminum (Al)	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Isobutyl Ketone	108-10-1	1.92E-02	1.92E-01	2.15E+01	1.07E-02
1-Methoxy-2-propyl acetate	108-65-6	1.10E-01	1.10E+00	2.64E+01	1.32E-02
1,3,5-trimethylbenzene	108-67-8	3.60E-01	3.60E+00	4.05E+02	2.02E-01
2-(2-Methoxyethoxy)-ethanol	111-77-3	2.03E-03	2.03E-02	3.72E-01	1.86E-04
Zinc Oxide	1314-13-2	1.36E+00	1.36E+01	6.37E+02	3.18E-01
Aluminum Oxide	1344-28-1	2.25E+00	2.25E+01	2.20E+03	1.10E+00
Trimethyl benzene	25551-13-7	5.91E-01	5.91E+00	5.84E+02	2.92E-01
1,2,3-Trimethylbenzene	526-73-8	1.24E-01	1.24E+00	1.17E+02	5.87E-02
1-Butanol	71-36-3	2.43E+00	2.43E+01	2.66E+03	1.33E+00
*1,2,4 Trimethylbenzene	95-63-6	1.14E+00	1.14E+01	7.86E+02	3.93E-01
Cumene	98-82-8	1.08E-01	1.08E+00	1.03E+02	5.13E-02
Copper Oxide (Cupric Oxide)	1317-38-0	3.01E-03	3.01E-02	1.80E+00	9.02E-04
Copper Oxide (Cuprous Oxide)	1317-39-1	3.63E-02	3.63E-01	2.37E+01	1.18E-02
Fatty acids, C9-13-neo-, cobalt salts	68955-83-9	2.96E-05	2.96E-04	5.43E-03	2.71E-06
HDI Homopolymer	28182-81-2	3.18E-02	3.18E-01	9.98E+00	4.99E-03
2-Propanol	67-63-0	3.27E-02	3.27E-01	7.50E+02	3.75E-01

[a] Emissions information obtained from 'Att B_Coating Emissions Calculation_2025 Amend_2025-02-26_Jacobs.xlsx' updated February 2025.

Austal USA
San Diego Floating Dry Dock (FDD)
Coating Usages_Provided by Austal
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Coating Usages_Provided by Austal
Aluminum Ships

Coating	Manufacturer	VOC Content (g/L)	DSRA[1] gal/yr	Pier Side[1] gal/yr	Total per Year gal/yr	Max Daily Usage[2] gal/day
Intergard 264 (Red)	International Paint	194	25.5	25.5	51	6.375
Intergard 264 (Black)	International Paint	194	45.6	45.6	91.2	11.4
Intershield 5150LWT (Dark Gray)	International Paint	145	137.1	137.1	274.2	34.275
Interthane 990 (Dark Gray)	International Paint	420	45.6	45.6	91.2	11.4
Interthane 990 (Red)	International Paint	420	0.6	0.6	1.2	0.6
Interthane 990 (Yellow)	International Paint	420	0.6	0.6	1.2	0.6
Interthane 990 (White)	International Paint	420	1.5	1.5	3	1.5
Nova-Plate UHS Primer (Buff)	SHERWIN-WILLIAMS	43.8	0.12	0	0.12	0.12
Nova-Plate UHS Epoxy (Light Gray)	SHERWIN-WILLIAMS	45.4	0.06	0	0.06	0.06
Nova-Plate UHS Epoxy (White)	SHERWIN-WILLIAMS	44.6	0.24	0	0.24	0.24
Sherwin Williams SeaGuard 5000 HS (Red)	SHERWIN-WILLIAMS	292.5	48.18	0	48.18	9.636
Sherwin Williams SeaGuard Tie Coat (Yellow)	SHERWIN-WILLIAMS	340	48.12	0	48.12	9.624
Sherwin Williams SeaVoyage Copper Free Antifouling (Red)	SHERWIN-WILLIAMS	314	48.12	0	48.12	9.624
Sherwin Williams SeaVoyage Copper Free Antifouling (Black)	SHERWIN-WILLIAMS	317	48.12	0	48.12	9.624
Sherwin Williams SeaGuard 5000 HS (Black)	SHERWIN-WILLIAMS	250	0.12	0	0.12	0.12
Versa-Foam System 15 (Orange)	RHH Foam System	0	0.06	0	0.06	0.06
PVDC Coating (NCP Coatings N-6091 or alternate NTA approved coating system)	NCP Coating	103.8754219	0.18	0	0.18	0.18
Sherwin Williams SeaGuard 5000 HS (Light Gray)	SHERWIN-WILLIAMS	250	0.06	0	0.06	0.06
Sherwin Williams Polysiloxane XLE-80 HAPS Free	SHERWIN-WILLIAMS	74	0.18	0	0.18	0.18
INTERSHIELD 6GV (DARK GREY)	INTERNATIONAL	92	1.152	1.152	2.304	1.152
SS5000 (HAZE GREY)	SYNDECK	0	0.864	0.864	1.728	0.864
ARC 855 (GRAY)	CHESTERTON	0	0.144	0.144	0.288	0.144
FLAKE SYSTEM (BLUE 705)	DEX-O-TEX	5	0.432	0.432	0.864	0.432
International Intergard 264 FPL274 SurfaceTolerant Epoxy (Red)	International Paint	194	18.48	18.48	36.96	3.696
International Intergard 264 FPJ034 SurfaceTolerant Epoxy (Light Gray)	International Paint	194	18.48	18.48	36.96	3.696
Sherwin Williams SherPlate PW (White (B62W260))	Sherwin Williams	76	4.5	4.5	9	2.25

TATS (STEEL HULL SHIP)

Coating Product	Manufacturer	Color	VOC Content (g/L)	DSRA[1] gal/yr	Pier Side[1] gal/yr	Total per Year gal/yr	Max Daily Usage[2] gal/day	Emissions (lbs/day)
SEAGUARD 5000 HS EPOXY N11A350/N11V350	Sherwin Williams	GRAY	250	108.3	108.3	216.7	10.83	22.60
SEAGUARD 5000 HS EPOXY N11H350/N11V350	Sherwin Williams	BUFF	250	157.3	157.3	314.6	15.73	32.82
RANDOGRIP NAVY G NON-SKID 600D01/610C01	Randolph Products	DARK GRAY FS36076	192	16.2	16.2	32.4	1.62	2.59
NCP SILOXOGRIP N-9020 NON-SKID	NCP	DARK GRAY FS36076	180	91.4	91.4	182.9	9.14	13.73
FAST CLAD ZINC HS B69A352/B69V352	Sherwin Williams	GREEN/GRAY	333	84.5	84.5	169.1	8.45	23.49
SEAGUARD 5000 HS EPOXY N11R350/N11V350	Sherwin Williams	RED OXIDE	250	262.2	256.2	518.4	24.92	52.00
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (HAZE GRAY FS26270)	Sherwin Williams	HAZE GRAY FS26270	100	35.3	35.3	70.7	3.53	2.95
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (RED FS11105)	Sherwin Williams	RED FS11105	100	0.9	0.9	1.7	0.43	0.36
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (WHITE FS17975)	Sherwin Williams	WHITE FS17975	100	0.9	0.9	1.7	0.43	0.36
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (BLUE FS15182)	Sherwin Williams	BLUE FS15182	100	0.9	0.9	1.7	0.43	0.36
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (YELLOW FS13538)	Sherwin Williams	YELLOW FS13538	87	0.9	0.9	1.7	0.43	0.31
SHERGLASS FLAKE FILLED EPOXY B62B525/B62V525	Sherwin Williams	BLACK	220	5.2	5.2	10.4	2.59	4.75
SHERGLASS FLAKE FILLED EPOXY B62R525/B62V525	Sherwin Williams	RED OXIDE	214	1.7	1.7	3.5	0.86	1.54
SHERGLASS FLAKE FILLED EPOXY B62A525/B62V525	Sherwin Williams	GRAY	239	5.2	5.2	10.4	2.59	5.16
SEAGUARD TIE COAT EPOXY P23Y0001/P23V0001	Sherwin Williams	YELLOW	340	69.0	0.0	69.0	6.90	19.58
SEAGUARD ABLATIVE ANTI-FOULANT P30RQ10	Sherwin Williams	RED	335	111.1	0.0	111.1	11.11	31.06
SEAGUARD ABLATIVE ANTI-FOULANT P30BQ12	Sherwin Williams	BLACK	329	76.6	0.0	76.6	15.32	42.06
SEAGUARD 5000 HS EPOXY N11B350/N11V350	Sherwin Williams	BLACK	250	48.0	0.0	48.0	9.60	20.03
SEAGUARD 5000 HS EPOXY N11W350/N11V350	Sherwin Williams	OFF WHITE	250	308.1	308.1	616.2	24.92	52.00
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	Sherwin Williams	GREEN FS24585	54	8.6	8.6	17.3	4.31	1.94
MIL-DTL-24607B NON- FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	Sherwin Williams	GREEN FS24585	226	8.6	8.6	17.3	4.31	8.13
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	Sherwin Williams	**Bulkhead Gray**	54	34.5	34.5	69.0	3.45	1.55
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	Sherwin Williams	DARK GRAY FS16081	315	6.9	6.9	13.8	3.45	9.07
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	Sherwin Williams	GLOSS BLACK FS17038	293	6.9	6.9	13.8	3.45	8.44
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	Sherwin Williams	GLOSS RED FS11105	283	6.9	6.9	13.8	3.45	8.15
NOVA-PLATE UHS PRIMER EPOXY B62H220/B62V221	Sherwin Williams	BUFF	35	6.9	6.9	13.8	3.45	1.01
NOVA-PLATE UHS EPOXY B62W220/B62V221	Sherwin Williams	OFF WHITE	36	15.5	15.5	31.1	7.76	2.33
SHERPLATE PW POTABLE WATER EPOXY OAP WHITE B62W260/B62V265	Sherwin Williams	OAP WHITE	76	34.5	34.5	69.0	3.45	2.19
NOVA-PLATE UHS PRIMER EPOXY B62L220/B62V221	Sherwin Williams	OAP BLUE	37	1.7	0.0	1.7	0.86	0.27
NOVA-PLATE UHS EPOXY B62A220/B62V221	Sherwin Williams	GRAY	37	3.5	0.0	3.5	1.73	0.53
CLEARKIN CORROSION BATTLER BLACK		BLACK	0	1.7	1.7	3.5	0.86	0.00
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	Sherwin Williams	WHITE FS27880	44	0.9	0.9	1.7	0.43	0.16

MIL-DTL-24607B NON-FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	Sherwin Williams	WHITE FS27880	223	0.9	0.9	1.7	0.43	0.80
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (DARK GRAY FS26008)	Sherwin Williams	DARK GRAY FS26008	100	1.7	1.7	3.5	0.86	0.72

Austal USA
San Diego Floating Dry Dock (FDD)
Marine Coatings and Solvent Toxic Air Contaminant Emissions - Adjusted Based on 55 lbs/day VOC
Originally Prepared by M.S. Hatch Consulting, LLC
See 'Att B_Coating Emissions Calculation_2025 Amend_2025-02-26_Jacobs.xlsx' for detailed calculations.
April 2025

Toxic Air Contaminant	CAS Number	Hourly Emissions [a] lbs/hr							Daily Emissions [b, c] lbs/day							Annual Emissions lbs/year							Annual Emissions tons/year						
		Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock Maximum	Pier Maximum	Facility Maximum	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock Maximum	Pier Maximum	Facility Total	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock	Pier	Facility Total	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock	Pier	Facility Total
Crystalline Silica - Quartz	14808-60-7	4.12E-04	6.34E-05	8.75E-04	4.02E-04	8.75E-04	4.02E-04	1.28E-03	4.12E-03	6.34E-04	8.75E-03	4.02E-03	8.75E-03	4.02E-03	1.28E-02	3.23E-01	1.16E-02	2.79E-01	6.32E-02	6.03E-01	7.48E-02	6.77E-01	1.62E-04	5.82E-06	1.40E-04	3.16E-05	3.01E-04	3.74E-05	3.39E-04
Ethylbenzene	100-41-4	2.13E-01	5.43E-02	1.19E-01	5.49E-02	2.13E-01	5.49E-02	2.68E-01	2.13E+00	5.43E-01	1.19E+00	5.49E-01	2.13E+00	5.49E-01	2.68E+00	1.48E+02	3.74E+01	4.27E+01	1.32E+01	1.91E+02	5.06E+01	2.41E+02	7.40E-02	1.87E-02	2.13E-02	6.59E-03	9.54E-02	2.53E-02	1.21E-01
Hexamethylene Diisocyanate	822-06-0	0.00E+00	0.00E+00	1.59E-04	1.59E-04	1.59E-04	1.59E-04	3.18E-04	0.00E+00	0.00E+00	1.59E-03	1.59E-03	1.59E-03	1.59E-03	3.18E-03	0.00E+00	0.00E+00	4.99E-02	4.99E-02	4.99E-02	4.99E-02	9.98E-02	0.00E+00	0.00E+00	2.50E-05	2.50E-05	2.50E-05	2.50E-05	4.99E-05
Methyl Ethyl Ketone	78-93-3	2.37E-02	1.92E-02	7.20E-04	0.00E+00	2.37E-02	1.92E-02	4.29E-02	2.37E-01	1.92E-01	7.20E-03	0.00E+00	2.37E-01	1.92E-01	4.29E-01	4.34E+00	3.53E+00	6.60E-02	0.00E+00	4.41E+00	3.53E+00	7.94E+00	2.17E-03	1.76E-03	3.30E-05	0.00E+00	2.21E-03	1.76E-03	3.97E-03
p-Chloro-a,a,a-trifluorotoluene	98-56-6	8.37E-02	8.37E-02	3.47E-01	3.47E-01	3.47E-01	3.47E-01	6.94E-01	8.37E-01	8.37E-01	3.47E+00	3.47E+00	3.47E+00	3.47E+00	6.94E+00	1.53E+01	1.53E+01	1.37E+02	1.36E+02	1.52E+02	1.52E+02	3.04E+02	7.67E-03	7.67E-03	6.83E-02	6.82E-02	7.59E-02	7.59E-02	1.52E-01
t-Butyl Acetate	540-88-5	2.41E-02	0.00E+00	3.46E-02	0.00E+00	3.46E-02	0.00E+00	3.46E-02	2.41E-01	0.00E+00	3.46E-01	0.00E+00	3.46E-01	0.00E+00	3.46E-01	2.21E+01	0.00E+00	1.55E+01	0.00E+00	3.76E+01	0.00E+00	3.76E+01	1.11E-02	0.00E+00	7.75E-03	0.00E+00	1.88E-02	0.00E+00	1.88E-02
Xylene	1330-20-7	9.70E-01	2.38E-01	6.77E-01	2.70E-01	9.70E-01	2.70E-01	1.24E+00	9.70E+00	2.38E+00	6.77E+00	2.70E+00	9.70E+00	2.70E+00	1.24E+01	7.01E+02	1.69E+02	2.68E+02	8.18E+01	9.69E+02	2.50E+02	1.22E+03	3.51E-01	8.43E-02	1.34E-01	4.09E-02	4.85E-01	1.25E-01	6.10E-01
1-Methoxy 2-Propanol	107-98-2	1.51E-02	1.51E-02	0.00E+00	0.00E+00	1.51E-02	1.51E-02	3.03E-02	1.51E-01	1.51E-01	0.00E+00	0.00E+00	1.51E-01	1.51E-01	3.03E-01	1.39E+01	1.39E+01	0.00E+00	0.00E+00	1.39E+01	1.39E+01	2.78E+01	6.95E-03	6.95E-03	0.00E+00	0.00E+00	6.95E-03	6.95E-03	1.39E-02
Cobalt 2-Ethylhexanoate	136-52-7	3.19E-05	3.19E-05	0.00E+00	0.00E+00	3.19E-05	3.19E-05	6.39E-05	3.19E-04	3.19E-04	0.00E+00	0.00E+00	3.19E-04	3.19E-04	6.39E-04	5.86E-03	5.86E-03	0.00E+00	0.00E+00	5.86E-03	5.86E-03	1.17E-02	2.93E-06	2.93E-06	0.00E+00	0.00E+00	2.93E-06	2.93E-06	5.86E-06
Toluene	108-88-3	1.90E-03	1.90E-03	0.00E+00	0.00E+00	1.90E-03	1.90E-03	3.80E-03	1.90E-02	1.90E-02	0.00E+00	0.00E+00	1.90E-02	1.90E-02	3.80E-02	1.16E+00	1.16E+00	0.00E+00	0.00E+00	1.16E+00	1.16E+00	2.32E+00	5.80E-04	5.80E-04	0.00E+00	0.00E+00	5.80E-04	5.80E-04	1.16E-03
Aluminum (Al)	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Isobutyl Ketone	108-10-1	1.38E-02	0.00E+00	1.92E-02	0.00E+00	1.92E-02	0.00E+00	1.92E-02	1.38E-01	0.00E+00	1.92E-01	0.00E+00	1.92E-01	0.00E+00	1.92E-01	1.26E+01	0.00E+00	8.82E+00	0.00E+00	2.15E+01	0.00E+00	2.15E+01	6.32E-03	0.00E+00	4.41E-03	0.00E+00	1.07E-02	0.00E+00	1.07E-02
1-Methoxy-2-propyl acetate	108-65-6	0.00E+00	0.00E+00	5.49E-02	5.49E-02	5.49E-02	5.49E-02	1.10E-01	0.00E+00	0.00E+00	5.49E-01	5.49E-01	5.49E-01	5.49E-01	1.10E+00	0.00E+00	0.00E+00	1.32E+01	1.32E+01	1.32E+01	1.32E+01	2.64E+01	0.00E+00	0.00E+00	6.59E-03	6.59E-03	6.59E-03	6.59E-03	1.32E-02
1,3,5-trimethylbenzene	108-67-8	1.89E-01	1.71E-01	1.68E-01	8.79E-02	1.89E-01	1.71E-01	3.60E-01	1.89E+00	1.71E+00	1.68E+00	8.79E-01	1.89E+00	1.71E+00	3.60E+00	1.57E+02	1.47E+02	6.84E+01	3.20E+01	2.25E+02	1.79E+02	4.05E+02	7.84E-02	7.37E-02	3.42E-02	1.60E-02	1.13E-01	8.97E-02	2.02E-01
Zinc Oxide	1314-13-2	1.81E-02	0.00E+00	1.36E+00	0.00E+00	1.36E+00	0.00E+00	1.36E+00	1.81E-01	0.00E+00	1.36E+01	0.00E+00	1.36E+01	0.00E+00	1.36E+01	1.18E+01	0.00E+00	6.25E+02	0.00E+00	6.37E+02	0.00E+00	6.37E+02	5.92E-03	0.00E+00	3.13E-01	0.00E+00	3.18E-01	0.00E+00	3.18E-01
Aluminum Oxide	1344-28-1	1.23E+00	1.02E+00	3.37E-01	4.59E-03	1.23E+00	1.02E+00	2.25E+00	1.23E+01	1.02E+01	3.37E+00	4.59E-02	1.23E+01	1.02E+01	2.25E+01	1.12E+03	9.40E+02	1.34E+02	4.20E-01	1.26E+03	9.40E+02	2.20E+03	5.62E-01	4.70E-01	6.69E-02	2.10E-04	6.29E-01	4.70E-01	1.10E+00
Trimethyl benzene	25551-13-7	3.10E-01	2.81E-01	1.80E-01	1.31E-02	3.10E-01	2.81E-01	5.91E-01	3.10E+00	2.81E+00	1.80E+00	1.31E-01	3.10E+00	2.81E+00	5.91E+00	2.60E+02	2.45E+02	7.75E+01	1.20E+00	3.38E+02	2.46E+02	5.84E+02	1.30E-01	1.22E-01	3.88E-02	6.00E-04	1.69E-01	1.23E-01	2.92E-01
1,2,3-Trimethylbenzene	526-73-8	6.47E-02	5.88E-02	3.34E-02	0.00E+00	6.47E-02	5.88E-02	1.24E-01	6.47E-01	5.88E-01	3.34E-01	0.00E+00	6.47E-01	5.88E-01	1.24E+00	5.26E+01	4.95E+01	1.53E+01	0.00E+00	6.78E+01	4.95E+01	1.17E+02	2.63E-02	2.47E-02	7.63E-03	0.00E+00	3.39E-02	2.47E-02	5.87E-02
1-Butanol	71-36-3	1.30E+00	1.13E+00	4.63E-01	2.70E-01	1.30E+00	1.13E+00	2.43E+00	1.30E+01	1.13E+01	4.63E+00	2.70E+00	1.30E+01	1.13E+01	2.43E+01	1.23E+03	1.13E+03	1.90E+02	1.02E+02	1.42E+03	1.23E+03	2.66E+03	6.16E-01	5.66E-01	9.48E-02	5.09E-02	7.11E-01	6.17E-01	1.33E+00
*1,2,4 Trimethylbenzene	95-63-6	2.29E-01	2.11E-01	6.19E-01	5.19E-01	6.19E-01	5.19E-01	1.14E+00	2.29E+00	2.11E+00	6.19E+00	5.19E+00	6.19E+00	5.19E+00	1.14E+01	1.79E+02	1.70E+02	2.42E+02	1.96E+02	4.20E+02	3.65E+02	7.86E+02	8.94E-02	8.48E-02	1.21E-01	9.79E-02	2.10E-01	1.83E-01	3.93E-01
Cumene	98-82-8	6.47E-02	4.32E-02	3.34E-02	0.00E+00	6.47E-02	4.32E-02	1.08E-01	6.47E-01	4.32E-01	3.34E-01	0.00E+00	6.47E-01	4.32E-01	1.08E+00	5.26E+01	3.48E+01	1.53E+01	0.00E+00	6.78E+01	3.48E+01	1.03E+02	2.63E-02	1.74E-02	7.63E-03	0.00E+00	3.39E-02	1.74E-02	5.13E-02
Copper Oxide (Cupric Oxide)	1317-38-0	3.01E-03	0.00E+00	0.00E+00	0.00E+00	3.01E-03	0.00E+00	3.01E-03	3.01E-02	0.00E+00	0.00E+00	0.00E+00	3.01E-02	0.00E+00	3.01E-02	1.80E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+00	0.00E+00	1.80E+00	9.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-04
Copper Oxide (Cuprous Oxide)	1317-39-1	3.63E-02	0.00E+00	0.00E+00	0.00E+00	3.63E-02	0.00E+00	3.63E-02	3.63E-01	0.00E+00	0.00E+00	0.00E+00	3.63E-01	0.00E+00	3.63E-01	2.37E+01	0.00E+00	0.00E+00	0.00E+00	2.37E+01	0.00E+00	2.37E+01	1.18E-02	0.00E+00	0.00E+00	0.00E+00	1.18E-02	0.00E+00	1.18E-02
Fatty acids, C9-13-neo-, cobalt salts	68955-83-9	1.48E-05	1.48E-05	0.00E+00	0.00E+00	1.48E-05	1.48E-05	2.96E-05	1.48E-04	1.48E-04	0.00E+00	0.00E+00	1.48E-04	1.48E-04	2.96E-04	2.71E-03	2.71E-03	0.00E+00	0.00E+00	2.71E-03	2.71E-03	5.43E-03	1.36E-06	1.36E-06	0.00E+00	0.00E+00	1.36E-06	1.36E-06	2.71E-06
HDI Homopolymer	28182-81-2	0.00E+00	0.00E+00	1.59E-02	1.59E-02	1.59E-02	1.59E-02	3.18E-02	0.00E+00	0.00E+00	1.59E-01	1.59E-01	1.59E-01	1.59E-01	3.18E-01	0.00E+00	0.00E+00	4.99E+00	4.99E+00	4.99E+00	4.99E+00	9.98E+00	0.00E+00	0.00E+00	2.50E-03	2.50E-03	2.50E-03	2.50E-03	4.99E-03
2-Propanol	67-63-0	0.00E+00	0.00E+00	0.00E+00	3.27E-02	0.00E+00	3.27E-02	3.27E-02	0.00E+00	0.00E+00	0.00E+00	3.27E-01	0.00E+00	3.27E-01	3.27E-01	0.00E+00	0.00E+00	0.00E+00	7.50E+02	0.00E+00	7.50E+02	7.50E+02	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	3.75E-01	3.75E-01

Notes:
[a] Only one ship can be painted at one time within a one-hour period. Thus, max hourly TAC emissions (except 2-Propanol from solvent only) shall be the highest value of all four painting scenarios (steel ship at the dry dock (DSRA); steel ship at the pier; aluminum ship at the dry dock (DSRA); aluminum ship at the pier).
[b] Maximum two ships can be painted within one day. One ship from the dry dock (DSRA), and one ship at the pier. Thus, the max daily TAC emissions (except 2-Propanol from solvent only) are the combination of higher daily emissions scenario from the dry dock (steel ship or aluminum ship) and the higher daily emissions scenario from the pier (steel ship or aluminum ship).
[c] TAC emissions are adjusted based on a usage profile that corresponds with the proposed limit of 55 pounds VOC emissions per day, as well as the proposed operating schedule.

Austal USA
San Diego Floating Dry Dock (FDD)
Adhesive Usage Emission Calculations
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Adhesive Usage

Adhesive	Maximum Daily Usage (gallons/day) [a]	Annual Usage (gallons/year) [b]	Density (lb/gallon) [c]	VOC Content from SDS [c] (lb/gallon)	VOC Content from SDS [c] (grams/liter)	Daily Usage (hours/day)	Daily Usage (shifts/day)	Annual Usage (days/year)
CLICKBOND CB420-50	0.88	2.64	8.23	0.42	50	1	1	365
NOFIRNO	0.46	1.37	12.10	0.26	31	1	1	365
ARMAFLEX 520	0.17	0.50	7.09	5.13	615	1	1	365
WS-8070 B-1/2	0.33	1.00	12.38	0.60	71.69	1	1	365
WS-8070 B-2	0.25	0.75	12.38	0.60	71.69	1	1	365
SIKA FIRESIL-N	4.51	13.52	12.52	0.25	30	1	1	365
SIKAFLEX 291	0.59	1.77	10.68	0.21	25	1	1	365
SIKAFLEX 292i	0.61	1.82	10.85	0.19	23	1	1	365

[a] Annual usage of adhesives estimated based upon similar Austal USA operated drydock operations.
[b] Maximum daily is estimated based on annual usage to be applied to 3 ships.
[c] Adhesive density and VOC content from Safety Data Sheet (SDS).
VOC = volatile organic compound(s)

Adhesive Criteria Air Pollutant Emissions

Adhesive	Hourly VOC Emissions (lbs/hour)	Daily VOC Emissions (lbs/day)	Annual VOC Emissions (tons/year)
CLICKBOND CB420-50	0.37	0.37	0.001
NOFIRNO	0.12	0.12	0.000
ARMAFLEX 520	0.86	0.86	0.001
WS-8070 B-1/2	0.20	0.20	0.000
WS-8070 B-2	0.15	0.15	0.000
SIKA FIRESIL-N	1.13	1.13	0.002
SIKAFLEX 291	0.12	0.12	0.000
SIKAFLEX 292i	0.12	0.12	0.000
Total Calculated VOC Emissions	**3.06**	**3.06**	**0.005**
Total Proposed VOC Emissions [a]	**10**	**10**	**1.83**

[a] Proposed VOC emissions based on a daily limit of 10 lbs of VOC emissions per day.
lbs/hour = pound(s) per hour
lbs/day = pound(s) per day
tons/year = ton(s) per year

Adhesive Toxic Air Contaminant Emissions

Toxic Air Contaminant	CAS Number	Calculated			Proposed		
		Hourly Emissions (lb/hour)	Annual Emissions (lb/year)	Annual Emissions (tons/year)	Hourly Emissions (lb/hour)	Annual Emissions (lb/year)	Annual Emissions (tons/year)
4,4'-methylenediphenyl diisocyanate	101-68-8	6.30E-08	1.89E-07	9.45E-11	3.35E-07	1.89E-07	9.45E-11
Ethylbenzene	100-41-4	6.30E-02	1.89E-01	9.45E-05	3.35E-01	1.89E-01	9.45E-05
Formaldehyde	50-00-0	5.91E-03	1.77E-02	8.86E-06	3.14E-02	1.77E-02	8.86E-06
Hexanes	110-54-3	2.96E-01	8.87E-01	4.43E-04	1.57E+00	8.87E-01	4.43E-04
o-cresol	95-48-7	5.91E-03	1.77E-02	8.86E-06	3.14E-02	1.77E-02	8.86E-06
Phenol	108-95-2	6.56E-02	1.97E-01	9.85E-05	3.49E-01	1.97E-01	9.85E-05
Toluene	108-88-3	1.13E+00	3.39E+00	1.69E-03	6.01E+00	3.39E+00	1.69E-03
Xylene	1330-20-7	3.15E-01	9.45E-01	4.73E-04	1.68E+00	9.45E-01	4.73E-04
zeolite [impurity]	1318-02-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
titanium dioxide	13463-67-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Reaction product: bisphenolA-(epichlorhyd	25068-38-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenolic resin	25085-50-1	2.36E-01	7.09E-01	3.55E-04	1.26E+00	4.59E+02	2.29E-01
Terphenyl	26140-60-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oxydipropyl dibenzoate	27138-31-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diisodecyl adipate	27178-16-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aliphatic polyisocyanate	28182-81-2	6.59E-02	1.98E-01	9.89E-05	3.51E-01	1.28E+02	6.40E-02
2-Pentadione, O, O',"" - (methylsilylidyne)tr	37859-55-5	1.32E-01	3.97E-01	1.99E-04	7.04E-01	2.57E+02	1.29E-01
Pentamethyl piperidylsebacate	41556-26-7	6.59E-02	1.98E-01	9.89E-05	3.51E-01	1.28E+02	6.40E-02
calcium carbonate	471-34-1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hydrogenated Terphenyl	61788-32-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Pentanone, oxime	623-40-5	1.32E-01	3.97E-01	1.99E-04	7.04E-01	2.57E+02	1.29E-01
Benzene, ethenyl-, polymerwith 1,3-butadie	66070-58-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetone	67-64-1	4.73E-01	1.42E+00	7.09E-04	2.51E+00	9.18E+02	4.59E-01
Polysulphide Polymer	68611-50-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methacrylic acid	79-41-4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl methacrylate	80-62-6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
(3-Aminopropyl)triethoxysilane	919-30-2	4.97E-02	1.49E-01	7.45E-05	2.64E-01	9.64E+01	4.82E-02
Dibenzoyl peroxide	94-36-0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dipentamethylene Thiuram Hexasulphide	971-15-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Reaction product of Hexamethylenediisocyan	ot Assigned per SD	6.59E-02	1.98E-01	9.89E-05	3.51E-01	1.28E+02	6.40E-02

Note: For purposes of modeling, calculated emissions will be used for annual operation while proposed will be used for annual operation.

Conversions

1	pound/gallon	=	119.8264 gram/liter
1	ton	=	2000 pound

Adhesive Location Use

Operations Building	10%
Existing Pier	45%
Floating Dry Dock	45%

Austal USA
San Diego Floating Dry Dock (FDD)
Adhesive Usage
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Adhesive Usage

Adhesive Name	Part Description	Quantity	Unit	Conversion to gallons	Size/each	Total	Annual Gallons	Max Daily [a]
CLICKBOND CB420-50	CARTRIDGE,CLICKBOND,ADHESIVE,50ML,CB420-50,,,	200	ml	0.000	50	10000	**2.64**	**0.88**
NOFIRNO	COMPOUND,SEALING SYSTEM,SILICONE,NOFIRNO,, - 10.3 oz tube	17	oz	0.008	10.3	175.1	**1.37**	**0.46**
ARMAFLEX 520	INSULATION,ADHESIVE,ARMAFLEX 520,PINT,,,	4	pint	0.125	--	--	**0.50**	**0.17**
WS-8070 B-1/2	POLYSULFIDE,PINT,SEALANT KIT,CLASS B-1/2,AC-735,ROYAL ADHESIVE PN WS-8070 B-1/2 MIL-PRF-81733	8	pint	0.125	--	--	**1.00**	**0.33**
WS-8070 B-2	POLYSULFIDE,QUART,SEALANT KIT,CLASS B-2,3M PN AC-735,ROYAL ADHESIVE PN WS-8070 B-2 MIL-PRF-81733	3	qt	0.250	--	--	**0.75**	**0.25**
SIKA FIRESIL-N	SIKA FIRESIL-N,GREY,PART #443894,10.3 OZ,24 PER BOX,,	7	oz	0.008	10.3	168	**13.52**	**4.51**
SIKAFLEX 291	SIKAFLEX 291,WHITE,PART # 90919,MARINE GRADE - 10.3 oz tube	22	oz	0.008	10.3	226.6	**1.77**	**0.59**
SIKAFLEX 292i	SIKAFLEX 292i,WHITE,CARTRIDGE 300ml,577359	23	ml	0.000	300	6900	**1.82**	**0.61**
						Total Gallons	**23.37**	**7.79**

[a] Maximum daily is estimated based on annual usage to be applied to 3 ships. Considering the adheisve amount per ship is so low, assume they can be consumed in one hour.

Conversions:

1	fluid ounce	=	0.008	gallon
1	gallon	=	8	pint
1	gallon	=	128	ounces
1	pound/gallon	=	0.120	specific gravity

Austal USA
San Diego Floating Dry Dock (FDD)
Adhesive TAC Emmissions
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Name	Parts	Max Daily Usage (gal/day)[1]	Annual Usage (gal/year)[2]	VOC Content (g/L)	Density (lb/gal)	Solid?	Contents	CAS	wt%			Emissions			TAC?
									wt%_Range	wt%_High End	wt% for Multi-Component Adhesives	lb/hr[4]	lb/day	lb/yr	
CLICKBOND CB420-50		**0.88**	**2.64**	**50.00**	**8.23**										
	A			50.00	10.43		Dibenzoyl peroxide	94-36-0	10-30	30	3.03	0	0	0	N
							Reaction product: bisphenolA-(epichlorhydrin)	25068-38-6	10-30	30	3.03	0	0	0	N
							Diisodecyl adipate	27178-16-1	10-30	30	3.03	0	0	0	N
							Oxydipropyl dibenzoate	27138-31-4	1-10	10	1.01	0	0	0	N
							Benzene, ethenyl-, polymer with 1,3-butadiene, hydrogenated	66070-58-4	1-10	10	1.01	0	0	0	N
							Water	7732-18-5	1-10	10	1.01	0	0	0	N
	B			50.00	8.01		Methyl methacrylate	80-62-6	60-100	100	89.90	0	0	0	N
							Methacrylic acid	79-41-4	5-10	10	8.99	0	0	0	N
NOFIRNO		**0.46**	**1.37**	**31.00**	**12.10**										
							2-Pentanone, oxime	623-40-5	<2,4	2.4		0.13242211	0.132422	0.3972663	N
							2-Pentadione, O, O',"" -(methylsilylidyne)trioxime	37859-55-5	<2,4	2.4		0.13242211	0.132422	0.3972663	N
							(3-Aminopropyl)triethoxysilane	919-30-2	~0,9	0.9		0.04965829	0.049658	0.1489749	N
ARMAFLEX 520		**0.17**	**0.50**	**615.00**	**7.09**										
							Acetone	67-64-1	30.00 – 60.00	40		0.47288333	0.472883	1.41865	N
						Liquid	Hexanes	110-54-3	10.00 – 30.00	25		0.30	0.30	0.89	Y
						Liquid	Toluene	108-88-3	10.00 – 30.00	40		0.47	0.47	1.42	Y
							Phenolic resin	25085-50-1	5.00 – 10.00	20		0.23644167	0.236442	0.709325	N
WS-8070 B-1/2		**0.33**	**1.00**	**71.69**	**12.38**										
	A			2.40	14.69	Solid	manganese dioxide	1313-13-9	25-50%	50	4.55	0.00	0.00	0.00	Y
							Hydrogenated Terphenyl	61788-32-7	25-50%	50	4.55	0	0	0	N
							zeolite [impurity]	1318-02-1	2.5-10%	10	0.91	0	0	0	N
							Dipentamethylene Thiuram Hexasulphide	971-15-3	≤ 2.5%	2.5	0.23	0	0	0	N
							Terphenyl	26140-60-3	≤ 2.5%	2.5	0.23	0	0	0	N
						Solid	sodium hydroxide [impurity]	1310-73-2	≤ 2.5%	2.5	0.23	0.00	0.00	0.00	Y
	B			77.50	12.18		Polysulphide Polymer	68611-50-7	25-50%	50	45.45	0	0	0	N
							calcium carbonate	471-34-1	5-20%	20	18.18	0	0	0	N
							titanium dioxide	13463-67-7	2.5-10%	10	9.09	0	0	0	N
						Solid	Magnesium Chromate	13423-61-5	2.5-10%	10	9.09	0.00	0.00	0.00	Y
						Liquid	toluene	108-88-3	2.5-10%	10	9.09	0.38	0.38	1.13	Y
						Liquid	phenol	108-95-2	≤ 1.0%	1	0.91	0.04	0.04	0.11	Y
						Liquid	formaldehyde	50-00-0	≤ 0.09%	0.09	0.08	0.00	0.003	0.01	Y
						Liquid	o-cresol	95-48-7	≤ 0.09%	0.09	0.08	0.00	0.003	0.01	Y
WS-8070 B-2		**0.25**	**0.75**	**71.69**	**12.38**										
	A			2.40	14.69	Solid	manganese dioxide	1313-13-9	25-50%	50	4.55	0.00	0.00	0.00	Y
							Hydrogenated Terphenyl	61788-32-7	25-50%	50	4.55	0	0	0	N
							zeolite [impurity]	1318-02-1	2.5-10%	10	0.91	0	0	0	N
							Dipentamethylene Thiuram Hexasulphide	971-15-3	≤ 2.5%	2.5	0.23	0	0	0	N
							Terphenyl	26140-60-3	≤ 2.5%	2.5	0.23	0	0	0	N
						Solid	sodium hydroxide [impurity]	1310-73-2	≤ 2.5%	2.5	0.23	0.00	0.00	0.00	Y
	B			77.50	12.18		Polysulphide Polymer	68611-50-7	25-50%	50	45.45	0	0	0	N
							calcium carbonate	471-34-1	5-20%	20	18.18	0	0	0	N
							titanium dioxide	13463-67-7	2.5-10%	10	9.09	0	0	0	N
						Solid	Magnesium Chromate	13423-61-5	2.5-10%	10	9.09	0.00	0.00	0.00	Y
						Liquid	toluene	108-88-3	2.5-10%	10	9.09	0.28	0.28	0.84	Y
						Liquid	phenol	108-95-2	≤ 1.0%	1	0.91	0.03	0.03	0.08	Y
						Liquid	formaldehyde	50-00-0	≤ 0.09%	0.09	0.08	0.00	0.003	0.01	Y
						Liquid	o-cresol	95-48-7	≤ 0.09%	0.09	0.08	0.00	0.003	0.01	Y
SIKA FIRESIL-N		**4.51**	**13.52**	**30.00**	**12.52**										
SIKAFLEX 291		**0.59**	**1.77**	**25.00**	**10.68**										
						Liquid	xylene	1330-20-7	1-5	5.00		0.32	0.32	0.9	Y
						Liquid	4,4'-methylenediphenyl diisocyanate	101-68-8	0.1-1	1.00		0.00	0.00	0.00	Y
						Liquid	ethylbenzene	100-41-4	0.1-1	1.00		0.06	0.06	0.2	Y
						Solid	Quartz (SiO2) >5µm	14808-60-7	0.1-1	1.00		0.00	0.00	0.0	Y
SIKAFLEX 292i		**0.61**	**1.82**	**23.00**	**10.85**										
							Aliphatic polyisocyanate	28182-81-2	>= 0.1 - < 1	1		0.06591501	0.065915	0.197745	N
							Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane	Not Assigned per SDS	>= 0.1 - < 1	1		0.07	0.065915	0.197745	N
							Pentamethyl piperidylsebacate	41556-26-7	>= 0.1 - < 1	1		0.06591501	0.065915	0.197745	N
		TRUE	TRUE												

Notes

1. Max daily usage in gallons is provided by Austal

2. Annual usage in gallons is provided by Austal
3. Assume daily usage is consumed within one hour.

Conservative Operating Schedule

NO. OF HOURS/DAY:	1
NO. OF DAYS/YEAR	365
NO. OF SHIFTS/DAY	1

Polymerization Rate

MDI	0.0001%

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/painting-and-surface-coating/APCD-painting.pdf

APPLICATION METHOD	TRANSFER EFFICIENCIES					
	LARGE SURFACES		MEDIUM SURFACES		SMALL SURFACES	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	**50%**	**75%**	**65%**	**60%**	**70%**	**40%**
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	**0%**	**100%**	**0%**	**100%**	**0%**	**100%**

*Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/instructions/Painting-and-Surface-Coating-Operations.pdf

Conversion Factors

1 ton =	2000	lbs
Density of water	8.345	lb/gal

TAC Emissions

TAC	Cas No.	lb/hr	lb/day	lb/yr	ton/yr
4,4'-methylenediphenyl diisocyanate	101-68-8	6.30E-08	6.30E-08	1.89E-07	9.45E-11
Ethylbenzene	100-41-4	6.30E-02	6.30E-02	1.89E-01	9.45E-05
Formaldehyd	50-00-0	5.91E-03	5.91E-03	1.77E-02	8.86E-06
Hexanes	110-54-3	2.96E-01	2.96E-01	8.87E-01	4.43E-04
Magnesium Chromate	13423-61-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese Dioxide	1313-13-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o-cresol	95-48-7	5.91E-03	5.91E-03	1.77E-02	8.86E-06
Phenol	108-95-2	6.56E-02	6.56E-02	1.97E-01	9.85E-05
Quartz (SiO2) >5µm	14808-60-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
sodium hydroxide [impurity]	1310-73-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108-88-3	1.13E+00	1.13E+00	3.39E+00	1.69E-03
Xylene	1330-20-7	3.15E-01	3.15E-01	9.45E-01	4.73E-04
Total		***1.88***	***1.88***	***5.64***	***0.003***
Ratio		***5.32***	***5.32***	***647.00***	

Proposed TAC Emissions_Based on 10 lbs/day VOC (Assume all VOCs are TACs)

TAC	Cas No.	lb/hr	lb/day	lb/yr	ton/yr
4,4'-methylenediphenyl diisocyanate	101-68-8	3.35E-07	3.35E-07	1.89E-07	9.45E-11
ethylbenzene	100-41-4	3.35E-01	3.35E-01	1.89E-01	9.45E-05
formaldehyde	50-00-0	3.14E-02	3.14E-02	1.77E-02	8.86E-06
Hexanes	110-54-3	1.57E+00	1.57E+00	8.87E-01	4.43E-04
Magnesium Chron	13423-61-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
manganese diox	1313-13-9	0.00E+00	0.00E+00	0.00E+00	0.00E+00
o-cresol	95-48-7	3.14E-02	3.14E-02	1.77E-02	8.86E-06
phenol	108-95-2	3.49E-01	3.49E-01	1.97E-01	9.85E-05
Quartz (SiO2) >5µm	14808-60-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
sodium hydroxide [impurity]	1310-73-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108-88-3	6.01E+00	6.01E+00	3.39E+00	1.69E-03
xylene	1330-20-7	1.68E+00	1.68E+00	9.45E-01	4.73E-04
Total		***10***	***########***	***########***	***0.0028***

Austal USA
San Diego Floating Dry Dock (FDD)
Facility-Wide Portable Emergency Engines Emission Calculations
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Portable Equipment Engine Data

	Hourly Operation	Annual Operation
Maximum Horsepower (hp-hr)	850	850
Maximum Kilowatts (kW-hr)	625	625
Maximum MMBtu (MMBtu/hr)	6.0	6.0
Fuel Consumption (gal/hour)	43	43

Annual Operation: 50 hours/year
Fuel Flow Rate: 0.051 gal/hp-hr

Note: Operation information obtained from air permit application submitted to SDAPCD Dated June 2023 and discussion with Austal February 2025. It is assumed that maximum hourly and annual horsepower-hour should be the same, assuming that the site will only operate one emergency engine with a maximum 850 horsepower. Annual operation for maintenance and testing maximum.

hp-hr = horsepower-hour

kWh = kilowatt-hour

gal/hour = gallon(s) per hour

gal/hp-hr = gallon(s) per horsepower-hour

Default HHV (AP-42 Appendix A) 0.137

Portable Emergency Engines Criteria Pollutant Emissions

Pollutant	Emission Factor (g/kWh) [a]	Total Hourly Emissions (lbs/hour) [b]	Total Daily Emissions (lbs/day)	Total Annual Emissions (tons/year)
VOC	0.19	0.26	0.26	0.01
NOx	0.67	0.92	0.92	0.02
CO	3.50	4.82	4.82	0.12
SO_2	0.21	0.01	0.01	0.000
PM_{10}	0.03	0.04	0.04	0.00
$PM_{2.5}$	0.03	0.04	0.04	0.00

[a] Criteria pollutant emissions information assume Tier 4 standards for engines greater than 560 kW, as any portable rental equipment brought onsite will be Tier 3 or better. This applies to all criteria pollutants except for SO_2. The SO_2 emission factor is in units of lbs/1000 gal fuel burned from SDAPCD diesel combustion emission factors E15 - Portable Engine, Diesel Fired, 50-600 BHP, Uncontrolled.

[b] Maximum daily emissions were assumed to be equal to maximum hourly emissions estimated for maintenance and testing purposes.

g/kWh = gram(s) per kilowatt-hour

lbs/hr = pound(s) per hour

lbs/day = pound(s) per day

tons/year = ton(s) per year

Grams per pound 453.592

VOC = volatile organic compound(s)

NOx = oxides of nitrogen

CO = carbon monoxide

SO_2 = sulfur dioxide

PM_{10} = Particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

Total Portable Emergency Engines Toxic Air Contaminant Emissions

TAC	CAS Number	EF, lb/1,000 gal of fuel burned [a]	Total Hourly Emissions (lbs/hour)	Total Annual Emissions (lbs/year)	Total Annual Emissions (tons/year)
1,3-Butadiene	106-99-0	2.17E-01	9.43E-03	4.71E-01	2.36E-04
Acetaldehyde	75-07-0	7.83E-01	3.40E-02	1.70E+00	8.50E-04
Acrolein	107-02-8	3.39E-02	1.47E-03	7.36E-02	3.68E-05
Arsenic	7440-38-2	1.60E-03	6.95E-05	3.47E-03	1.74E-06
Benzene	71-43-2	1.86E-01	8.08E-03	4.04E-01	2.02E-04
Beryllium	7440-41-7	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	7440-43-9	1.50E-03	6.52E-05	3.26E-03	1.63E-06
Chlorobenzene	108-90-7	2.00E-04	8.69E-06	4.34E-04	2.17E-07
Chromium Hexavalent	18540-29-9	1.00E-04	4.34E-06	2.17E-04	1.09E-07
Chromium Nonhexavalent	7440-47-3	5.00E-04	2.17E-05	1.09E-03	5.43E-07
Copper	7440-50-8	4.10E-03	1.78E-04	8.90E-03	4.45E-06
Diesel Particulate [b]	9901	3.00E-02	4.13E-02	2.07E+00	1.03E-03
Ethyl Benzene	100-41-4	1.09E-02	4.73E-04	2.37E-02	1.18E-05
Formaldehyde	50-00-0	1.73E+00	7.51E-02	3.76E+00	1.88E-03
Hexane	110-54-3	2.69E-02	1.17E-03	5.84E-02	2.92E-05
Hydrogen Chloride	7647-01-0	1.86E-01	8.08E-03	4.04E-01	2.02E-04
Lead	7439-92-1	8.30E-03	3.61E-04	1.80E-02	9.01E-06
Manganese	7439-96-5	3.10E-03	1.35E-04	6.73E-03	3.37E-06
Mercury	7439-97-6	2.00E-03	8.69E-05	4.34E-03	2.17E-06
Naphthalene	91-20-3	1.97E-02	8.56E-04	4.28E-02	2.14E-05
Nickel	7440-02-0	3.90E-03	1.69E-04	8.47E-03	4.23E-06
Total PAHs	1150	3.62E-02	1.57E-03	7.86E-02	3.93E-05
Propylene	115-07-1	4.67E-01	2.03E-02	1.01E+00	5.07E-04
Selenium	7782-49-2	2.20E-03	9.56E-05	4.78E-03	2.39E-06
Toluene	108-88-3	1.05E-01	4.56E-03	2.28E-01	1.14E-04
Xylenes	1330-20-7	4.24E-02	1.84E-03	9.21E-02	4.60E-05
Zinc	7440-66-6	2.24E-02	9.73E-04	4.86E-02	2.43E-05

[a] Assume a diesel fired engine <= 600 BHP uncontrolled emission factors for the TAC emission profile for the most conservative estimate. From SDAPCD E15-Portable Engine, Diesel Fired, 50-600 BHP, Uncontrolled.

[b] Diesel Particulate emission factor in grams per kilowatt-hour (g/kW-hr) and assumed equal to PM_{10}.

Austal USA
San Diego Floating Dry Dock (FDD)
Floating Dry Dock (FDD) Emergency Generator Emission Calculations
Originally Prepared by M.S. Hatch Consulting, LLC
April 2025

Emergency Engine Data

Engine Make, Model, Type	Engine Rated Capacity (bhp)	Engine Rated Capacity (kW)	Fuel Consumption (gals/hour)	Emission Characteristics	Number of Units	Daily Operation (hours/day)	Annual Operation (hours/year)
Cummins QSK19-DM [a]	800	597	41.8	EPA Marine Tier 3 Commercial	2	1.25	52

[a] Operation information obtained from air permit application submitted to SDAPCD. Annual operation for maintenance and testing maximum.

bhp = brake-horsepower

kW = kilowatt

gals/hour = gallon(s) per hour

hours/day = hour(s) per day

hours/year = hour(s) per year

FDD Diesel Emergency Generator Criteria Pollutant Emissions

		Per Engine			Total (Two Engines)		
Pollutant	Emission Factor (g/kWh) [a]	Hourly Emissions (lbs/hour)	Daily Emissions (lbs/day)	Annual Emissions (tons/year)	Hourly Emissions (lbs/hour)	Daily Emissions (lbs/day)	Annual Emissions (tons/year)
VOC	0.18	0.24	0.30	0.01	0.47	0.59	0.01
NOx	5.40	7.11	8.88	0.18	14.21	17.77	0.37
CO	2.30	3.03	3.78	0.08	6.05	7.57	0.16
SO_2	0.01	0.01	0.01	0.00	0.02	0.02	0.00
PM_{10}	0.09	0.12	0.15	0.00	0.24	0.30	0.01
$PM_{2.5}$	0.09	0.12	0.15	0.00	0.24	0.30	0.01

[a] Criteria pollutant emissions information obtained from the EPA 2000-Present Marine CI Engine Certification Data (https://www.epa.gov/compliance-and-fuel-economy-data/annual-certification-data-vehicles-engines-and-equipment). Except for the SO_2 emission factor which assumes 15 ppm sulfur diesel fuel and is in units of lb/hour.

Engine Fuel Consumption (gal/hr):	41.8	Cummins Specifcation Sheet
Density of Diesel Fuel (lbs/gal)	7.05	AP-42 Appendix A
Diesel Fuel Heat Content (MMBtu/gal):	0.137	AP-42 Appendix A
Engine Heat Input (MMBtu/hr):	5.727	Calculated
Pounds per kilogram	2.205	Conversion

g/kWh = gram(s) per kilowatt-hour
lbs/hr = pound(s) per hour
lbs/day = pound(s) per day
tons/year = ton(s) per year
VOC = volatile organic compound(s)
NOx = oxides of nitrogen
CO = carbon monoxide
SO_2 = sulfur dioxide
PM_{10} = Particulate matter less than 10 micrometers in diameter
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

FDD Diesel Emergency Generator Toxic Air Contaminant Emissions

			Per Engine			Total (Two Engines)		
TAC	**CAS Number**	**EF, lb/1,000 gal of fuel burned [a]**	**Hourly Emissions (lbs/hour)**	**Annual Emissions (lbs/year)**	**Annual Emissions (tons/year)**	**Hourly Emissions (lbs/hour)**	**Annual Emissions (lbs/year)**	**Annual Emissions (tons/year)**
1,3-Butadiene	106-99-0	0.217	9.07E-03	4.72E-01	2.36E-04	1.81E-02	9.43E-01	4.72E-04
Acetaldehyde	75-07-0	0.783	3.27E-02	1.70E+00	8.51E-04	6.55E-02	3.40E+00	1.70E-03
Acrolein	107-02-8	0.034	1.42E-03	7.37E-02	3.68E-05	2.83E-03	1.47E-01	7.37E-05
Arsenic	7440-38-2	0.002	6.69E-05	3.48E-03	1.74E-06	1.34E-04	6.96E-03	3.48E-06
Benzene	71-43-2	0.186	7.77E-03	4.04E-01	2.02E-04	1.55E-02	8.09E-01	4.04E-04
Cadmium	7440-43-9	0.002	6.27E-05	3.26E-03	1.63E-06	1.25E-04	6.52E-03	3.26E-06
Chlorobenzene	108-90-7	0.000	8.36E-06	4.35E-04	2.17E-07	1.67E-05	8.69E-04	4.35E-07
Chromium Hexavalent	18540-29-9	0.000	4.18E-06	2.17E-04	1.09E-07	8.36E-06	4.35E-04	2.17E-07
Chromium Nonhexavalent	7440-47-3	0.001	2.09E-05	1.09E-03	5.43E-07	4.18E-05	2.17E-03	1.09E-06
Copper	7440-50-8	0.004	1.71E-04	8.91E-03	4.46E-06	3.43E-04	1.78E-02	8.91E-06
Diesel Particulate	9901	2.830	1.18E-01	6.15E+00	3.08E-03	2.37E-01	1.23E+01	6.15E-03
Ethyl Benzene	100-41-4	0.011	4.56E-04	2.37E-02	1.18E-05	9.11E-04	4.74E-02	2.37E-05
Formaldehyde	50-00-0	1.730	7.23E-02	3.76E+00	1.88E-03	1.45E-01	7.52E+00	3.76E-03
Hexane	110-54-3	0.027	1.12E-03	5.85E-02	2.92E-05	2.25E-03	1.17E-01	5.85E-05
Hydrogen Chloride	7647-01-0	0.186	7.77E-03	4.04E-01	2.02E-04	1.55E-02	8.09E-01	4.04E-04
Lead	7439-92-1	0.008	3.47E-04	1.80E-02	9.02E-06	6.94E-04	3.61E-02	1.80E-05
Manganese	7439-96-5	0.003	1.30E-04	6.74E-03	3.37E-06	2.59E-04	1.35E-02	6.74E-06
Mercury	7439-97-6	0.002	8.36E-05	4.35E-03	2.17E-06	1.67E-04	8.69E-03	4.35E-06
Naphthalene	91-20-3	0.020	8.23E-04	4.28E-02	2.14E-05	1.65E-03	8.56E-02	4.28E-05
Nickel	7440-02-0	0.004	1.63E-04	8.48E-03	4.24E-06	3.26E-04	1.70E-02	8.48E-06
Total PAHs	1150	0.036	1.51E-03	7.87E-02	3.93E-05	3.03E-03	1.57E-01	7.87E-05
Propylene	115-07-1	0.467	1.95E-02	1.02E+00	5.08E-04	3.90E-02	2.03E+00	1.02E-03
Selenium	7782-49-2	0.002	9.20E-05	4.78E-03	2.39E-06	1.84E-04	9.56E-03	4.78E-06
Toluene	108-88-3	0.105	4.39E-03	2.28E-01	1.14E-04	8.78E-03	4.56E-01	2.28E-04
Xylenes	1330-20-7	0.042	1.77E-03	9.22E-02	4.61E-05	3.54E-03	1.84E-01	9.22E-05
Zinc	7440-66-6	0.022	9.36E-04	4.87E-02	2.43E-05	1.87E-03	9.74E-02	4.87E-05

[a] Source: SDAPCD Calculation Procedures for Diesel-Fired Engines > 600 bhp Uncontrolled.

Austal USA
Worker Onroad Emission Calculations
Criteria Air Pollutant Emission Summary
April 2025

Mobile Source Data

Trip Type	One Way Trip Length (miles) [a]	Number of New Employees/Haul Trucks	Work Days Per Week	Work Weeks Per Year	Vehicle Type
Local San Diego Worker	11.8	130	5	52	50% gasoline light duty cars, 50% light duty trucks (type 1 and 2)
Local Haul Truck	7.63	1	1	12	T7 Public Class 8, diesel

[a] Trip length based upon CalEEMOD Version 2022.1.1 Default Data for San Diego Air Pollution Control District residential trip length for home to work for local San Diego Workers and Work-Other nonresidential trip length for Local Haul Trucks.

Mobile Source Emission Factors [a]

Trip Type	Emission Factors (lbs/VMT)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Local San Diego Worker	7.21E-05	1.94E-04	2.45E-03	7.36E-06	4.02E-05	1.48E-05
Local Haul Truck	2.93E-04	1.70E-02	8.50E-04	3.93E-05	4.28E-04	2.03E-04

[a] Equipment emission factors were obtained from EFMAC 2021 for San Diego Air Pollution Control District defaults and aggregated speed and vehicle age. Emission factors assume 50% LDA, 25 LDT1, and 25% LDT2 vehicle types.

lbs/VMT = pound(s) per vehicle mile traveled

VOC = volatile organic compound(s)

NOx = oxides of nitrogen

CO = carbon monoxide

SO_2 = sulfur dioxide

PM_{10} = Particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

Mobile Source Hourly Emissions

Trip Type	Hourly Emissions (lb/hour)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Local San Diego Worker	2.21E-01	5.97E-01	7.51E+00	2.26E-02	1.23E-01	4.55E-02
Local Haul Truck	4.47E-03	2.60E-01	1.30E-02	6.00E-04	6.53E-03	3.10E-03
Total Emissions	**2.26E-01**	**8.57E-01**	**7.52E+00**	**2.32E-02**	**1.30E-01**	**4.86E-02**

lb/hour = pound(s) per hour

Mobile Source Daily Emissions

Trip Type	Daily Emissions (lb/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Local San Diego Worker	2.21E-01	5.97E-01	7.51E+00	2.26E-02	1.23E-01	4.55E-02
Local Haul Truck	4.47E-03	2.60E-01	1.30E-02	6.00E-04	6.53E-03	3.10E-03
Total Emissions	**2.26E-01**	**8.57E-01**	**7.52E+00**	**2.32E-02**	**1.30E-01**	**4.86E-02**

lb/day = pound(s) per day

Mobile Source Annual Emissions

Trip Type	Annual Emissions (tons/year)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Local San Diego Worker	2.88E-02	7.76E-02	9.76E-01	2.94E-03	1.60E-02	5.91E-03
Local Haul Truck	2.68E-05	1.56E-03	7.78E-05	3.60E-06	3.92E-05	1.86E-05
Total Emissions	**2.88E-02**	**7.91E-02**	**9.76E-01**	**2.94E-03**	**1.61E-02**	**5.93E-03**

tons/year = ton(s) per year

grams per pound 453.6

Local Haul Truck Toxic Air Contaminant Emissions

TAC	CAS Number	VOC %	Hourly Emissions (lbs/hour)	Annual Emissions (lbs/year)	Annual Emissions (tons/year)
DieselExhPM	9901	--	6.53E-03	7.84E-02	3.92E-05
Cyclohexane	110-82-7	1.72%	7.68E-05	9.22E-04	4.61E-07
Ethylbenzene	100-41-4	1.29%	5.76E-05	6.91E-04	3.46E-07
Hexane	110-54-3	2.40%	1.07E-04	1.29E-03	6.43E-07
Styrene	100-42-5	2.04%	9.11E-05	1.09E-03	5.47E-07
Trimethylbenzene	25551-13-7	4.27%	1.91E-04	2.29E-03	1.14E-06
2,2,4-Trimethylpentane	540-84-1	0.24%	1.07E-05	1.29E-04	6.43E-08

Source: U.S. Air Force Mobile Source Inventory Guidance (2024).

VOC & PM Emissions Summary

Emissions	VOC	PM	PM (w/ Control)
Annual[1] (ton/year)	3.86	2.06	0.21
Max Daily[2] (lb/day)	55.00	25.87	2.59
Hourly[3] (lb/hr)	5.50	2.59	0.26

Notes:

1. Annual emission is calculated based on the max daily emissions and an operating schedule of 250 days per year.
2. Max daily VOC emissions are proposed as 55 lbs/day;
   Max daily PM emissions, corresponding with the proposed max daily VOC emissions, are calculated based on average daily usage, average solid content in weight percentage (wt%), and average density of all coatings including solvent, as well as a conservative assumption that half of the coatings will be sprayed.
3. Hourly emission is calculated based on the max daily emissions and an operating schedule of 10 hours per day.

Parameters for Daily PM Emissions Calculation

Average VOC content of all coatings (lbs/gal)	1.56
Average daily usage of all coatings (gal)	35.34
Average solid content of all coatings (wt%)	86.41%
Average density of all coatings (lbs/gal)	12.10
Percent of coatings to be sprayed	0.50
Total number of coatings	102

* Coatings include solvent

Operating Schedule

Hours per day	10
Days per week	5
Weeks per year	50
Days per year	250

PM Control Efficiency

Shrouding	90%

Conversion Factor

2000	lbs/ton

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	LARGE SURFACES		MEDIUM SURFACES		SMALL SURFACES	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	50%	75%	65%	60%	70%	40%
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	0%	100%	0%	100%	0%	100%

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/instructions/Painting-and-Surface-Coating-Operations.pdf

TAC Emissions Summary

TAC	CAS #	Unadjusted			Adjusted_Based on 55 lbs/day VOC[3]		
		Hourly[1] (lb/hr)	Max Daily[2] (lb/day)	Annual (lb/year)	Hourly (lb/hr)	Max Daily (lb/day)	Annual (lb/year)
1,2,3-Trimethylbenzene	526-73-8	0.59	11.33	117.32	0.12	1.24	117.32
1,2,4-Trimethylbenzene	95-63-6	5.68	104.37	785.75	1.14	11.38	785.75
1,3,5-Trimethylbenzene	108-67-8	1.73	33.01	404.62	0.36	3.60	404.62
1-METHOXY 2-PROPANOL	107-98-2	0.14	2.78	27.78	0.03	0.30	27.78
Antimony Chromium Titanium Oxide	68186-90-3	0.00	0.00	0.00	0.00	0.00	0.00
Chromium green-black	68909-79-5	0.00	0.00	0.00	0.00	0.00	0.00
Cobalt 2-Ethylhexanoate	136-52-7	0.0003	0.01	0.01	0.0001	0.001	0.01
Copper Oxide (Cupric Oxide)	1317-38-0	0.03	0.28	1.80	0.003	0.03	1.80
Copper Oxide (Cuprous Oxide)	1317-39-1	0.33	3.33	23.67	0.04	0.36	23.67
Crystalline Silica, respirable powder	14808-60-7	0.01	0.12	0.68	0.001	0.01	0.68
Ethylbenzene	100-41-4	1.95	24.57	241.30	0.27	2.68	241.30
Fatty acids, C9-13-neo-, cobalt salts	68955-83-9	0.0001	0.003	0.01	0.00003	0.0003	0.01
Methyl Ethyl Ketone	78-93-3	0.22	3.94	7.94	0.04	0.43	7.94
p-Chlorobenzotrifluoride	98-56-6	3.18	63.62	303.66	0.69	6.94	303.66
t-Butyl Acetate	540-88-5	0.32	3.17	37.62	0.03	0.35	37.62
Toluene	108-88-3	0.02	0.35	2.32	0.004	0.04	2.32
Trimethylbenzene	25551-13-7	2.85	54.19	584.12	0.59	5.91	584.12
Xylene, mixed isomers	1330-20-7	8.90	113.76	1219.67	1.24	12.41	1219.67
Chromium Iron Oxide	12737-27-8	0.00	0.00	0.00	0.00	0.00	0.00
HDI Homopolymer	28182-81-2	0.15	2.91	9.98	0.03	0.32	9.98
Hexamethylene diisocyanate	822-06-0	0.001	0.03	0.10	0.0003	0.003	0.10
2-Propanol	67-63-0	0.30	3.00	750.07	0.03	0.33	750.07

Notes:

1. Only one ship can be painted at one time within a one-hour period. Thus, max hourly TAC emissions (except 2-Propanol from solvent only) shall be the highest value of all four painting scenarios (steel ship at the dry dock (DSRA); steel ship at the pier; aluminum ship at the dry dock (DSRA); aluminum ship at the pier).

2. Maximum two ships can be painted within one day. One ship from the dry dock (DSRA), and one ship at the pier. Thus, the max daily TAC emissions (except 2-Propanol from solvent only) are the combination of higher daily emissions scenario from the dry dock (steel ship or aluminum ship) and the higher daily emissions scenario from the pier (steel ship or aluminum ship).

3. TAC emissions are adjusted based on a usage profile that corresponds with the proposed limit of 55 pounds VOC emissions per day, as well as the proposed operating schedule.

Adjustment Ratio Calculation

Average of Max Daily VOC Emissions (lbs/day)	504.30
Proposed Max Daily VOC Emissions (lbs/day)	55
Adjustment Ratio	0.11

Operating Schedule

Hours per day	10
Days per week	5
Weeks per year	50
Days per year	250

Unadjusted Max Daily VOC Emissions_Based on Different Combinations of Ship Type and Location (Maximum Two Ships Per Day)

Scenario	Unadjusted Max Daily VOC Emissions
Steel Dry Dock + Steel Pier + Solvent	638.77
Aluminum Dry Dock + Aluminum Pier + Solvent	369.83
Steel Dry Dock + Aluminum Pier + Solvent	511.62
Aluminum Dry Dock + Steel Pier + Solvent	496.98

Unadjusted Daily VOC Emissions_Based on VOC Emission Sources

Emission Source	Unadjusted Daily VOC Emissions
Steel Dry Dock	374.65
Steel Pier	261.12
Aluminum Dry Dock	232.86
Aluminum Pier	133.97
Solvent	3.00

Austal USA
San Diego Floating Dry Dock
Marine Coatings and Solvent Toxic Air Contaminant Emissions
Originally Prepared by M.S. Hatch Consulting, LLC
See 'Marine Coating_Solvent_Emissions Calculation_2025 Amend_2025-02-07.xlsx' for detailed calculations.
February 2025

Unadjusted

Toxic Air Contaminant	CAS Number	Hourly Emissions [a] lbs/hr							Daily Emissions [b] lbs/day							Annual Emissions lbs/year							Annual Emissions tons/year						
		Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock Maximum	Pier Maximum	Facility Maximum [a]	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock Maximum	Pier Maximum	Facility Total [b]	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock	Pier	Total	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock	Pier	Total
Crystalline Silica - Quartz	14808-60-7	3.78E-03	5.82E-04	8.03E-03	3.69E-03	8.03E-03	3.69E-03	8.03E-03	3.78E-02	5.82E-03	8.03E-02	3.69E-02	8.03E-02	3.69E-02	1.17E-01	3.23E-01	1.16E-02	2.79E-01	6.32E-02	6.03E-01	7.48E-02	6.77E-01	1.62E-04	5.82E-06	1.40E-04	3.16E-05	3.01E-04	3.74E-05	3.39E-04
Ethylbenzene	100-41-4	1.95E+00	4.98E-01	1.09E+00	5.03E-01	1.95E+00	5.03E-01	1.95E+00	1.95E+01	4.98E+00	1.09E+01	5.03E+00	1.95E+01	5.03E+00	2.46E+01	1.48E+02	3.74E+01	4.27E+01	1.32E+01	1.91E+02	5.06E+01	2.41E+02	7.40E-02	1.87E-02	2.13E-02	6.59E-03	9.54E-02	2.53E-02	1.21E-01
Hexamethylene Diisocyanate	822-06-0	0.00E+00	0.00E+00	1.46E-03	1.46E-03	1.46E-03	1.46E-03	1.46E-03	0.00E+00	0.00E+00	1.46E-02	1.46E-02	1.46E-02	1.46E-02	2.91E-02	0.00E+00	0.00E+00	4.99E-02	4.99E-02	4.99E-02	4.99E-02	9.98E-02	0.00E+00	0.00E+00	2.50E-05	2.50E-05	2.50E-05	2.50E-05	4.99E-05
Methyl Ethyl Ketone	78-93-3	2.17E-01	1.76E-01	6.60E-03	0.00E+00	2.17E-01	1.76E-01	2.17E-01	2.17E+00	1.76E+00	6.60E-02	0.00E+00	2.17E+00	1.76E+00	3.94E+00	4.34E+00	3.53E+00	6.60E-02	0.00E+00	4.41E+00	3.53E+00	7.94E+00	2.17E-03	1.76E-03	3.30E-05	0.00E+00	2.21E-03	1.76E-03	3.97E-03
p-Chloro-a,a,a-trifluorotoluene	98-56-6	7.67E-01	7.67E-01	3.18E+00	3.18E+00	3.18E+00	3.18E+00	3.18E+00	7.67E+00	7.67E+00	3.18E+01	3.18E+01	3.18E+01	3.18E+01	6.36E+01	1.53E+01	1.53E+01	1.37E+02	1.36E+02	1.52E+02	1.52E+02	3.04E+02	7.67E-03	7.67E-03	6.83E-02	6.82E-02	7.59E-02	7.59E-02	1.52E-01
t-Butyl Acetate	540-88-5	2.21E-01	0.00E+00	3.17E-01	0.00E+00	3.17E-01	0.00E+00	3.17E-01	2.21E+00	0.00E+00	3.17E+00	0.00E+00	3.17E+00	0.00E+00	3.17E+00	2.21E+01	0.00E+00	1.55E+01	0.00E+00	3.76E+01	0.00E+00	3.76E+01	1.11E-02	0.00E+00	7.75E-03	0.00E+00	1.88E-02	0.00E+00	1.88E-02
Xylene	1330-20-7	8.90E+00	2.18E+00	6.21E+00	2.48E+00	8.90E+00	2.48E+00	8.90E+00	8.90E+01	2.18E+01	6.21E+01	2.48E+01	8.90E+01	2.48E+01	1.14E+02	7.01E+02	1.69E+02	2.68E+02	8.18E+01	9.69E+02	2.50E+02	1.22E+03	3.51E-01	8.43E-02	1.34E-01	4.09E-02	4.85E-01	1.25E-01	6.10E-01
1-Methoxy 2-Propanol	107-98-2	1.39E-01	1.39E-01	0.00E+00	0.00E+00	1.39E-01	1.39E-01	1.39E-01	1.39E+00	1.39E+00	0.00E+00	0.00E+00	1.39E+00	1.39E+00	2.78E+00	1.39E+01	1.39E+01	0.00E+00	0.00E+00	1.39E+01	1.39E+01	2.78E+01	6.95E-03	6.95E-03	0.00E+00	0.00E+00	6.95E-03	6.95E-03	1.39E-02
Cobalt 2-Ethylhexanoate	136-52-7	2.93E-04	2.93E-04	0.00E+00	0.00E+00	2.93E-04	2.93E-04	2.93E-04	2.93E-03	2.93E-03	0.00E+00	0.00E+00	2.93E-03	2.93E-03	5.86E-03	5.86E-03	5.86E-03	0.00E+00	0.00E+00	5.86E-03	5.86E-03	1.17E-02	2.93E-06	2.93E-06	0.00E+00	0.00E+00	2.93E-06	2.93E-06	5.86E-06
Toluene	108-88-3	1.74E-02	1.74E-02	0.00E+00	0.00E+00	1.74E-02	1.74E-02	1.74E-02	1.74E-01	1.74E-01	0.00E+00	0.00E+00	1.74E-01	1.74E-01	3.48E-01	1.16E+00	1.16E+00	0.00E+00	0.00E+00	1.16E+00	1.16E+00	2.32E+00	5.80E-04	5.80E-04	0.00E+00	0.00E+00	5.80E-04	5.80E-04	1.16E-03
Aluminum (Al)	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Isobutyl Ketone	108-10-1	1.26E-01	0.00E+00	1.76E-01	0.00E+00	1.76E-01	0.00E+00	1.76E-01	1.26E+00	0.00E+00	1.76E+00	0.00E+00	1.76E+00	0.00E+00	1.76E+00	1.26E+01	0.00E+00	8.82E+00	0.00E+00	2.15E+01	0.00E+00	2.15E+01	6.32E-03	0.00E+00	4.41E-03	0.00E+00	1.07E-02	0.00E+00	1.07E-02
1-Methoxy-2-propyl acetate	108-65-6	0.00E+00	0.00E+00	5.03E-01	5.03E-01	5.03E-01	5.03E-01	5.03E-01	0.00E+00	0.00E+00	5.03E+00	5.03E+00	5.03E+00	5.03E+00	1.01E+01	0.00E+00	0.00E+00	1.32E+01	1.32E+01	1.32E+01	1.32E+01	2.64E+01	0.00E+00	0.00E+00	6.59E-03	6.59E-03	6.59E-03	6.59E-03	1.32E-02
1,3,5-trimethylbenzene	108-67-8	1.73E+00	1.57E+00	1.54E+00	8.06E-01	1.73E+00	1.57E+00	1.73E+00	1.73E+01	1.57E+01	1.54E+01	8.06E+00	1.73E+01	1.57E+01	3.30E+01	1.57E+02	1.47E+02	6.84E+01	3.20E+01	2.25E+02	1.79E+02	4.05E+02	7.84E-02	7.37E-02	3.42E-02	1.60E-02	1.13E-01	8.97E-02	2.02E-01
2-(2-Methoxyethoxy)-ethanol	111-77-3	9.30E-03	9.30E-03	0.00E+00	0.00E+00	9.30E-03	9.30E-03	9.30E-03	9.30E-02	9.30E-02	0.00E+00	0.00E+00	9.30E-02	9.30E-02	1.86E-01	1.86E-01	1.86E-01	0.00E+00	0.00E+00	1.86E-01	1.86E-01	3.72E-01	9.30E-05	9.30E-05	0.00E+00	0.00E+00	9.30E-05	9.30E-05	1.86E-04
Zinc Oxide	1314-13-2	1.66E-01	0.00E+00	1.25E+01	0.00E+00	1.25E+01	0.00E+00	1.25E+01	1.66E+00	0.00E+00	1.25E+02	0.00E+00	1.25E+02	0.00E+00	1.25E+02	1.18E+01	0.00E+00	6.25E+02	0.00E+00	6.37E+02	0.00E+00	6.37E+02	5.92E-03	0.00E+00	3.13E-01	0.00E+00	3.18E-01	0.00E+00	3.18E-01
Aluminum Oxide	1344-28-1	1.12E+01	9.40E+00	3.09E+00	4.20E-02	1.12E+01	9.40E+00	1.12E+01	1.12E+02	9.40E+01	3.09E+01	4.20E-01	1.12E+02	9.40E+01	2.06E+02	1.12E+03	9.40E+02	1.34E+02	4.20E-01	1.26E+03	9.40E+02	2.20E+03	5.62E-01	4.70E-01	6.69E-02	2.10E-04	6.29E-01	4.70E-01	1.10E+00
Trimethyl benzene	25551-13-7	2.85E+00	2.57E+00	1.65E+00	1.20E-01	2.85E+00	2.57E+00	2.85E+00	2.85E+01	2.57E+01	1.65E+01	1.20E+00	2.85E+01	2.57E+01	5.42E+01	2.60E+02	2.45E+02	7.75E+01	1.20E+00	3.38E+02	2.46E+02	5.84E+02	1.30E-01	1.22E-01	3.88E-02	6.00E-04	1.69E-01	1.23E-01	2.92E-01
1,2,3-Trimethylbenzene	526-73-8	5.94E-01	5.39E-01	3.06E-01	0.00E+00	5.94E-01	5.39E-01	5.94E-01	5.94E+00	5.39E+00	3.06E+00	0.00E+00	5.94E+00	5.39E+00	1.13E+01	5.26E+01	4.95E+01	1.53E+01	0.00E+00	6.78E+01	4.95E+01	1.17E+02	2.63E-02	2.47E-02	7.63E-03	0.00E+00	3.39E-02	2.47E-02	5.87E-02
1-Butanol	71-36-3	1.19E+01	1.04E+01	4.25E+00	2.47E+00	1.19E+01	1.04E+01	1.19E+01	1.19E+02	1.04E+02	4.25E+01	2.47E+01	1.19E+02	1.04E+02	2.23E+02	1.23E+03	1.13E+03	1.90E+02	1.02E+02	1.42E+03	1.23E+03	2.66E+03	6.16E-01	5.66E-01	9.48E-02	5.09E-02	7.11E-01	6.17E-01	1.33E+00
*1,2,4 Trimethylbenzene	95-63-6	2.10E+00	1.93E+00	5.68E+00	4.76E+00	5.68E+00	4.76E+00	5.68E+00	2.10E+01	1.93E+01	5.68E+01	4.76E+01	5.68E+01	4.76E+01	1.04E+02	1.79E+02	1.70E+02	2.42E+02	1.96E+02	4.20E+02	3.65E+02	7.86E+02	8.94E-02	8.48E-02	1.21E-01	9.79E-02	2.10E-01	1.83E-01	3.93E-01
Cumene	98-82-8	5.94E-01	3.96E-01	3.06E-01	0.00E+00	5.94E-01	3.96E-01	5.94E-01	5.94E+00	3.96E+00	3.06E+00	0.00E+00	5.94E+00	3.96E+00	9.90E+00	5.26E+01	3.48E+01	1.53E+01	0.00E+00	6.78E+01	3.48E+01	1.03E+02	2.63E-02	1.74E-02	7.63E-03	0.00E+00	3.39E-02	1.74E-02	5.13E-02
Copper Oxide (Cupric Oxide)	1317-38-0	2.76E-02	0.00E+00	0.00E+00	0.00E+00	2.76E-02	0.00E+00	2.76E-02	2.76E-01	0.00E+00	0.00E+00	0.00E+00	2.76E-01	0.00E+00	2.76E-01	1.80E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+00	0.00E+00	1.80E+00	9.02E-04	0.00E+00	0.00E+00	0.00E+00	9.02E-04	0.00E+00	9.02E-04
Copper Oxide (Cuprous Oxide)	1317-39-1	3.33E-01	0.00E+00	0.00E+00	0.00E+00	3.33E-01	0.00E+00	3.33E-01	3.33E+00	0.00E+00	0.00E+00	0.00E+00	3.33E+00	0.00E+00	3.33E+00	2.37E+01	0.00E+00	0.00E+00	0.00E+00	2.37E+01	0.00E+00	2.37E+01	1.18E-02	0.00E+00	0.00E+00	0.00E+00	1.18E-02	0.00E+00	1.18E-02
Fatty acids, C9-13-neo-, cobalt salts	68955-83-9	1.36E-04	1.36E-04	0.00E+00	0.00E+00	1.36E-04	1.36E-04	1.36E-04	1.36E-03	1.36E-03	0.00E+00	0.00E+00	1.36E-03	1.36E-03	2.71E-03	2.71E-03	2.71E-03	0.00E+00	0.00E+00	2.71E-03	2.71E-03	5.43E-03	1.36E-06	1.36E-06	0.00E+00	0.00E+00	1.36E-06	1.36E-06	2.71E-06
HDI Homopolymer	28182-81-2	0.00E+00	0.00E+00	1.46E-01	1.46E-01	1.46E-01	1.46E-01	1.46E-01	0.00E+00	0.00E+00	1.46E+00	1.46E+00	1.46E+00	1.46E+00	2.91E+00	0.00E+00	0.00E+00	4.99E+00	4.99E+00	4.99E+00	4.99E+00	9.98E+00	0.00E+00	0.00E+00	2.50E-03	2.50E-03	2.50E-03	2.50E-03	4.99E-03
2-Propanol	67-63-0	0.00E+00	0.00E+00	0.00E+00	3.00E-01	0.00E+00	3.00E-01	3.00E-01	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00	3.00E+00	3.00E+00	0.00E+00	0.00E+00	0.00E+00	7.50E+02	0.00E+00	7.50E+02	7.50E+02	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	3.75E-01	3.75E-01

Adjusted Based on 55 lbs/day VOC [c]		Hourly Emissions [a]							Daily Emissions [b]							Annual Emissions							Annual Emissions						
		lbs/hr							lbs/day							lbs/year							tons/year						
Toxic Air Contaminant	CAS Number	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock Maximum	Pier Maximum	Facility Maximum [a]	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock Maximum	Pier Maximum	Facility Total [b]	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock	Pier	Total	Steel Ships at Dry Dock	Steel Ships at Pier	Aluminum Ships at Dry Dock	Aluminum Ships at Pier	Dry Dock	Pier	Total
Crystalline Silica - Quartz	14808-60-7	4.12E-04	6.34E-05	8.75E-04	4.02E-04	8.75E-04	4.02E-04	1.28E-03	4.12E-03	6.34E-04	8.75E-03	4.02E-03	8.75E-03	4.02E-03	1.28E-02	3.23E-01	1.16E-02	2.79E-01	6.32E-02	6.03E-01	7.48E-02	6.77E-01	1.62E-04	5.82E-06	1.40E-04	3.16E-05	3.01E-04	3.74E-05	3.39E-04
Ethylbenzene	100-41-4	2.13E-01	5.43E-02	1.19E-01	5.49E-02	2.13E-01	5.49E-02	2.68E-01	2.13E+00	5.43E-01	1.19E+00	5.49E-01	2.13E+00	5.49E-01	2.68E+00	1.48E+02	3.74E+01	4.27E+01	1.32E+01	1.91E+02	5.06E+01	2.41E+02	7.40E-02	1.87E-02	2.13E-02	6.59E-03	9.54E-02	2.53E-02	1.21E-01
Hexamethylene Diisocyanate	822-06-0	0.00E+00	0.00E+00	1.59E-04	1.59E-04	1.59E-04	1.59E-04	3.18E-04	0.00E+00	0.00E+00	1.59E-03	1.59E-03	1.59E-03	1.59E-03	3.18E-03	0.00E+00	0.00E+00	4.99E-02	4.99E-02	4.99E-02	4.99E-02	9.98E-02	0.00E+00	0.00E+00	2.50E-05	2.50E-05	2.50E-05	2.50E-05	4.99E-05
Methyl Ethyl Ketone	78-93-3	2.37E-02	1.92E-02	7.20E-04	0.00E+00	2.37E-02	1.92E-02	4.29E-02	2.37E-01	1.92E-01	7.20E-03	0.00E+00	2.37E-01	1.92E-01	4.29E-01	4.34E+00	3.53E+00	6.60E-02	0.00E+00	4.41E+00	3.53E+00	7.94E+00	2.17E-03	1.76E-03	3.30E-05	0.00E+00	2.21E-03	1.76E-03	3.97E-03
p-Chloro-a,a,a-trifluorotoluene	98-56-6	8.37E-02	8.37E-02	3.47E-01	3.47E-01	3.47E-01	3.47E-01	6.94E-01	8.37E-01	8.37E-01	3.47E+00	3.47E+00	3.47E+00	3.47E+00	6.94E+00	1.53E+01	1.53E+01	1.37E+02	1.36E+02	1.52E+02	1.52E+02	3.04E+02	7.67E-03	7.67E-03	6.83E-02	6.82E-02	7.59E-02	7.59E-02	1.52E-01
t-Butyl Acetate	540-88-5	2.41E-02	0.00E+00	3.46E-02	0.00E+00	3.46E-02	0.00E+00	3.46E-02	2.41E-01	0.00E+00	3.46E-01	0.00E+00	3.46E-01	0.00E+00	3.46E-01	2.21E+01	0.00E+00	1.55E+01	0.00E+00	3.76E+01	0.00E+00	3.76E+01	1.11E-02	0.00E+00	7.75E-03	0.00E+00	1.88E-02	0.00E+00	1.88E-02
Xylene	1330-20-7	9.70E-01	2.38E-01	6.77E-01	2.70E-01	9.70E-01	2.70E-01	1.24E+00	9.70E+00	2.38E+00	6.77E+00	2.70E+00	9.70E+00	2.70E+00	1.24E+01	7.01E+02	1.69E+02	2.68E+02	8.18E+01	9.69E+02	2.50E+02	1.22E+03	3.51E-01	8.43E-02	1.34E-01	4.09E-02	4.85E-01	1.25E-01	6.10E-01
1-Methoxy 2-Propanol	107-98-2	1.51E-02	1.51E-02	0.00E+00	0.00E+00	1.51E-02	1.51E-02	3.03E-02	1.51E-01	1.51E-01	0.00E+00	0.00E+00	1.51E-01	1.51E-01	3.03E-01	1.39E+01	1.39E+01	0.00E+00	0.00E+00	1.39E+01	1.39E+01	2.78E+01	6.95E-03	6.95E-03	0.00E+00	0.00E+00	6.95E-03	6.95E-03	1.39E-02
Cobalt 2-Ethylhexanoate	136-52-7	3.19E-05	3.19E-05	0.00E+00	0.00E+00	3.19E-05	3.19E-05	6.39E-05	3.19E-04	3.19E-04	0.00E+00	0.00E+00	3.19E-04	3.19E-04	6.39E-04	5.86E-03	5.86E-03	0.00E+00	0.00E+00	5.86E-03	5.86E-03	1.17E-02	2.93E-06	2.93E-06	0.00E+00	0.00E+00	2.93E-06	2.93E-06	5.86E-06
Toluene	108-88-3	1.90E-03	1.90E-03	0.00E+00	0.00E+00	1.90E-03	1.90E-03	3.80E-03	1.90E-02	1.90E-02	0.00E+00	0.00E+00	1.90E-02	1.90E-02	3.80E-02	1.16E+00	1.16E+00	0.00E+00	0.00E+00	1.16E+00	1.16E+00	2.32E+00	5.80E-04	5.80E-04	0.00E+00	0.00E+00	5.80E-04	5.80E-04	1.16E-03
Aluminum (Al)	7429-90-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Isobutyl Ketone	108-10-1	1.38E-02	0.00E+00	1.92E-02	0.00E+00	1.92E-02	0.00E+00	1.92E-02	1.38E-01	0.00E+00	1.92E-01	0.00E+00	1.92E-01	0.00E+00	1.92E-01	1.26E+01	0.00E+00	8.82E+00	0.00E+00	2.15E+01	0.00E+00	2.15E+01	6.32E-03	0.00E+00	4.41E-03	0.00E+00	1.07E-02	0.00E+00	1.07E-02
1-Methoxy-2-propyl acetate	108-65-6	0.00E+00	0.00E+00	5.49E-02	5.49E-02	5.49E-02	5.49E-02	1.10E-01	0.00E+00	0.00E+00	5.49E-01	5.49E-01	5.49E-01	5.49E-01	1.10E+00	0.00E+00	0.00E+00	1.32E+01	1.32E+01	1.32E+01	1.32E+01	2.64E+01	0.00E+00	0.00E+00	6.59E-03	6.59E-03	6.59E-03	6.59E-03	1.32E-02
1,3,5-trimethylbenzene	108-67-8	1.89E-01	1.71E-01	1.68E-01	8.79E-02	1.89E-01	1.71E-01	3.60E-01	1.89E+00	1.71E+00	1.68E+00	8.79E-01	1.89E+00	1.71E+00	3.60E+00	1.57E+02	1.47E+02	6.84E+01	3.20E+01	2.25E+02	1.79E+02	4.05E+02	7.84E-02	7.37E-02	3.42E-02	1.60E-02	1.13E-01	8.97E-02	2.02E-01
2-(2-Methoxyethoxy)-ethanol	111-77-3	1.01E-03	1.01E-03	0.00E+00	0.00E+00	1.01E-03	1.01E-03	2.03E-03	1.01E-02	1.01E-02	0.00E+00	0.00E+00	1.01E-02	1.01E-02	2.03E-02	1.86E-01	1.86E-01	0.00E+00	0.00E+00	1.86E-01	1.86E-01	3.72E-01	9.30E-05	9.30E-05	0.00E+00	0.00E+00	9.30E-05	9.30E-05	1.86E-04
Zinc Oxide	1314-13-2	1.81E-02	0.00E+00	1.36E+00	0.00E+00	1.36E+00	0.00E+00	1.36E+00	1.81E-01	0.00E+00	1.36E+01	0.00E+00	1.36E+01	0.00E+00	1.36E+01	1.18E+01	0.00E+00	6.25E+02	0.00E+00	6.37E+02	0.00E+00	6.37E+02	5.92E-03	0.00E+00	3.13E-01	0.00E+00	3.18E-01	0.00E+00	3.18E-01
Aluminum Oxide	1344-28-1	1.23E+00	1.02E+00	3.37E-01	4.59E-03	1.23E+00	1.02E+00	2.25E+00	1.23E+01	1.02E+01	3.37E+00	4.59E-02	1.23E+01	1.02E+01	2.25E+01	1.12E+03	9.40E+02	1.34E+02	4.20E-01	1.26E+03	9.40E+02	2.20E+03	5.62E-01	4.70E-01	6.69E-02	2.10E-04	6.29E-01	4.70E-01	1.10E+00
Trimethyl benzene	25551-13-7	3.10E-01	2.81E-01	1.80E-01	1.31E-02	3.10E-01	2.81E-01	5.91E-01	3.10E+00	2.81E+00	1.80E+00	1.31E-01	3.10E+00	2.81E+00	5.91E+00	2.60E+02	2.45E+02	7.75E+01	1.20E+00	3.38E+02	2.46E+02	5.84E+02	1.30E-01	1.22E-01	3.88E-02	6.00E-04	1.69E-01	1.23E-01	2.92E-01
1,2,3-Trimethylbenzene	526-73-8	6.47E-02	5.88E-02	3.34E-02	0.00E+00	6.47E-02	5.88E-02	1.24E-01	6.47E-01	5.88E-01	3.34E-01	0.00E+00	6.47E-01	5.88E-01	1.24E+00	5.26E+01	4.95E+01	1.53E+01	0.00E+00	6.78E+01	4.95E+01	1.17E+02	2.63E-02	2.47E-02	7.63E-03	0.00E+00	3.39E-02	2.47E-02	5.87E-02
1-Butanol	71-36-3	1.30E+00	1.13E+00	4.63E-01	2.70E-01	1.30E+00	1.13E+00	2.43E+00	1.30E+01	1.13E+01	4.63E+00	2.70E+00	1.30E+01	1.13E+01	2.43E+01	1.23E+03	1.13E+03	1.90E+02	1.02E+02	1.42E+03	1.23E+03	2.66E+03	6.16E-01	5.66E-01	9.48E-02	5.09E-02	7.11E-01	6.17E-01	1.33E+00
*1,2,4 Trimethylbenzene	95-63-6	2.29E-01	2.11E-01	6.19E-01	5.19E-01	6.19E-01	5.19E-01	1.14E+00	2.29E+00	2.11E+00	6.19E+00	5.19E+00	6.19E+00	5.19E+00	1.14E+01	1.79E+02	1.70E+02	2.42E+02	1.96E+02	4.20E+02	3.65E+02	7.86E+02	8.94E-02	8.48E-02	1.21E-01	9.79E-02	2.10E-01	1.83E-01	3.93E-01
Cumene	98-82-8	6.47E-02	4.32E-02	3.34E-02	0.00E+00	6.47E-02	4.32E-02	1.08E-01	6.47E-01	4.32E-01	3.34E-01	0.00E+00	6.47E-01	4.32E-01	1.08E+00	5.26E+01	3.48E+01	1.53E+01	0.00E+00	6.78E+01	3.48E+01	1.03E+02	2.63E-02	1.74E-02	7.63E-03	0.00E+00	3.39E-02	1.74E-02	5.13E-02
Copper Oxide (Cupric Oxide)	1317-38-0	3.01E-03	0.00E+00	0.00E+00	0.00E+00	3.01E-03	0.00E+00	3.01E-03	3.01E-02	0.00E+00	0.00E+00	0.00E+00	3.01E-02	0.00E+00	3.01E-02	1.80E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+00	0.00E+00	1.80E+00	9.02E-04	0.00E+00	0.00E+00	0.00E+00	9.02E-04	0.00E+00	9.02E-04
Copper Oxide (Cuprous Oxide)	1317-39-1	3.63E-02	0.00E+00	0.00E+00	0.00E+00	3.63E-02	0.00E+00	3.63E-02	3.63E-01	0.00E+00	0.00E+00	0.00E+00	3.63E-01	0.00E+00	3.63E-01	2.37E+01	0.00E+00	0.00E+00	0.00E+00	2.37E+01	0.00E+00	2.37E+01	1.18E-02	0.00E+00	0.00E+00	0.00E+00	1.18E-02	0.00E+00	1.18E-02
Fatty acids, C9-13-neo-, cobalt salts	68955-83-9	1.48E-05	1.48E-05	0.00E+00	0.00E+00	1.48E-05	1.48E-05	2.96E-05	1.48E-04	1.48E-04	0.00E+00	0.00E+00	1.48E-04	1.48E-04	2.96E-04	2.71E-03	2.71E-03	0.00E+00	0.00E+00	2.71E-03	2.71E-03	5.43E-03	1.36E-06	1.36E-06	0.00E+00	0.00E+00	1.36E-06	1.36E-06	2.71E-06
HDI Homopolymer	28182-81-2	0.00E+00	0.00E+00	1.59E-02	1.59E-02	1.59E-02	1.59E-02	3.18E-02	0.00E+00	0.00E+00	1.59E-01	1.59E-01	1.59E-01	1.59E-01	3.18E-01	0.00E+00	0.00E+00	4.99E+00	4.99E+00	4.99E+00	4.99E+00	9.98E+00	0.00E+00	0.00E+00	2.50E-03	2.50E-03	2.50E-03	2.50E-03	4.99E-03
2-Propanol	67-63-0	0.00E+00	0.00E+00	0.00E+00	3.27E-02	0.00E+00	3.27E-02	3.27E-02	0.00E+00	0.00E+00	0.00E+00	3.27E-01	0.00E+00	3.27E-01	3.27E-01	0.00E+00	0.00E+00	0.00E+00	7.50E+02	0.00E+00	7.50E+02	7.50E+02	0.00E+00	0.00E+00	0.00E+00	3.75E-01	0.00E+00	3.75E-01	3.75E-01

Notes:

[a] Only one ship can be painted at one time within a one-hour period. Thus, max hourly TAC emissions (except 2-Propanol from solvent only) shall be the highest value of all four painting scenarios (steel ship at the dry dock (DSRA); steel ship at the pier; aluminum ship at the dry dock (DSRA); aluminum ship at the pier).

[b] Maximum two ships can be painted within one day. One ship from the dry dock (DSRA), and one ship at the pier. Thus, the max daily TAC emissions (except 2-Propanol from solvent only) are the combination of higher daily emissions scenario from the dry dock (steel ship or aluminum ship) and the higher daily emissions scenario from the pier (steel ship or aluminum ship).

[c] TAC emissions are adjusted based on a usage profile that corresponds with the proposed limit of 55 pounds VOC emissions per day, as well as the proposed operating schedule.

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SEAGUARD 5000 HS EPOXY N11A350/N11V350	**Sherwin Williams**	**GRAY**		**1:1**		**BRUSH, ROLL,**	**82.05%**	**250**	**11.63**	**10.83**	**108.33**										
													Talc	14807-96-6	≥25 - ≤50	50.00	25.42	3.20	32.01	320.12	N
													1-Butanol	71-36-3	≥10 - ≤24	24.00	12.20	1.54	15.37	153.66	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.71	1.60	16.01	160.06	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	12.71	1.60	16.01	160.06	N
													Phenylmethanol	100-51-6	≤10	10.00	5.08	0.64	6.40	64.02	N
			N11A350	1	12				11.82				Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.52	0.19	1.92	19.21	N
													Iron Oxide	1317-61-9	≤3	3.00	1.52	0.19	1.92	19.21	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.51	0.06	0.64	6.40	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.15	0.02	0.19	1.92	N
													Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	24.58	3.10	30.96	309.62	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.58	3.10	30.96	309.62	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	4.92	0.62	6.19	61.92	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.46	0.31	3.10	30.96	Y
			N11V350	1	11				11.43			Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.48	0.19	1.86	18.58	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.48	0.19	1.86	18.58	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.49	0.06	0.62	6.19	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.49	0.06	0.62	6.19	Y
													Cumene	98-82-8	<1	1.00	0.49	0.06	0.62	6.19	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	0.02	0.19	1.86	Y
SEAGUARD 5000 HS EPOXY N11H350/N11V350	**Sherwin Williams**	**BUFF**		**1:1**		**BRUSH, ROLL,**	**82.58%**	**250**	**11.98**	**15.73**	**157.32**										
													Titanium Dioxide, Rutile	1317-80-2	≥10 - ≤25	25.00	13.07	2.46	24.62	246.16	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	13.07	2.46	24.62	246.16	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	13.07	2.46	24.62	246.16	N
													1-Butanol	71-36-3	≥10 - ≤18	18.00	9.41	1.77	17.72	177.23	N
													Phenylmethanol	100-51-6	≤10	10.00	5.23	0.98	9.85	98.46	N
			N11H350	1	13				12.52				Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.57	0.30	2.95	29.54	N
													Amorphous Silica	7631-86-9	≤3	3.00	1.57	0.30	2.95	29.54	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.52	0.10	0.98	9.85	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.16	0.03	0.30	2.95	N
													Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	23.87	4.50	44.96	449.65	N
													Talc	14807-96-6	≥25 - ≤50	50.00	23.87	4.50	44.96	449.65	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	4.77	0.90	8.99	89.93	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.39	0.45	4.50	44.96	Y
			N11V350	1	11				11.43			Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.43	0.27	2.70	26.98	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.43	0.27	2.70	26.98	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.48	0.09	0.90	8.99	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.48	0.09	0.90	8.99	Y
													Cumene	98-82-8	<1	1.00	0.48	0.09	0.90	8.99	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.14	0.03	0.27	2.70	Y

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
RANDOGRIP NAVY G NON-SKID 600D01/610C01	**Randolph Products**	**DARK GRAY FS36076**		**7.9:1**		**ROLL OR SPRAY**	**91.15%**	**192**	**18.08**	**1.62**	**16.22**										
			600D01	7.9	18			216	19.31				ALUMINUM OXIDE	1344-28-1	45	45.00	42.63	1.25	12.50	125.01	N
													BARIUM SULFATE	7727-43-7	18	18.00	17.05	0.50	5.00	50.01	N
													NEPHELINE SYENITE	37244-96-5	7	7.00	6.63	0.19	1.94	19.45	N
												Liquid	1-METHOXY 2-PROPANOL	107-98-2	5	5.00	4.74	0.14	1.39	13.89	Y
													EPOXY RESIN	25036-25-3	2	2.00	1.89	0.06	0.56	5.56	N
													SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	64742-95-6	2	2.00	1.89	0.06	0.56	5.56	N
			610C01	1	1			2	8.39				POLYAMIDO AMINE	68605-86-7	63	63.00	3.32	0.10	0.97	9.72	N
													TOFA REACTION PRODUCTS W/TEPA	68953-36-6	21	21.00	1.11	0.03	0.32	3.24	N
													AMORPHOUS SILICA	67762-90-7	9	9.00	0.47	0.01	0.14	1.39	N
													EPOXIDIZED OLEIC ACID REACTION PRODUCTS W/TEP	68298-14-6	7	7.00	0.37	0.01	0.11	1.08	N
NCP SILOXOGRIP N-9020 NON-SKID	**NCP**	**DARK GRAY FS36076**		**Premeasured 5 gal Kit**		**ROLL OR SPRAY**	**91.00%**	**180**	**16.70**	**9.14**	**91.43**										
			N-9020A	4	75				18.75				Aluminum Oxide	1344-28-1	55-60%	60.00	53.36	8.15	81.47	814.67	N
													Proprietary	TradeSecret	10-15%	15.00	13.34	2.04	20.37	203.67	N
													Butyl Acetate	64742-95-6	1-5%	5.00	4.45	0.68	6.79	67.89	N
													Light Aromatic Petroleum distillates	123-86-4	1-5%	5.00	4.45	0.68	6.79	67.89	N
												Liquid	*1,2,4 Trimethylbenzene	95-63-6	1.36	1.36	1.21	0.18	1.85	18.47	Y
													Titanium Dioxide	13463-67-7	0.54	0.54	0.48	0.07	0.73	7.33	N
			N-9020B	1	9				9.34				Proprietary	TradeSecret	85-90%	90.00	9.96	1.52	15.21	152.11	N
												Liquid	*Mixed Xylenes	1330-20-7	9.95	9.95	1.10	0.17	1.68	16.82	Y
												Liquid	Ethyl Benzene	100-41-4	0.99	0.99	0.11	0.02	0.17	1.67	Y
FAST CLAD ZINC HS B69A352/B69V352	**Sherwin Williams**	**GREEN/GRAY**		**9:1**		**SPRAY ONLY**	**86.10%**	**333**	**20.00**	**8.45**	**84.53**										
			B69A352	9	200				22.20				Epoxy Polymer	25068-38-6	≥10 - ≤25	25.00	24.09	4.07	40.73	407.31	N
													Portland Cement	65997-15-1	≤9.6	9.60	9.25	1.56	15.64	156.41	N
													Methyl n-Amyl Ketone	110-43-0	≤5.2	5.20	5.01	0.85	8.47	84.72	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤5.1	5.10	4.92	0.83	8.31	83.09	Y
													Barium Sulfate	7727-43-7	≤5	5.00	4.82	0.81	8.15	81.46	N
												Liquid	Ethylbenzene	100-41-4	<1	1.00	0.96	0.16	1.63	16.29	Y
			B69V352	1	8				7.51				Methyl n-Amyl Ketone	110-43-0	≥25 - ≤45	45.00	1.63	0.28	2.76	27.56	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤13	13.00	0.47	0.08	0.80	7.96	Y
													Paratertiarybutylphenol	98-54-4	≤10	10.00	0.36	0.06	0.61	6.13	N
													Trimethyl-1,6-hexanediamine	25620-58-0	≤10	10.00	0.36	0.06	0.61	6.13	N
													1-Butanol	71-36-3	≤7.3	7.30	0.26	0.04	0.45	4.47	N
													1,3-Benzenedimethanamine	1477-55-0	≤7.2	7.20	0.26	0.04	0.44	4.41	N
												Liquid	Ethylbenzene	100-41-4	≤3	3.00	0.11	0.02	0.18	1.84	Y
													Phenol, 4-Nonyl-, Branched	84852-15-3	≤3	3.00	0.11	0.02	0.18	1.84	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.04	0.01	0.06	0.61	N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SEAGUARD 5000 HS EPOXY N11R350/N11V350	**Sherwin Williams**	**RED OXIDE**		**1:1**		**BRUSH, ROLL, OR SPRAY**	**81.91%**	**250**	**11.53**	**24.92**	**262.20**										
			N11R350	1	12				11.63				Talc	14807-96-6	≥25 - ≤50	50.00	25.21	7.25	72.47	762.35	N
													1-Butanol	71-36-3	≥10 - ≤24	24.00	12.10	3.48	34.78	365.93	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.61	3.62	36.23	381.17	N
													Phenylmethanol	100-51-6	≤10	10.00	5.04	1.45	14.49	152.47	N
													Iron Oxide	1309-37-1	≤10	10.00	5.04	1.45	14.49	152.47	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.51	0.43	4.35	45.74	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.50	0.14	1.45	15.25	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.15	0.04	0.43	4.57	N
			N11V350	1	11				11.43				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	24.79	7.12	71.24	749.41	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.79	7.12	71.24	749.41	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	4.96	1.42	14.25	149.88	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.48	0.71	7.12	74.94	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.49	0.43	4.27	44.96	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.49	0.43	4.27	44.96	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.50	0.14	1.42	14.99	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.50	0.14	1.42	14.99	Y
													Cumene	98-82-8	<1	1.00	0.50	0.14	1.42	14.99	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	0.04	0.43	4.50	Y
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (HAZE GRAY FS26270)	**Sherwin Williams**	**HAZE GRAY FS26270**		**4:1**		**BRUSH, ROLL**	**92.56%**	**100**	**11.22**	**3.53**	**35.34**										
			B80AW450	4	46				11.60				Epoxy Polymer	30583-72-3	≥25 - ≤50	50.00	42.70	0.00	0.00	0.00	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.54	0.00	0.00	0.00	N
													Amorphous Precipitated Silica	112926-00-8	≤10	10.00	8.54	0.00	0.00	0.00	N
													Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7	≤5	5.00	4.27	0.00	0.00	0.00	N
												Solid	Chromium green-black	68909-79-5	≤3	3.00	2.56	0.00	0.00	0.00	Y
													Methyl pentamethylpiperidyl sebacate	82919-37-7	≤3	3.00	2.56	0.00	0.00	0.00	N
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	0.01	0.10	1.02	Y
													Anatase (TiO2)	1317-70-0	≤0.3	0.30	0.26	0.00	0.00	0.00	N
			B80V500	1	8				7.93				Triethyoxysilyl Propylamine	919-30-2	≥90	90.00	13.13	0.00	0.00	0.00	N
													Dibutyltin Dilaurate	77-58-7	≤10	10.00	1.46	0.00	0.00	0.00	N
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (RED FS11105)	**Sherwin Williams**	**RED FS11105**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**92.56%**	**100**	**11.22**	**0.43**	**0.86**										
			B80EW500	4	41				10.26				Epoxy Polymer	30583-72-3	≥25 - ≤50	50.00	41.91	0.20	2.03	4.06	N
													Wollastonite	13983-17-0	≤5	5.00	4.19	0.02	0.20	0.41	N
													Titanium Dioxide	13463-67-7	≤5	5.00	4.19	0.02	0.20	0.41	N
													Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7	≤3	3.00	2.51	0.01	0.12	0.24	N
													Polycarboxylic acid ester	91001-64-8	<1	1.00	0.84	0.00	0.04	0.08	N
													Methyl pentamethylpiperidyl sebacate	82919-37-7	≤1	1.00	0.84	0.00	0.04	0.08	N
													Light Aromatic Hydrocarbons	64742-95-6	<1	1.00	0.84	0.00	0.04	0.08	N
													Heavy Aliphatic Solvent	64742-82-1	≤0.3	0.30	0.25	0.00	0.01	0.02	N
												Liquid	trimethylbenzene	25551-13-7	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.25	1.70E-05	1.70E-04	3.41E-04	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethyoxysilyl Propylamine	919-30-2	≥90	90.00	14.57	0.07	0.70	1.41	N
													Dibutyltin Dilaurate	77-58-7	≤10	10.00	1.62	0.01	0.08	0.16	N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (WHITE FS17975)	**Sherwin Williams**	**WHITE FS17975**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**92.56%**	**100**	**11.22**	**0.43**	**0.86**										
			B80WW500	4	48				12.02				Epoxy Polymer	30583-72-3	≥25 - ≤50	50.00	42.92	0.00	0.03	0.06	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	21.46	0.00	0.01	0.03	N
													Wollastonite	13983-17-0	≥10 - ≤25	25.00	21.46	0.00	0.01	0.03	N
													Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7	≤3	3.00	2.58	0.00	0.00	0.00	N
													Amorphous Silica	7631-86-9	≤3	3.00	2.58	0.00	0.00	0.00	N
													Aluminum Hydroxide	21645-51-2	≤3	3.00	2.58	0.00	0.00	0.00	N
													Polycarboxylic acid ester	91001-64-8	<1	1.00	0.86	0.00	0.00	0.00	N
													Methyl pentamethylpiperidyl sebacate	82919-37-7	≤1	1.00	0.86	0.00	0.00	0.00	N
													Light Aromatic Hydrocarbons	64742-95-6	<1	1.00	0.86	0.00	0.00	0.00	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	<1	1.00	0.86	5.82E-05	5.82E-04	1.16E-03	Y
													Heavy Aliphatic Solvent	64742-82-1	≤0.3	0.30	0.26	0.00	0.00	0.00	N
												Liquid	trimethylbenzene	25551-13-7	≤0.3	0.30	0.26	1.25E-03	0.01	0.02	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	1.25E-03	0.01	0.02	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤0.3	0.30	0.26	1.25E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethyoxysilyl Propylamine	919-30-2	≥90	90.00	12.74	0.06	0.62	1.23	N
													Dibutyltin Dilaurate	77-58-7	≤10	10.00	1.42	0.01	0.07	0.14	N
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (BLUE FS15182)	**Sherwin Williams**	**BLUE FS15182**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**92.56%**	**100**	**11.22**	**0.43**	**0.86**										
			B80LW500	4	45				11.27				Epoxy Polymer	30583-72-3	≥25 - ≤50	50.00	42.52	0.00	0.03	0.06	N
													Wollastonite	13983-17-0	≥10 - ≤25	25.00	21.26	0.00	0.01	0.03	N
													Titanium Dioxide	13463-67-7	≤3	3.00	2.55	0.00	0.00	0.00	N
													Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7	≤3	3.00	2.55	0.00	0.00	0.00	N
													Polycarboxylic acid ester	91001-64-8	<1	1.00	0.85	0.00	0.00	0.00	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	<1	1.00	0.85	5.76E-05	5.76E-04	1.15E-03	Y
													Methyl pentamethylpiperidyl sebacate	82919-37-7	≤1	1.00	0.85	0.00	0.00	0.00	N
													Light Aromatic Hydrocarbons	64742-95-6	<1	1.00	0.85	0.00	0.00	0.00	N
													Heavy Aliphatic Solvent	64742-82-1	≤0.3	0.30	0.26	0.00	0.00	0.00	N
												Liquid	trimethylbenzene	25551-13-7	≤0.3	0.30	0.26	1.23E-03	0.01	0.02	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	1.23E-03	0.01	0.02	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤0.3	0.30	0.26	1.23E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethyoxysilyl Propylamine	919-30-2	≥90	90.00	13.46	0.00	0.01	0.02	N
													Dibutyltin Dilaurate	77-58-7	≤10	10.00	1.50	0.00	0.00	0.00	N
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (YELLOW FS13538)	**Sherwin Williams**	**YELLOW FS13538**		**4:1**		**BRUSH, ROLL**	**92.65%**	**87**	**9.88**	**0.43**	**0.86**										
			B80YW500	4	43				10.77				Epoxy Polymer	30583-72-3	≥25 - ≤50	50.00	42.23	0.00	0.00	0.00	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.45	0.00	0.00	0.00	N
													Wollastonite	13983-17-0	≤10	10.00	8.45	0.00	0.00	0.00	N
													Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7	≤3	3.00	2.53	0.00	0.00	0.00	N
												Solid	Antimony Chromium Titanium Oxide	68186-90-3	≤3	3.00	2.53	0.00E+00	0.00E+00	0.00E+00	Y
													Polycarboxylic acid ester	91001-64-8	<1	1.00	0.84	0.00	0.00	0.00	N
													Methyl pentamethylpiperidyl sebacate	82919-37-7	≤1	1.00	0.84	0.00	0.00	0.00	N
													Light Aromatic Hydrocarbons	64742-95-6	<1	1.00	0.84	0.00	0.00	0.00	N
													Heavy Aliphatic Solvent	64742-82-1	≤0.3	0.30	0.25	0.00	0.00	0.00	N
												Liquid	trimethylbenzene	25551-13-7	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.25	0.00E+00	0.00E+00	0.00E+00	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethyoxysilyl Propylamine	919-30-2	≥90	90.00	13.99	0.00	0.00	0.00	N
													Dibutyltin Dilaurate	77-58-7	≤10	10.00	1.55	0.00	0.00	0.00	N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SHERGLASS FLAKE FILLED EPOXY B62B525/B62V525	**Sherwin Williams**	**BLACK**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**84.03%**	**220**	**11.50**	**2.59**	**5.18**										
			B62B525	4	49			177	12.24				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	42.58	1.27	12.67	25.34	N
													Glass	65997-17-3	≥10 - ≤25	25.00	21.29	0.63	6.33	12.67	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤10	10.00	8.52	0.25	2.53	5.07	Y
												Liquid	Ethylbenzene	100-41-4	≤3	3.00	2.55	0.08	0.76	1.52	Y
													Carbon Black	1333-86-4	≤3	3.00	2.55	0.08	0.76	1.52	N
													Light Aliphatic Hydrocarbon	64742-47-8	≤1	1.00	0.85	0.03	0.25	0.51	N
													Heavy Aliphatic Solvent	64742-82-1	≤0.3	0.30	0.26	0.01	0.08	0.15	N
			B62V525	1	9			392	8.53				Phenylmethanol	100-51-6	≥25 - ≤42	42.00	6.23	0.19	1.85	3.71	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≥10 - ≤25	25.00	3.71	0.11	1.10	2.21	N
													1,2-Cyclohexanediamine	694-83-7	≥10 - ≤17	17.00	2.52	0.08	0.75	1.50	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤3.6	3.60	0.53	0.02	0.16	0.32	N
SHERGLASS FLAKE FILLED EPOXY B62R525/B62V525	**Sherwin Williams**	**RED OXIDE**		**4:1**		**BRUSH OR ROLL**	**84.79%**	**214**	**11.74**	**0.86**	**1.73**										
			B62R525	4	50				12.54				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	42.75	0.43	4.33	8.66	N
													Glass	65997-17-3	≥10 - ≤25	25.00	21.37	0.22	2.16	4.33	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤10	10.00	8.55	0.09	0.87	1.73	Y
													Iron Oxide	1309-37-1	≤5	5.00	4.27	0.04	0.43	0.87	N
												Liquid	Ethylbenzene	100-41-4	≤3	3.00	2.56	0.03	0.26	0.52	Y
													Light Aliphatic Hydrocarbon	64742-47-8	≤1	1.00	0.85	0.01	0.09	0.17	N
													Heavy Aliphatic Solvent	64742-82-1	≤0.3	0.30	0.26	0.00	0.03	0.05	N
			B62V525	1	9				8.51				Phenylmethanol	100-51-6	≥25 - ≤42	42.00	6.09	0.06	0.62	1.23	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≥10 - ≤25	25.00	3.63	0.04	0.37	0.73	N
													1,2-Cyclohexanediamine	694-83-7	≥10 - ≤17	17.00	2.47	0.02	0.25	0.50	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤3.6	3.60	0.52	0.01	0.05	0.11	N
SHERGLASS FLAKE FILLED EPOXY B62A525/B62V525	**Sherwin Williams**	**GRAY**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**82.84%**	**239**	**11.62**	**2.59**	**5.18**										
			B62A525	4	52				13.10				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	43.01	1.29	12.93	25.87	N
													Glass	65997-17-3	≥10 - ≤25	25.00	21.51	0.65	6.47	12.93	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.60	0.26	2.59	5.17	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤8	8.00	6.88	0.21	2.07	4.14	Y
												Liquid	Ethylbenzene	100-41-4	≤1.4	1.40	1.20	0.04	0.36	0.72	Y
													Light Aliphatic Hydrocarbon	64742-47-8	≤0.39	0.39	0.34	0.01	0.10	0.20	N
													Carbon Black	1333-86-4	≤0.3	0.30	0.26	0.01	0.08	0.16	N
													Heavy Aliphatic Solvent	64742-82-1	≤0.12	0.12	0.10	0.00	0.03	0.06	N
			B62V525	1	9				8.51				Phenylmethanol	100-51-6	≥25 - ≤42	42.00	5.87	0.18	1.76	3.53	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≥10 - ≤25	25.00	3.49	0.11	1.05	2.10	N
													1,2-Cyclohexanediamine	694-83-7	≥10 - ≤17	17.00	2.38	0.07	0.71	1.43	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤3.6	3.60	0.50	0.02	0.15	0.30	N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SEAGUARD TIE COAT EPOXY P23Y0001/P23V0001	**Sherwin Williams**	**YELLOW**		**7:1**		**BRUSH, ROLL, OR SPRAY**	**75.73%**	**340**	**11.69**	**6.90**	**69.00**										
			P23Y00001	7	85				12.21				Talc	14807-96-6	≥10 - ≤25	25.00	22.85	1.84	18.43	184.29	N
													Aluminum Oxide	1344-28-1	≥10 - ≤25	25.00	22.85	1.84	18.43	184.29	N
												Liquid	Xylene, mixed isomers	1330-20-7	≥10 - ≤25	25.00	22.85	1.84	18.43	184.29	Y
													Methylstyrenated Phenolic Resin	68512-30-1	≤10	10.00	9.14	0.74	7.37	73.72	N
													Epoxy Polymer	25068-38-6	≤10	10.00	9.14	0.74	7.37	73.72	N
													Epoxy Polymer	25068-38-6	≤5	5.00	4.57	0.37	3.69	36.86	N
													Titanium Dioxide	13463-67-7	≤3	3.00	2.74	0.22	2.21	22.12	N
													1-Butanol	71-36-3	<3	3.00	2.74	0.22	2.21	22.12	N
												Liquid	t-Butyl Acetate	540-88-5	≤3	3.00	2.74	0.22	2.21	22.12	Y
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤3	3.00	2.74	3.10E-03	0.03	0.31	Y
												Liquid	Ethylbenzene	100-41-4	≤3	3.00	2.74	0.22	2.21	22.12	Y
													Methyl Isobutyl Ketone	108-10-1	<1	1.00	0.91	0.07	0.74	7.37	N
			P23V00001	1	8				8.05			Liquid	Xylene, mixed isomers	1330-20-7	≤10	10.00	0.86	0.07	0.69	6.94	Y
													1-Butanol	71-36-3	≤10	10.00	0.86	0.07	0.69	6.94	N
													1,3-Benzenedimethanamine	1477-55-0	≤7.5	7.50	0.65	0.05	0.52	5.21	N
													Methyl Isobutyl Ketone	108-10-1	≤7.6	7.60	0.65	0.05	0.53	5.28	N
													2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	≤4.5	4.50	0.39	0.03	0.31	3.12	N
													3,3'-oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	≤5	5.00	0.43	0.03	0.35	3.47	N
												Liquid	Ethylbenzene	100-41-4	≤1.5	1.50	0.13	0.01	0.10	1.04	Y
SEAGUARD ABLATIVE ANTI-FOULANT P30RQ10	**Sherwin Williams**	**RED**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**84.58%**	**335**	**18.13**	**11.11**	**111.09**										
			P30RQ10									Solid	Copper Oxide (Cuprous Oxide)	1317-39-1	≥25 - ≤50	50.00	50.00	0.14	1.41	14.10	Y
													Zinc Oxide	1314-13-2	≥10 - ≤25	25.00	25.00	0.07	0.70	7.05	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤10	10.00	10.00	2.01	20.14	201.41	Y
													Rosin	8050-09-7	≤10	10.00	10.00	0.03	0.28	2.82	N
													Iron Oxide	1309-37-1	≤10	10.00	10.00	0.03	0.28	2.82	N
													1-Butanol	71-36-3	≤5	5.00	5.00	0.01	0.14	1.41	N
												Liquid	Ethylbenzene	100-41-4	≤2.6	2.60	2.60	0.52	5.24	52.37	Y
												Solid	Copper Oxide (Cupric Oxide)	1317-38-0	≤3	3.00	3.00	0.01	0.08	0.85	Y
													Hydrotreated Heavy Petroleum Naphtha	64742-48-9	≤0.3	0.30	0.30	0.00	0.01	0.08	N
SEAGUARD ABLATIVE ANTI-FOULANT P30BQ12	**Sherwin Williams**	**BLACK**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**84.63%**	**329**	**17.86**	**15.32**	**76.59**										
			P30BQ12									Solid	Copper Oxide (Cuprous Oxide)	1317-39-1	≥25 - ≤50	50.00	50.00	0.19	1.92	9.58	Y
													Zinc Oxide	1314-13-2	≥10 - ≤25	25.00	25.00	0.10	0.96	4.79	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤10	10.00	10.00	2.74	27.36	136.79	Y
													Rosin	8050-09-7	≤10	10.00	10.00	0.04	0.38	1.92	N
													1-Butanol	71-36-3	≤5	5.00	5.00	0.02	0.19	0.96	N
												Solid	Copper Oxide (Cupric Oxide)	1317-38-0	≤5	5.00	5.00	0.02	0.19	0.96	Y
												Liquid	Ethylbenzene	100-41-4	≤2.5	2.50	2.50	0.68	6.84	34.20	Y

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SEAGUARD 5000 HS EPOXY N11B350/N11V350	**Sherwin Williams**	**BLACK**		**1:1**		**BRUSH, ROLL, OR SPRAY**	**81.38%**	**250**	**11.21**	**9.60**	**48.00**										
			N11B350	1	11				10.98				Talc	14807-96-6	≥25 - ≤50	50.00	24.50	2.64	26.35	131.76	N
													1-Butanol	71-36-3	≥10 - ≤23	23.00	11.27	1.21	12.12	60.61	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.25	1.32	13.18	65.88	N
													Phenylmethanol	100-51-6	≤10	10.00	4.90	0.53	5.27	26.35	N
													Carbon Black	1333-86-4	≤5	5.00	2.45	0.26	2.64	13.18	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.47	0.16	1.58	7.91	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.49	0.05	0.53	2.64	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.15	0.02	0.16	0.79	N
			N11V350	1	11				11.43				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	25.50	2.74	27.44	137.19	N
													Talc	14807-96-6	≥25 - ≤50	50.00	25.50	2.74	27.44	137.19	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	5.10	0.55	5.49	27.44	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.55	0.27	2.74	13.72	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.53	0.16	1.65	8.23	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.53	0.16	1.65	8.23	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.51	0.05	0.55	2.74	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.51	0.05	0.55	2.74	Y
													Cumene	98-82-8	<1	1.00	0.51	0.05	0.55	2.74	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	0.02	0.16	0.82	Y
SEAGUARD 5000 HS EPOXY N11W350/N11V350	**Sherwin Williams**	**OFF WHITE**		**1:1**		**BRUSH, ROLL, OR SPRAY**	**82.48%**	**250**	**11.91**	**24.92**	**308.10**										
			N11W350	1	12				12.39				Titanium Dioxide	13463-67-7	≥25 - ≤50	50.00	26.00	7.72	77.20	954.34	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	13.00	3.86	38.60	477.17	N
													1-Butanol	71-36-3	≥10 - ≤23	23.00	11.96	3.55	35.51	439.00	N
													Phenylmethanol	100-51-6	≤10	10.00	5.20	1.54	15.44	190.87	N
													Titanium Dioxide, Rutile	1317-80-2	≤5	5.00	2.60	0.77	7.72	95.43	N
													Amorphous Silica	7631-86-9	≤3	3.00	1.56	0.46	4.63	57.26	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.56	0.46	4.63	57.26	N
													Aluminum Hydroxide	21645-51-2	≤3	3.00	1.56	0.46	4.63	57.26	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.52	0.15	1.54	19.09	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.16	0.05	0.46	5.73	N
			N11V350	1	11				11.43				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	24.00	7.12	71.24	880.60	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.00	7.12	71.24	880.60	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	4.80	1.42	14.25	176.12	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.40	0.71	7.12	88.06	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.44	0.43	4.27	52.84	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.44	0.43	4.27	52.84	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.48	0.14	1.42	17.61	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.48	0.14	1.42	17.61	Y
													Cumene	98-82-8	<1	1.00	0.48	0.14	1.42	17.61	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.14	0.04	0.43	5.28	Y
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	**Sherwin Williams**	**GREEN FS24585**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**95.67%**	**54**	**10.41**	**4.31**	**8.63**										
			N41G350										Aluminum Hydroxide	21645-51-2	≥10 - ≤25	25.00	25.00	1.12	11.22	22.45	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	25.00	1.12	11.22	22.45	N
													Propylene Glycol	57-55-6	≤3	3.00	3.00	0.13	1.35	2.69	N
													1,3,5-Triazine-triethanol	4719-04-4	≤0.3	0.30	0.30	0.01	0.13	0.27	N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	**Sherwin Williams**	**Bulkhead Gray**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**95.68%**	**54**	**10.44**	**3.45**	**34.50**										
			N41A350										Aluminum Hydroxide	21645-51-2	≥10 - ≤25	25.00	25.00	0.90	9.00	90.05	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	25.00	0.90	9.00	90.05	N
													Propylene Glycol	57-55-6	≤3	3.00	3.00	0.11	1.08	10.81	N
													Carbon Black	1333-86-4	≤0.3	0.30	0.30	0.01	0.11	1.08	N
													1,3,5-Triazine-triethanol	4719-04-4	≤0.3	0.30	0.30	0.01	0.11	1.08	N
NOVA-PLATE UHS PRIMER EPOXY B62H220/B62V221	**Sherwin Williams**	**BUFF**		**4:1**		**SPRAY ONLY**	**97.39%**	**35**	**11.20**	**3.45**	**6.90**										
			B62H220	4	48				11.93				Phenol, polymer with formaldehyde, glycidylether	28064-14-4	≥50 - ≤75	75.00	64.41	0.03	0.35	0.70	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.47	0.01	0.12	0.23	N
													Phenylmethanol	100-51-6	≤10	10.00	8.59	0.00	0.05	0.09	N
													Titanium Dioxide, Rutile	1317-80-2	≤5	5.00	4.29	0.00	0.02	0.05	N
													Titanium Dioxide	13463-67-7	≤3	3.00	2.58	0.00	0.01	0.03	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.26	1.39E-04	1.39E-03	2.79E-03	Y
			B62V221	1	8				7.84				Cyclohexanamine	6864-37-5	≥75 - ≤90	90.00	12.70	0.49	4.91	9.82	N
												Liquid	Methyl Ethyl Ketone	78-93-3	≤10	10.00	1.41	0.05	0.55	1.09	Y
													2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	≤8.8	8.80	1.24	0.05	0.48	0.96	N
													Phenylmethanol	100-51-6	≤3	3.00	0.42	0.02	0.16	0.33	N
													Aminoethylaminopropyltrimethoxysilane	1760-24-3	<1	1.00	0.14	0.01	0.05	0.11	N
NOVA-PLATE UHS EPOXY B62W220/B62V221	**Sherwin Williams**	**OFF WHITE**		**4:1**		**SPRAY ONLY**	**97.28%**	**36**	**11.06**	**7.76**	**15.53**										
			B62W220	4	47				11.85				Phenol, polymer with formaldehyde, glycidylether	28064-14-4	≥50 - ≤75	75.00	64.35	0.08	0.77	1.55	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.45	0.03	0.26	0.52	N
													Phenylmethanol	100-51-6	≤10	10.00	8.58	0.01	0.10	0.21	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.58	0.01	0.10	0.21	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.26	3.09E-04	3.09E-03	6.19E-03	Y
			B62V221	1	8				7.84				Cyclohexanamine	6864-37-5	≥75 - ≤90	90.00	12.78	1.10	10.97	21.94	N
												Liquid	Methyl Ethyl Ketone	78-93-3	≤10	10.00	1.42	0.12	1.22	2.44	Y
													2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	≤8.8	8.80	1.25	0.11	1.07	2.15	N
													Phenylmethanol	100-51-6	≤3	3.00	0.43	0.04	0.37	0.73	N
													Aminoethylaminopropyltrimethoxysilane	1760-24-3	<1	1.00	0.14	0.01	0.12	0.24	N
SHERPLATE PW POTABLE WATER EPOXY OAP WHITE B62W260/B62V265	**Sherwin Williams**	**OAP WHITE**		**1:1**		**SPRAY ONLY**	**94.60%**	**76**	**11.75**	**3.45**	**34.50**										
			B62W260	1	14				13.85				Styrenated-Phenolic Resin	61788-44-1	≥10 - ≤25	25.00	14.77	0.60	5.99	59.87	N
													Phenylmethanol	100-51-6	≤10	10.00	5.91	0.24	2.39	23.95	N
													Titanium Dioxide	13463-67-7	≤10	10.00	5.91	0.24	2.39	23.95	N
													1,3-Benzenedimethanamine	1477-55-0	≤10	10.00	5.91	0.24	2.39	23.95	N
													Cyclohexanedimethanamine	2579-20-6	≤8.8	8.80	5.20	0.21	2.11	21.07	N
			B62V265	1	10				9.60				Epoxy Polymer	1675-54-3	≥75 - ≤90	90.00	36.83	1.49	14.93	149.31	N
													Alkyl Glycidyl Ether	17557-23-2	≥10 - ≤25	25.00	10.23	0.41	4.15	41.48	N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
NOVA-PLATE UHS PRIMER EPOXY B62L220/B62V221	**Sherwin Williams**	**OAP BLUE**		**4:1**		**SPRAY ONLY**	**97.24%**	**37**	**11.19**	**0.86**	**1.73**										
			B62L220	4	48				11.93				Phenol, polymer with formaldehyde, glycidylether	28064-14-4	≥50 - ≤75	75.00	64.41	0.01	0.09	0.17	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.47	0.00	0.03	0.06	N
													Phenylmethanol	100-51-6	≤10	10.00	8.59	0.00	0.01	0.02	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.59	0.00	0.01	0.02	N
													Light Aromatic Hydrocarbons	64742-95-6	≤0.3	0.30	0.26	0.00	0.00	0.00	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.26	3.48E-05	3.48E-04	6.96E-04	Y
			B62V221	1	8				7.84				Cyclohexanamine	6864-37-5	≥75 - ≤90	90.00	12.70	0.12	1.23	2.45	N
												Liquid	Methyl Ethyl Ketone	78-93-3	≤10	10.00	1.41	0.01	0.14	0.27	Y
													2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	≤8.8	8.80	1.24	0.01	0.12	0.24	N
													Phenylmethanol	100-51-6	≤3	3.00	0.42	0.00	0.04	0.08	N
													Aminoethylaminopropyltr imethoxysilane	1760-24-3	<1	1.00	0.14	0.00	0.01	0.03	N
NOVA-PLATE UHS EPOXY B62A220/B62V221	**Sherwin Williams**	**GRAY**		**4:1**		**SPRAY ONLY**	**97.22%**	**37**	**11.09**	**1.73**	**3.45**										
			B62A220	4	47				11.85				Phenol, polymer with formaldehyde, glycidylether	28064-14-4	≥50 - ≤75	75.00	64.35	0.02	0.17	0.34	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.45	0.01	0.06	0.11	N
													Phenylmethanol	100-51-6	≤10	10.00	8.58	0.00	0.02	0.05	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.58	0.00	0.02	0.05	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.26	6.89E-05	6.89E-04	1.38E-03	Y
			B62V221	1	8				7.84				Cyclohexanamine	6864-37-5	≥75 - ≤90	90.00	12.78	0.24	2.44	4.89	N
												Liquid	Methyl Ethyl Ketone	78-93-3	≤10	10.00	1.42	0.03	0.27	0.54	Y
													2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	≤8.8	8.80	1.25	0.02	0.24	0.48	N
													Phenylmethanol	100-51-6	≤3	3.00	0.43	0.01	0.08	0.16	N
													Aminoethylaminopropyltr imethoxysilane	1760-24-3	<1	1.00	0.14	0.00	0.03	0.05	N
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	**Sherwin Williams**	**WHITE FS27880**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**96.46%**	**44**	**10.37**	**0.43**	**0.86**										
			N41W350										Aluminum Hydroxide	21645-51-2	≥10 - ≤25	25.00	25.00	0.11	1.12	2.24	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	25.00	0.11	1.12	2.24	N
													Propylene Glycol	57-55-6	≤3	3.00	3.00	0.01	0.13	0.27	N
													Decylpoly(ethyleneoxy)e thanol	9014-85-1	<3	3.00	3.00	0.01	0.13	0.27	N
													1,3,5-Triazine-triethanol	4719-04-4	≤0.3	0.30	0.30	0.00	0.01	0.03	N
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (DARK GRAY FS26008)	**Sherwin Williams**	**DARK GRAY FS26008**		**4:1**		**BRUSH, ROLL**	**92.56%**	**100**	**11.22**	**0.86**	**1.73**										
			B80AW451	4	45				11.35				Epoxy Polymer	30583-72-3	≥25 - ≤50	50.00	42.54	0.00	0.00	0.00	N
													Amorphous Precipitated Silica	112926-00-8	≤10	10.00	8.51	0.00	0.00	0.00	N
													Titanium Dioxide	13463-67-7	≤5	5.00	4.25	0.00	0.00	0.00	N
													Bis(pentamethyl-4-piperidyl)sebacate	41556-26-7	≤5	5.00	4.25	0.00	0.00	0.00	N
												Solid	Chromium green-black	68909-79-5	≤3	3.00	2.55	0.00E+00	0.00E+00	0.00E+00	Y
													Methyl pentamethylpiperidyl sebacate	82919-37-7	≤3	3.00	2.55	0.00	0.00	0.00	N
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	2.47E-03	0.02	0.05	Y
			B80V500	1	8				7.96				Triethyoxysilyl Propylamine	919-30-2	≥90	90.00	76.57	0.74	7.41	14.82	N
													Dibutyltin Dilaurate	77-58-7	≤10	10.00	8.51	0.08	0.82	1.65	N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	**Sherwin Williams**	**DARK GRAY FS16081**		**N/A**		**BRUSH, ROLL, OR SPRAY**	**76.57%**	**315**	**11.22**	**3.45**	**6.90**										
			N40A203						9.35				Talc	14807-96-6	≤10	10.00	10.000	0.39	3.87	7.74	N
													Med. Aliphatic Hydrocarbon Solvent	64742-88-7	≤8.7	8.70	8.700	0.34	3.37	6.74	N
													Light Aromatic Hydrocarbons	64742-95-6	≤7.8	7.80	7.800	0.30	3.02	6.04	N
													Titanium Dioxide	13463-67-7	≤5	5.00	5.000	0.19	1.94	3.87	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	5.00	0.19	1.94	3.87	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤1.7	1.70	1.70	0.07	0.66	1.32	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤1.7	1.70	1.70	0.07	0.66	1.32	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	1.00	0.04	0.39	0.77	Y
													Carbon Black	1333-86-4	≤1	1.00	1.000	0.04	0.39	0.77	N
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	1.00	0.04	0.39	0.77	Y
													Cumene	98-82-8	<1	1.00	1.000	0.04	0.39	0.77	N
													Hydrotreated Heavy Petroleum Naphtha	64742-48-9	≤1	1.00	1.000	0.04	0.39	0.77	N
													Zirconium 2-Ethylhexanoate	22464-99-9	≤0.3	0.30	0.300	0.01	0.12	0.23	N
													Methyl Ethyl Ketoxime	96-29-7	≤0.3	0.30	0.300	0.01	0.12	0.23	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.30	0.01	0.12	0.23	Y
												Solid	Cobalt 2-Ethylhexanoate	136-52-7	≤0.3	0.30	0.30	1.63E-04	1.63E-03	3.25E-03	Y
													Light Aliphatic Hydrocarbon	64742-47-8	≤0.3	0.30	0.300	0.01	0.12	0.23	N
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	**Sherwin Williams**	**GLOSS BLACK FS17038**		**N/A**		**BRUSH, ROLL, OR SPRAY**	**72.80%**	**293**	**8.99**	**3.45**	**6.90**										
			N40B100										Med. Aliphatic Hydrocarbon Solvent	64742-88-7	≤14	14.00	14.000	0.43	4.34	8.68	N
													Calcium Carbonate	1317-65-3	≤10	10.00	10.000	0.31	3.10	6.20	N
													Light Aromatic Hydrocarbons	64742-95-6	≤5.7	5.70	5.700	0.18	1.77	3.54	N
												Liquid	trimethylbenzene	25551-13-7	≤3	3.00	3.00	0.09	0.93	1.86	Y
													Carbon Black	1333-86-4	≤3	3.00	3.000	0.09	0.93	1.86	N
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	3.00	0.09	0.93	1.86	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	3.00	0.09	0.93	1.86	Y
													Zirconium 2-Ethylhexanoate	22464-99-9	≤1	1.00	1.000	0.03	0.31	0.62	N
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	1.00	0.03	0.31	0.62	Y
													Hydrotreated Heavy Petroleum Naphtha	64742-48-9	≤1	1.00	1.000	0.03	0.31	0.62	N
													Methyl Ethyl Ketoxime	96-29-7	<1	1.00	1.000	0.03	0.31	0.62	N
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	1.00	0.03	0.31	0.62	Y
													Cumene	98-82-8	<1	1.00	1.000	0.03	0.31	0.62	N
												Solid	Cobalt 2-Ethylhexanoate	136-52-7	≤0.3	0.30	0.30	1.30E-04	1.30E-03	2.61E-03	Y
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.30	0.01	0.09	0.19	Y
													Calcium 2-Ethylhexanoate	136-51-6	≤0.3	0.30	0.300	0.01	0.09	0.19	N
													2-(2-Methoxyethoxy)-ethanol	111-77-3	≤0.3	0.30	0.300	0.01	0.09	0.19	N
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	**Sherwin Williams**	**GLOSS RED FS11105**		**N/A**		**BRUSH, ROLL, OR SPRAY**	**74.77%**	**283**	**9.36**	**3.45**	**6.90**										
			N40R100						9.35				Med. Aliphatic Hydrocarbon Solvent	64742-88-7	≤13	13.00	13.000	0.42	4.20	8.40	N
													Calcium Carbonate	1317-65-3	≤10	10.00	10.000	0.32	3.23	6.46	N
													Light Aromatic Hydrocarbons	64742-95-6	≤6.5	6.50	6.500	0.21	2.10	4.20	N
													Quinacridone	1047-16-1	≤10	10.00	10.000	0.32	3.23	6.46	N
												Liquid	trimethylbenzene	25551-13-7	≤3	3.00	3.00	0.10	0.97	1.94	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	3.00	0.10	0.97	1.94	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	3.00	0.10	0.97	1.94	Y
													Titanium Dioxide	13463-67-7	≤3	3.00	3.000	0.10	0.97	1.94	N
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	1.00	0.03	0.32	0.65	Y
													Zirconium 2-Ethylhexanoate	22464-99-9	≤1	1.00	1.000	0.03	0.32	0.65	N
													Hydrotreated Heavy Petroleum Naphtha	64742-48-9	≤1	1.00	1.000	0.03	0.32	0.65	N
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	1.00	0.03	0.32	0.65	Y
													Cumene	98-82-8	<1	1.00	1.000	0.03	0.32	0.65	N
													Methyl Ethyl Ketoxime	96-29-7	≤0.3	0.30	0.300	0.01	0.10	0.19	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.30	0.01	0.10	0.19	Y
												Solid	Fatty acids, C9-13-neo-, cobalt salts	68955-83-9	≤0.3	0.30	0.30	1.36E-04	1.36E-03	2.71E-03	Y
CLEARKIN CORROSION BATTLER BLACK	**Sherwin Williams**	**BLACK**		**N/A**		**FLOAT COAT**	**99.99%**	**0**	**7.81**	**0.86**	**1.73**										
													No. 5 fuel Oil		65.6	65.60					N
													Lanolin	8006-54-0	23.06						N

OPC Steel DSRA_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
MIL-DTL-24607B NON-FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	**Sherwin Williams**	**WHITE FS27880**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**86.25%**	**223**	**13.53**	**0.43**	**0.86**										
			N41W150										Aluminum Hydroxide	21645-51-2	≥10 - ≤25	25.00	25.000	0.15	1.46	2.92	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	25.000	0.15	1.46	2.92	N
												Liquid	p-Chlorobenzotrifluoride	98-56-6	<12	12.00	12.00	0.07	0.70	1.40	Y
													Light Aromatic Hydrocarbons	64742-95-6	≤6.5	6.50	6.500	0.04	0.38	0.76	N
													Calcium Metaborate	13701-64-9	≤5	5.00	5.000	0.03	0.29	0.58	N
												Liquid	1,2,4-Trimethylbenzene	95-63-6	<2.8	2.80	2.80	0.02	0.16	0.33	Y
													Methyl n-Amyl Ketone	110-43-0	≤3	3.00	3.000	0.02	0.18	0.35	N
													Talc	14807-96-6	≤3	3.00	3.000	0.02	0.18	0.35	N
													Methyl Ethyl Ketoxime	96-29-7	≤0.3	0.30	0.300	0.00	0.02	0.04	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤0.21	0.21	0.21	1.23E-03	0.01	0.02	Y
													Amino Polymer	162627-17-0	≤0.3	0.30	0.300	0.00	0.02	0.04	N
													Hydrotreated Heavy Petroleum Naphtha	64742-48-9	≤0.12	0.12	0.120	0.00	0.01	0.01	N
MIL-DTL-24607B NON- FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	**Sherwin Williams**	**GREEN FS24585**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**86.00%**	**226**	**13.47**	**4.31**	**8.63**										
			N41G150						13.52				Aluminum Hydroxide	21645-51-2	≥10 - ≤25	25.00	25.000	1.45	14.52	29.04	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	25.000	1.45	14.52	29.04	N
												Liquid	p-Chlorobenzotrifluoride	98-56-6	<12	12.00	12.00	0.70	6.97	13.94	Y
													Light Aromatic Hydrocarbons	64742-95-6	≤6.5	6.50	6.500	0.38	3.78	7.55	N
													Calcium Metaborate	13701-64-9	≤5	5.00	5.000	0.29	2.90	5.81	N
												Liquid	1,2,4-Trimethylbenzene	95-63-6	<2.8	2.80	2.80	0.16	1.63	3.25	Y
													Methyl n-Amyl Ketone	110-43-0	≤3	3.00	3.000	0.17	1.74	3.49	N
													Methyl Ethyl Ketoxime	96-29-7	≤0.3	0.30	0.300	0.02	0.17	0.35	N
												Liquid	Xylene, mixed isomers	1330-20-7	≤0.22	0.22	0.22	0.01	0.13	0.26	Y
													Amino Polymer	162627-17-0	≤0.3	0.30	0.300	0.017	0.174	0.34853625	N
													Hydrotreated Heavy Petroleum Naphtha	64742-48-9	≤0.12	0.12	0.120	0.007	0.070	0.1394145	N
Highlighted Cells are TACS per Rule 1200										192.12	1523.39										
									Sum from Provided Usage	192.46	1524.08										
									QA/QC	FALSE	FALSE										

Conversion Factors

119.826	(g/L)/(lbs/gal)
8.345	lbs/gal
2000	lbs/ton

Max Operating Schedule

NO. OF HOURS/DAY:	10

PM Control Efficiency

Overall Emission	0.9

APPLICATION	FALLOUT AND TRANSFER EFFICIENCIES						
METHOD	LARGE SURFACES		MEDIUM SURFACES			SMALL SURFACES	
	Fallout	Transfer	Fallout	Transfer		Fallout	Transfer
Conventional	50%	50%	65%	30%		70%	20%
Airless	50%	70%	65%	50%		70%	30%
HVLP	50%	75%	65%	60%		70%	40%
Electrostatic							
Air Atomized	70%	75%	80%	65%		80%	65%
Airless	70%	80%	80%	70%		80%	70%
Disc	70%	95%	80%	90%		80%	90%
Brush, Roller & Dip	0%	100%	0%	100%		0%	100%

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/instructions/Painting-and-Surface-Coating-Operations.pdf

Contents	CAS #	lb/hr	lb/day	lb/yr	ton/yr
1,2,3-Trimethylbenzene	526-73-8	5.94E-01	5.94E+00	5.26E+01	2.63E-02
1,2,4-Trimethylbenzene	95-63-6	2.10E+00	2.10E+01	1.79E+02	8.94E-02
1,3,5-Trimethylbenzene	108-67-8	1.73E+00	1.73E+01	1.57E+02	7.84E-02
1-METHOXY 2-PROPANOL	107-98-2	1.39E-01	1.39E+00	1.39E+01	6.95E-03
Antimony Chromium Titanium Oxide	68186-90-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium green-black	68909-79-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt 2-Ethylhexanoate	136-52-7	2.93E-04	2.93E-03	5.86E-03	2.93E-06
Copper Oxide (Cupric Oxide)	1317-38-0	2.76E-02	2.76E-01	1.80E+00	9.02E-04
Copper Oxide (Cuprous Oxide)	1317-39-1	3.33E-01	3.33E+00	2.37E+01	1.18E-02
Crystalline Silica, respirable powder	14808-60-7	3.78E-03	3.78E-02	3.23E-01	1.62E-04
Ethylbenzene	100-41-4	1.95E+00	1.95E+01	1.48E+02	7.40E-02
Fatty acids, C9-13-neo-, cobalt salts	68955-83-9	1.36E-04	1.36E-03	2.71E-03	1.36E-06
Methyl Ethyl Ketone	78-93-3	2.17E-01	2.17E+00	4.34E+00	2.17E-03
p-Chlorobenzotrifluoride	98-56-6	7.67E-01	7.67E+00	1.53E+01	7.67E-03
t-Butyl Acetate	540-88-5	2.21E-01	2.21E+00	2.21E+01	1.11E-02
Toluene	108-88-3	1.74E-02	1.74E-01	1.16E+00	5.80E-04
trimethylbenzene	25551-13-7	2.85E+00	2.85E+01	2.60E+02	1.30E-01
Xylene, mixed isomers	1330-20-7	8.90E+00	8.90E+01	7.01E+02	3.51E-01
	Sum of Summary Ta	19.85	198.48	1580.39	0.79
	Sum of Raw Data Ta	19.85	198.48	1580.39	0.79
	QA/QC	TRUE	TRUE	TRUE	TRUE

OPC Steel DSRA_Criteria Pollutants Emissions

COATING CATEGORY	NAME	COLOR	MANUFACTURER	MAX DAILY USAGE	ANNUAL USAGE	DENSITY	FROM MSDS VOC CONTENT		RULE 67.18 VOC	COMPLIANT?	SOLID %	APPLICATION METHOD	PM EMISSIONS RATE[1]			VOC EMISSIONS RATE		
				(gal/day)	(gal/yr)	(lb/gal)	(lb/gal)	(g/L)	(g/L)		WEIGHT		(lb/hr)	(lb/day)	(lb/yr)	(lb/hr)	(lb/day)	(lb/yr)
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11A350/N11V350	GRAY	Sherwin Williams	10.83	108.33	11.63	2.09	250.00	280	Yes	82.05%	BRUSH, ROLL,	0.00	0.00	0.00	2.26	22.60	226.02
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11H350/N11V350	BUFF	Sherwin Williams	15.73	157.32	11.98	2.09	250.00	280	Yes	82.58%	BRUSH, ROLL,	0.00	0.00	0.00	3.28	32.82	328.23
High Solids Epoxy Coating	RANDOGRIP NAVY G NON-SKID 600D01/610C01	DARK GRAY FS36076	Randolph Products	1.62	16.22	18.08	1.60	191.72	280	Yes	91.15%	ROLL OR SPRAY	0.37	3.74	37.42	0.26	2.59	25.94
Air Dried Coatings	NCP SILOXOGRIP N-9020 NON-SKID	DARK GRAY FS36076	NCP	9.14	91.43	16.70	1.50	180.00	340	Yes	91.00%	ROLL OR SPRAY	1.95	19.45	194.52	1.37	13.73	137.34
Air Dried Coatings	FAST CLAD ZINC HS B69A352/B69V352	GREEN/GRAY	Sherwin Williams	8.45	84.53	20.00	2.78	333.00	340	Yes	86.10%	SPRAY ONLY	2.04	20.38	203.78	2.35	23.49	234.90
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11R350/N11V350	RED OXIDE	Sherwin Williams	24.92	262.20	11.53	2.09	250.00	280	Yes	81.91%	BRUSH, ROLL, OR SPRAY	3.30	32.96	346.71	5.20	52.00	547.04
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (HAZE GRAY FS26270)	HAZE GRAY FS26270	Sherwin Williams	3.53	35.34	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL[2]	0.00	0.00	0.00	0.29	2.95	29.49
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (RED FS11105)	RED FS11105	Sherwin Williams	0.43	0.86	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL, OR SPRAY	0.06	0.63	1.25	0.04	0.36	0.72
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (WHITE FS17975)	WHITE FS17975	Sherwin Williams	0.43	0.86	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL, OR SPRAY	0.06	0.63	1.25	0.04	0.36	0.72
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (BLUE FS15182)	BLUE FS15182	Sherwin Williams	0.43	0.86	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL, OR SPRAY	0.06	0.63	1.25	0.04	0.36	0.72
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (YELLOW FS13538)	YELLOW FS13538	Sherwin Williams	0.43	0.86	9.88	0.73	87.00	340	Yes	92.65%	BRUSH, ROLL[2]	0.00	0.00	0.00	0.03	0.31	0.63
Air Dried Coatings	SHERGLASS FLAKE FILLED EPOXY B62B525/B62V525	BLACK	Sherwin Williams	2.59	5.18	11.50	1.84	220.00	340	Yes	84.03%	BRUSH, ROLL, OR SPRAY	0.35	3.50	7.00	0.48	4.75	9.50
Air Dried Coatings	SHERGLASS FLAKE FILLED EPOXY B62R525/B62V525	RED OXIDE	Sherwin Williams	0.86	1.73	11.74	1.79	214.00	340	Yes	84.79%	BRUSH OR ROLL	0.00	0.00	0.00	0.15	1.54	3.08
Air Dried Coatings	SHERGLASS FLAKE FILLED EPOXY B62A525/B62V525	GRAY	Sherwin Williams	2.59	5.18	11.62	1.99	239.00	340	Yes	82.84%	BRUSH, ROLL, OR SPRAY	0.35	3.49	6.97	0.52	5.16	10.32
Antifoulant Coating (except for pleas	SEAGUARD TIE COAT EPOXY P23Y0001/P23V0001	YELLOW	Sherwin Williams	6.90	69.00	11.69	2.84	340.00	400	Yes	75.73%	BRUSH, ROLL, OR SPRAY	0.86	8.55	85.52	1.96	19.58	195.78
Antifoulant Coating (except for pleas	SEAGUARD ABLATIVE ANTI-FOULANT P30RQ10	RED	Sherwin Williams	11.11	111.09	18.13	2.80	335.00	400	Yes	84.58%	BRUSH, ROLL, OR SPRAY	2.39	23.85	238.49	3.11	31.06	310.58
Antifoulant Coating (except for pleas	SEAGUARD ABLATIVE ANTI-FOULANT P30BQ12	BLACK	Sherwin Williams	15.32	76.59	17.86	2.75	329.00	400	Yes	84.63%	BRUSH, ROLL, OR SPRAY	3.24	32.42	162.07	4.21	42.06	210.29
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11B350/N11V350	BLACK	Sherwin Williams	9.60	48.00	11.21	2.09	250.00	280	Yes	81.38%	BRUSH, ROLL, OR SPRAY	1.23	12.26	61.29	2.00	20.03	100.15
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11W350/N11V350	OFF WHITE	Sherwin Williams	24.92	308.10	11.91	2.09	250.00	280	Yes	82.48%	BRUSH, ROLL, OR SPRAY	3.43	34.28	423.79	5.20	52.00	642.81
Specialty Interior Coating	SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	GREEN FS24585	Sherwin Williams	4.31	8.63	10.41	0.45	54.00	340	Yes	95.67%	BRUSH, ROLL, OR SPRAY	0.60	6.01	12.03	0.19	1.94	3.89

OPC Steel DSRA_Criteria Pollutants Emissions

COATING CATEGORY	NAME	COLOR	MANUFACTURER	MAX DAILY USAGE (gal/day)	ANNUAL USAGE (gal/yr)	DENSITY (lb/gal)	FROM MSDS VOC CONTENT (lb/gal)	(g/L)	RULE 67.18 VOC (g/L)	COMPLIANT?	SOLID % WEIGHT	APPLICATION METHOD	PM EMISSIONS RATE[1] (lb/hr)	(lb/day)	(lb/yr)	VOC EMISSIONS RATE (lb/hr)	(lb/day)	(lb/yr)
Specialty Interior Coating	SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	Bulkhead Gray	Sherwin Williams	3.45	34.50	10.41	0.45	54.00	340	Yes	95.67%	BRUSH, ROLL, OR SPRAY	0.48	4.81	48.10	0.16	1.55	15.55
High Solids Epoxy Coating	NOVA-PLATE UHS PRIMER EPOXY B62H220/B62V221	BUFF	Sherwin Williams	3.45	6.90	11.20	0.29	35.00	280	Yes	97.39%	SPRAY ONLY	0.53	5.27	10.54	0.10	1.01	2.02
High Solids Epoxy Coating	NOVA-PLATE UHS EPOXY B62W220/B62V221	OFF WHITE	Sherwin Williams	7.76	15.53	11.06	0.30	36.00	280	Yes	97.28%	SPRAY ONLY	1.17	11.69	23.39	0.23	2.33	4.66
High Solids Epoxy Coating	SHERPLATE PW POTABLE WATER EPOXY OAP WHITE B62W260/B62V265	OAP WHITE	Sherwin Williams	3.45	34.50	11.75	0.63	76.00	280	Yes	94.60%	SPRAY ONLY	0.54	5.37	53.69	0.22	2.19	21.88
High Solids Epoxy Coating	NOVA-PLATE UHS PRIMER EPOXY B62L220/B62V221	OAP BLUE	Sherwin Williams	0.86	1.73	11.19	0.31	37.00	280	Yes	97.24%	SPRAY ONLY	0.13	1.31	2.63	0.03	0.27	0.53
High Solids Epoxy Coating	NOVA-PLATE UHS EPOXY B62A220/B62V221	GRAY	Sherwin Williams	1.73	3.45	11.09	0.31	37.00	280	Yes	97.22%	SPRAY ONLY	0.26	2.60	5.21	0.05	0.53	1.07
Specialty Interior Coating	SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	WHITE FS27880	Sherwin Williams	0.43	0.86	10.41	0.45	54.00	340	Yes	95.67%	BRUSH, ROLL, OR SPRAY	0.06	0.60	1.20	0.02	0.19	0.39
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (DARK GRAY FS26008)	DARK GRAY FS26008	Sherwin Williams	0.86	1.73	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL[2]	0.00	0.00	0.00	0.07	0.72	1.44
Specialty Interior Coating	MIL-DTL-24607B NON- FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	GREEN FS24585	Sherwin Williams	4.31	8.63	13.47	1.89	226.00	340	Yes	86.00%	BRUSH, ROLL, OR SPRAY	0.70	6.99	13.99	0.81	8.13	16.27
Air Dried Coatings	MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	DARK GRAY FS16081	Sherwin Williams	3.45	6.90	11.22	2.63	315.00	340	Yes	76.57%	BRUSH, ROLL, OR SPRAY	0.41	4.15	8.30	0.91	9.07	18.14
Air Dried Coatings	MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	GLOSS BLACK FS17038	Sherwin Williams	3.45	6.90	11.22	2.63	315.00	340	Yes	76.57%	BRUSH, ROLL, OR SPRAY	0.41	4.15	8.30	0.91	9.07	18.14
Air Dried Coatings	MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	GLOSS RED FS11105	Sherwin Williams	3.45	6.90	11.22	2.63	315.00	340	Yes	76.57%	BRUSH, ROLL, OR SPRAY	0.41	4.15	8.30	0.91	9.07	18.14
Air Dried Coatings	CLEARKIN CORROSION BATTLER BLACK	BLACK	Sherwin Williams	0.86	1.73	7.81	0.00	0.10	340	Yes	99.99%	FLOAT COAT	0.00	0.00	0.00	0.00	0.00	0.00
Specialty Interior Coating	MIL-DTL-24607B NON-FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	WHITE FS27880	Sherwin Williams	0.43	0.86	13.53	1.86	223.00	340	Yes	86.25%	BRUSH, ROLL, OR SPRAY	0.07	0.70	1.41	0.08	0.80	1.61

Note:
1. For application methods (column M) that contain "spray", assume all usage is applied by spray application to conservatively estimate PM emissions.
2. Materials contain NESHAP 6H targeted toxic metals, highlighted in green, can only be applied by hand application.

	192.12	1523.39
	192.12	1523.39
	TRUE	TRUE

Max Operating Schedule

NO. OF HOURS/DAY:	10

Conversions

1	pound/gallon	=	119.826	gram/liter
1	ton	=	2000	pounds

Potential To Emit: (w/o PM Control)

PM (LB/HR)	25.46	VOC (LB/HR)	37.47
PM (LB/DAY)	254.58	VOC (LB/DAY)	374.65
PM (LB/YR)	1968.39	VOC (LB/YR)	3137.96
PM (TON/YR)	0.98	VOC (TON/YR)	1.57

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	Large Surfaces		Medium Surfaces		Small Surfaces	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	50%	75%	65%	60%	70%	40%
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	0%	100%	0%	100%	0%	100%

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SEAGUARD 5000 HS EPOXY N11A350/N11V350	**Sherwin Williams**	**GRAY**		**1:1**		**BRUSH, ROLL,**	**82.05%**	**250**	**11.63**	**10.83**	**108.33**										
			N11A350	1	12				11.82				Talc	14807-96-6	≥25 - ≤50	50.00	25.42	3.20	32.01	320.12	N
													1-Butanol	71-36-3	≥10 - ≤24	24.00	12.20	1.54	15.37	153.66	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.71	1.60	16.01	160.06	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	12.71	1.60	16.01	160.06	N
													Phenylmetha	100-51-6	≤10	10.00	5.08	0.64	6.40	64.02	N
													Fatty acids, t	68953-36-6	≤3	3.00	1.52	0.19	1.92	19.21	N
													Iron Oxide	1317-61-9	≤3	3.00	1.52	0.19	1.92	19.21	N
													Triethylene T	112-24-3	<1	1.00	0.51	0.06	0.64	6.40	N
													3,6,9-triazau	112-57-2	≤0.3	0.30	0.15	0.02	0.19	1.86	N
			N11V350	1	11				11.43				Epoxy Polym	1675-54-3	≥25 - ≤50	50.00	24.58	3.10	30.96	309.62	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.58	3.10	30.96	309.62	N
													Light Aromat	64742-95-6	≤10	10.00	4.92	0.62	6.19	61.92	N
												Liquid	trimethylbenz	25551-13-7	≤5	5.00	2.46	0.31	3.10	30.96	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤3	3.00	1.48	0.19	1.86	18.58	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤3	3.00	1.48	0.19	1.86	18.58	Y
												Liquid	Xylene, mixe	1330-20-7	<1	1.00	0.49	0.06	0.62	6.19	Y
												Liquid	1,2,3-Trimeth	526-73-8	<1	1.00	0.49	0.06	0.62	6.19	Y
													Cumene	98-82-8	<1	1.00	0.49	0.06	0.62	6.19	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	0.02	0.19	1.86	Y
SEAGUARD 5000 HS EPOXY N11H350/N11V350	**Sherwin Williams**	**BUFF**		**1:1**		**BRUSH, ROLL,**	**82.58%**	**250**	**11.98**	**15.73**	**157.32**										
			N11H350	1	13				12.52				Titanium Dio	1317-80-2	≥10 - ≤25	25.00	13.07	2.46	24.62	246.16	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	13.07	2.46	24.62	246.16	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	13.07	2.46	24.62	246.16	N
													1-Butanol	71-36-3	≥10 - ≤18	18.00	9.41	1.77	17.72	177.23	N
													Phenylmetha	100-51-6	≤10	10.00	5.23	0.98	9.85	98.46	N
													Fatty acids, t	68953-36-6	≤3	3.00	1.57	0.30	2.95	29.54	N
													Amorphous S	7631-86-9	≤3	3.00	1.57	0.30	2.95	29.54	N
													Triethylene T	112-24-3	<1	1.00	0.52	0.10	0.98	9.85	N
													3,6,9-triazau	112-57-2	≤0.3	0.30	0.16	0.03	0.30	2.95	N
			N11V350	1	11				11.43				Epoxy Polym	1675-54-3	≥25 - ≤50	50.00	23.87	4.50	44.96	449.65	N
													Talc	14807-96-6	≥25 - ≤50	50.00	23.87	4.50	44.96	449.65	N
													Light Aromat	64742-95-6	≤10	10.00	4.77	0.90	8.99	89.93	N
												Liquid	trimethylbenz	25551-13-7	≤5	5.00	2.39	0.45	4.50	44.96	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤3	3.00	1.43	0.27	2.70	26.98	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤3	3.00	1.43	0.27	2.70	26.98	Y
												Liquid	Xylene, mixe	1330-20-7	<1	1.00	0.48	0.09	0.90	8.99	Y
												Liquid	1,2,3-Trimeth	526-73-8	<1	1.00	0.48	0.09	0.90	8.99	Y
													Cumene	98-82-8	<1	1.00	0.48	0.09	0.90	8.99	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.14	0.03	0.27	2.70	Y
RANDOGRIP NAVY G NON-SKID 600D01/610C01	**Randolph Products**	**DARK GRAY FS36076**		**7.9:1**		**ROLL OR SPRAY**	**91.15%**	**192**	**18.08**	**1.62**	**16.22**										
			600D01	7.9	18			216	19.31				ALUMINUM	1344-28-1	45	45.00	42.63	1.25	12.50	125.01	N
													BARIUM SUI	7727-43-7	18	18.00	17.05	0.50	5.00	50.01	N
													NEPHELINE	37244-96-5	7	7.00	6.63	0.19	1.94	19.45	N
												Liquid	1-METHOXY	107-98-2	5	5.00	4.74	0.14	1.39	13.89	Y
													EPOXY RES	25036-25-3	2	2.00	1.89	0.06	0.56	5.56	N
													SOLVENT N	64742-95-6	2	2.00	1.89	0.06	0.56	5.56	N
			610C01	1	1			2	8.39				POLYAMIDO	68605-86-7	63	63.00	3.32	0.10	0.97	9.72	N
													TOFA REAC	68953-36-6	21	21.00	1.11	0.03	0.32	3.24	N
													AMORPHOU	67762-90-7	9	9.00	0.47	0.01	0.14	1.39	N
													EPOXIDIZED	68298-14-6	7	7.00	0.37	0.01	0.11	1.08	N

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
NCP SILOXOGRIP N-9020 NON-SKID	**NCP**	**DARK GRAY FS36076**		**Premeasured 5 gal Kit**		**ROLL OR SPRAY**	**91.00%**	**180**	**16.70**	**9.14**	**91.43**										
			N-9020A	4	75				18.75				Aluminum Ox	1344-28-1	55-60%	60.00	53.36	8.15	81.47	814.67	N
													Proprietary	TradeSecret	10-15%	15.00	13.34	2.04	20.37	203.67	N
													Butyl Acetate	64742-95-6	1-5%	5.00	4.45	0.68	6.79	67.89	N
													Light Aromat	123-86-4	1-5%	5.00	4.45	0.68	6.79	67.89	N
												Liquid	*1,2,4 Trimethylbenzene	95-63-6	1.36	1.36	1.21	0.18	1.85	18.47	Y
													Titanium Dio	13463-67-7	0.54	0.54	0.48	0.07	0.73	7.33	N
			N-9020B	1	9				9.34				Proprietary	TradeSecret	85-90%	90.00	9.96	1.52	15.21	152.11	N
												Liquid	*Mixed Xylen	1330-20-7	9.95	9.95	1.10	0.17	1.68	16.82	Y
												Liquid	Ethyl Benzen	100-41-4	0.99	0.99	0.11	0.02	0.17	1.67	Y
FAST CLAD ZINC HS B69A352/B69V352	**Sherwin Williams**	**GREEN/GRAY**		**9:1**		**SPRAY ONLY**	**86.10%**	**333**	**20.00**	**8.45**	**84.53**										
			B69A352	9	200				22.20				Epoxy Polym	25068-38-6	≥10 - ≤25	25.00	24.09	4.07	40.73	407.31	N
													Portland Cem	65997-15-1	≤9.6	9.60	9.25	1.56	15.64	156.41	N
													Methyl n-Amy	110-43-0	≤5.2	5.20	5.01	0.85	8.47	84.72	N
												Liquid	Xylene, mixe	1330-20-7	≤5.1	5.10	4.92	0.83	8.31	83.09	Y
													Barium Sulfa	7727-43-7	≤5	5.00	4.82	0.81	8.15	81.46	N
												Liquid	Ethylbenzene	100-41-4	<1	1.00	0.96	0.16	1.63	16.29	Y
			B69V352	1	8				7.51				Methyl n-Amy	110-43-0	≥25 - ≤45	45.00	1.63	0.28	2.76	27.56	N
												Liquid	Xylene, mixe	1330-20-7	≤13	13.00	0.47	0.08	0.80	7.96	Y
													Paratertiaryb	98-54-4	≤10	10.00	0.36	0.06	0.61	6.13	N
													Trimethyl-1,6	25620-58-0	≤10	10.00	0.36	0.06	0.61	6.13	N
													1-Butanol	71-36-3	≤7.3	7.30	0.26	0.04	0.45	4.47	N
													1,3-Benzene	1477-55-0	≤7.2	7.20	0.26	0.04	0.44	4.41	N
												Liquid	Ethylbenzene	100-41-4	≤3	3.00	0.11	0.02	0.18	1.84	Y
													Phenol, 4-No	84852-15-3	≤3	3.00	0.11	0.02	0.18	1.84	N
													Triethylene T	112-24-3	<1	1.00	0.04	0.01	0.06	0.61	N
SEAGUARD 5000 HS EPOXY N11R350/N11V350	**Sherwin Williams**	**RED OXIDE**		**1:1**		**BRUSH, ROLL, OR SPRAY**	**81.91%**	**250**	**11.53**	**24.92**	**256.20**										
			N11R350	1	12				11.63				Talc	14807-96-6	≥25 - ≤50	50.00	25.21	7.25	72.47	744.90	N
													1-Butanol	71-36-3	≥10 - ≤24	24.00	12.10	3.48	34.78	357.55	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.61	3.62	36.23	372.45	N
													Phenylmetha	100-51-6	≤10	10.00	5.04	1.45	14.49	148.98	N
													Iron Oxide	1309-37-1	≤10	10.00	5.04	1.45	14.49	148.98	N
													Fatty acids, t	68953-36-6	≤3	3.00	1.51	0.43	4.35	44.69	N
													Triethylene T	112-24-3	<1	1.00	0.50	0.14	1.45	14.90	N
													3,6,9-triazaur	112-57-2	≤0.3	0.30	0.15	0.04	0.43	4.47	N
			N11V350	1	11				11.43				Epoxy Polym	1675-54-3	≥25 - ≤50	50.00	24.79	7.12	71.24	732.26	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.79	7.12	71.24	732.26	N
													Light Aromat	64742-95-6	≤10	10.00	4.96	1.42	14.25	146.45	N
												Liquid	trimethylbenz	25551-13-7	≤5	5.00	2.48	0.71	7.12	73.23	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤3	3.00	1.49	0.43	4.27	43.94	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤3	3.00	1.49	0.43	4.27	43.94	Y
												Liquid	Xylene, mixe	1330-20-7	<1	1.00	0.50	0.14	1.42	14.65	Y
												Liquid	1,2,3-Trimeth	526-73-8	<1	1.00	0.50	0.14	1.42	14.65	Y
													Cumene	98-82-8	<1	1.00					N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	0.04	0.43	4.39	Y

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (HAZE GRAY FS26270)	**Sherwin Williams**	**HAZE GRAY FS26270**		**4:1**		**BRUSH, ROLL**	**92.56%**	**100**	**11.22**	**3.53**	**35.34**										
			B80AW450	4	46				11.60				Epoxy Polym	30583-72-3	≥25 - ≤50	50.00	42.70	0.00	0.00	0.00	N
													Titanium Dio	13463-67-7	≤10	10.00	8.54	0.00	0.00	0.00	N
													Amorphous F	112926-00-8	≤10	10.00	8.54	0.00	0.00	0.00	N
													Bis(pentame	41556-26-7	≤5	5.00	4.27	0.00	0.00	0.00	N
												Solid	Chromium gr	68909-79-5	≤3	3.00	2.56	0.00E+00	0.00E+00	0.00E+00	Y
													Methyl penta	82919-37-7	≤3	3.00	2.56	0.00	0.00	0.00	N
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	0.01	0.10	1.02	Y
													Anatase (TiO	1317-70-0	≤0.3	0.30	0.04	0.00	0.00	0.00	N
			B80V500	1	8				7.93				Triethyoxysil	919-30-2	≥90	90.00	13.13	0.00	0.00	0.00	N
													Dibutyltin Dil	77-58-7	≤10	10.00	1.46	0.00	0.00	0.00	N
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (RED FS11105)	**Sherwin Williams**	**RED FS11105**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**92.56%**	**100**	**11.22**	**0.43**	**0.86**										
			B80EW500	4	41				10.26				Epoxy Polym	30583-72-3	≥25 - ≤50	50.00	41.91	0.20	2.03	4.06	N
													Wollastonite	13983-17-0	≤5	5.00	4.19	0.02	0.20	0.41	N
													Titanium Dio	13463-67-7	≤5	5.00	4.19	0.02	0.20	0.41	N
													Bis(pentame	41556-26-7	≤3	3.00	2.51	0.01	0.12	0.24	N
													Polycarboxyl	91001-64-8	<1	1.00	0.84	0.00	0.04	0.08	N
													Methyl penta	82919-37-7	≤1	1.00	0.84	0.00	0.04	0.08	N
													Light Aromat	64742-95-6	<1	1.00	0.84	0.00	0.04	0.08	N
													Heavy Alipha	64742-82-1	≤0.3	0.30	0.25	0.00	0.01	0.02	N
												Liquid	trimethylben	25551-13-7	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.25	1.70E-05	1.70E-04	3.41E-04	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤0.3	0.30	0.25	1.22E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethyoxysil	919-30-2	≥90	90.00	14.57	0.07	0.70	1.41	N
													Dibutyltin Dil	77-58-7	≤10	10.00	1.62	0.01	0.08	0.16	N
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (WHITE FS17975)	**Sherwin Williams**	**WHITE FS17975**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**92.56%**	**100**	**11.22**	**0.43**	**0.86**										
			B80WW500	4	48				12.02				Epoxy Polym	30583-72-3	≥25 - ≤50	50.00	42.92	0.00	0.03	0.06	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	21.46	0.00	0.01	0.03	N
													Wollastonite	13983-17-0	≥10 - ≤25	25.00	21.46	0.00	0.01	0.03	N
													Bis(pentame	41556-26-7	≤3	3.00	2.58	0.00	0.00	0.00	N
													Amorphous S	7631-86-9	≤3	3.00	2.58	0.00	0.00	0.00	N
													Aluminum Hy	21645-51-2	≤3	3.00	2.58	0.00	0.00	0.00	N
													Polycarboxyl	91001-64-8	<1	1.00	0.86	0.00	0.00	0.00	N
													Methyl penta	82919-37-7	≤1	1.00	0.86	0.00	0.00	0.00	N
													Light Aromat	64742-95-6	<1	1.00	0.86	0.00	0.00	0.00	N
												Solid	Crystalline S	14808-60-7	<1	1.00	0.86	5.82E-05	5.82E-04	1.16E-03	Y
													Heavy Alipha	64742-82-1	≤0.3	0.30	0.26	0.00	0.00	0.00	N
												Liquid	trimethylben	25551-13-7	≤0.3	0.30	0.26	1.25E-03	0.01	0.02	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	1.25E-03	0.01	0.02	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤0.3	0.30	0.26	1.25E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethyoxysil	919-30-2	≥90	90.00	12.74	0.00	0.01	0.02	N
													Dibutyltin Dil	77-58-7	≤10	10.00	1.42	0.00	0.00	0.00	N

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (BLUE FS15182)	**Sherwin Williams**	**BLUE FS15182**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**92.56%**	**100**	**11.22**	**0.43**	**0.86**										
			B80LW500	4	45				11.27				Epoxy Polym	30583-72-3	≥25 - ≤50	50.00	42.52	0.00	0.03	0.06	N
													Wollastonite	13983-17-0	≥10 - ≤25	25.00	21.26	0.00	0.01	0.03	N
													Titanium Dio	13463-67-7	≤3	3.00	2.55	0.00	0.00	0.00	N
													Bis(pentame	41556-26-7	≤3	3.00	2.55	0.00	0.00	0.00	N
													Polycarboxyl	91001-64-8	<1	1.00	0.85	0.00	0.00	0.00	N
												Solid	Crystalline S	14808-60-7	<1	1.00	0.85	5.76E-05	5.76E-04	1.15E-03	Y
													Methyl penta	82919-37-7	≤1	1.00	0.85	0.00	0.00	0.00	N
													Light Aromat	64742-95-6	<1	1.00	0.85	0.00	0.00	0.00	N
													Heavy Alipha	64742-82-1	≤0.3	0.30	0.26	0.00	0.00	0.00	N
												Liquid	trimethylben	25551-13-7	≤0.3	0.30	0.26	1.23E-03	0.01	0.02	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	1.23E-03	0.01	0.02	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤0.3	0.30	0.26	1.23E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethoxysil	919-30-2	≥90	90.00	13.46	0.00	0.01	0.02	N
													Dibutyltin Dil	77-58-7	≤10	10.00	1.50	0.00	0.00	0.00	N
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (YELLOW FS13538)	**Sherwin Williams**	**YELLOW FS13538**		**4:1**		**BRUSH, ROLL**	**92.65%**	**87**	**9.88**	**0.43**	**0.86**										
			B80YW500	4	43				10.77				Epoxy Polym	30583-72-3	≥25 - ≤50	50.00	42.23	0.00	0.00	0.00	N
													Titanium Dio	13463-67-7	≤10	10.00	8.45	0.00	0.00	0.00	N
													Wollastonite	13983-17-0	≤10	10.00	8.45	0.00	0.00	0.00	N
													Bis(pentame	41556-26-7	≤3	3.00	2.53	0.00	0.00	0.00	N
												Solid	Antimony Ox	68186-90-3	≤3	3.00	2.53	0.00E+00	0.00E+00	0.00E+00	Y
													Polycarboxyl	91001-64-8	<1	1.00	0.84	0.00	0.00	0.00	N
													Methyl penta	82919-37-7	≤1	1.00	0.84	0.00	0.00	0.00	N
													Light Aromat	64742-95-6	<1	1.00	0.84	0.00	0.00	0.00	N
													Heavy Alipha	64742-82-1	≤0.3	0.30	0.25	0.00	0.00	0.00	N
												Liquid	trimethylben	25551-13-7	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
												Solid	Crystalline S	14808-60-7	≤0.3	0.30	0.25	0.00E+00	0.00E+00	0.00E+00	Y
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤0.3	0.30	0.25	1.08E-03	0.01	0.02	Y
			B80V500	1	8				7.93				Triethoxysil	919-30-2	≥90	90.00	13.99	0.00	0.00	0.00	N
													Dibutyltin Dil	77-58-7	≤10	10.00	1.55	0.00	0.00	0.00	N
SHERGLASS FLAKE FILLED EPOXY B62B525/B62V525	**Sherwin Williams**	**BLACK**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**84.03%**	**220**	**11.50**	**2.59**	**5.18**										
			B62B525	4	49			177	12.24				Epoxy Polym	1675-54-3	≥25 - ≤50	50.00	42.58	1.27	12.67	25.34	N
													Glass	65997-17-3	≥10 - ≤25	25.00	21.29	0.63	6.33	12.67	N
												Liquid	Xylene, mixe	1330-20-7	≤10	10.00	8.52	0.25	2.53	5.07	Y
												Liquid	Ethylbenzene	100-41-4	≤3	3.00	2.55	0.08	0.76	1.52	Y
													Carbon Blac	1333-86-4	≤3	3.00	2.55	0.08	0.76	1.52	N
													Light Aliphati	64742-47-8	≤1	1.00	0.85	0.03	0.25	0.51	N
													Heavy Alipha	64742-82-1	≤0.3	0.30	0.26	0.01	0.08	0.15	N
			B62V525	1	9			392	8.53				Phenylmetha	100-51-6	≥25 - ≤42	42.00	6.23	0.19	1.85	3.71	N
													Fatty acids, t	68953-36-6	≥10 - ≤25	25.00	3.71	0.11	1.10	2.21	N
													1,2-Cyclohex	694-83-7	≥10 - ≤17	17.00	2.52	0.08	0.75	1.50	N
													3,6,9-triazau	112-57-2	≤3.6	3.60	0.53	0.02	0.16	0.32	N

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SHERGLASS FLAKE FILLED EPOXY B62R525/B62V525	**Sherwin Williams**	**RED OXIDE**		**4:1**		**BRUSH OR ROLL**	**84.79%**	**214**	**11.74**	**0.86**	**1.73**										
			B62R525	4	50				12.54				Epoxy Polym	1675-54-3	≥25 - ≤50	50.00	42.75	0.43	4.33	8.66	N
													Glass	65997-17-3	≥10 - ≤25	25.00	21.37	0.22	2.16	4.33	N
												Liquid	Xylene, mixe	1330-20-7	≤10	10.00	8.55	0.09	0.87	1.73	Y
													Iron Oxide	1309-37-1	≤5	5.00	4.27	0.04	0.43	0.87	N
												Liquid	Ethylbenzen	100-41-4	≤3	3.00	2.56	0.03	0.26	0.52	Y
													Light Aliphati	64742-47-8	≤1	1.00	0.85	0.01	0.09	0.17	N
													Heavy Aliphe	64742-82-1	≤0.3	0.30	0.26	0.00	0.03	0.05	N
			B62V525	1	9				8.51				Phenylmetha	100-51-6	≥25 - ≤42	42.00	6.09	0.06	0.62	1.23	N
													Fatty acids, t	68953-36-6	≥10 - ≤25	25.00	3.63	0.04	0.37	0.73	N
													1,2-Cyclohex	694-83-7	≥10 - ≤17	17.00	2.47	0.02	0.25	0.50	N
													3,6,9-triazau	112-57-2	≤3.6	3.60	0.52	0.01	0.05	0.11	N
SHERGLASS FLAKE FILLED EPOXY B62A525/B62V525	**Sherwin Williams**	**GRAY**		**4:1**		**BRUSH, ROLL, OR SPRAY**	**82.84%**	**239**	**11.62**	**2.59**	**5.18**										
			B62A525	4	52				13.10				Epoxy Polym	1675-54-3	≥25 - ≤50	50.00	43.01	1.29	12.93	25.87	N
													Glass	65997-17-3	≥10 - ≤25	25.00	21.51	0.65	6.47	12.93	N
													Titanium Dio	13463-67-7	≤10	10.00	8.60	0.26	2.59	5.17	N
												Liquid	Xylene, mixe	1330-20-7	≤8	8.00	6.88	0.21	2.07	4.14	Y
												Liquid	Ethylbenzen	100-41-4	≤1.4	1.40	1.20	0.04	0.36	0.72	Y
													Light Aliphati	64742-47-8	≤0.39	0.39	0.34	0.01	0.10	0.20	N
													Carbon Blac	1333-86-4	≤0.3	0.30	0.26	0.01	0.08	0.16	N
													Heavy Aliphe	64742-82-1	≤0.12	0.12	0.10	0.00	0.03	0.06	N
			B62V525	1	9				8.51				Phenylmetha	100-51-6	≥25 - ≤42	42.00	5.87	0.18	1.76	3.53	N
													Fatty acids, t	68953-36-6	≥10 - ≤25	25.00	3.49	0.11	1.05	2.10	N
													1,2-Cyclohex	694-83-7	≥10 - ≤17	17.00	2.38	0.07	0.71	1.43	N
													3,6,9-triazau	112-57-2	≤3.6	3.60	0.50	0.02	0.15	0.30	N
SEAGUARD 5000 HS EPOXY N11W350/N11V350	**Sherwin Williams**	**OFF WHITE**		**1:1**		**BRUSH, ROLL, OR SPRAY**	**82.48%**	**250**	**11.91**	**24.92**	**308.10**										
			N11W350	1	12				12.39				Titanium Dio	13463-67-7	≥25 - ≤50	50.00	26.00	7.72	77.20	954.34	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	13.00	3.86	38.60	477.17	N
													1-Butanol	71-36-3	≥10 - ≤23	23.00	11.96	3.55	35.51	439.00	N
													Phenylmetha	100-51-6	≤10	10.00	5.20	1.54	15.44	190.87	N
													Titanium Dio	1317-80-2	≤5	5.00	2.60	0.77	7.72	95.43	N
													Amorphous S	7631-86-9	≤3	3.00	1.56	0.46	4.63	57.26	N
													Fatty acids, t	68953-36-6	≤3	3.00	1.56	0.46	4.63	57.26	N
													Aluminum Hy	21645-51-2	≤3	3.00	1.56	0.46	4.63	57.26	N
													Triethylene T	112-24-3	<1	1.00	0.52	0.15	1.54	19.09	N
													3,6,9-triazau	112-57-2	≤0.3	0.30	0.16	0.05	0.46	5.73	N
			N11V350	1	11				11.43				Epoxy Polym	1675-54-3	≥25 - ≤50	50.00	24.00	7.12	71.24	880.60	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.00	7.12	71.24	880.60	N
													Light Aromat	64742-95-6	≤10	10.00	4.80	1.42	14.25	176.12	N
												Liquid	trimethylben	25551-13-7	≤5	5.00	2.40	0.71	7.12	88.06	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤3	3.00	1.44	0.43	4.27	52.84	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤3	3.00	1.44	0.43	4.27	52.84	Y
												Liquid	Xylene, mixe	1330-20-7	<1	1.00	0.48	0.14	1.42	17.61	Y
												Liquid	1,2,3-Trimeth	526-73-8	<1	1.00	0.48	0.14	1.42	17.61	Y
													Cumene	98-82-8	<1	1.00	0.48	0.14	1.42	17.61	N
												Liquid	Ethylbenzen	100-41-4	≤0.3	0.30	0.14	0.04	0.43	5.28	Y
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	**Sherwin Williams**	**GREEN FS24585**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**95.67%**	**54**	**10.41**	**4.31**	**8.63**										
			N41G350										Aluminum Hy	21645-51-2	≥10 - ≤25	25.00	25.00	1.12	11.22	22.45	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	25.00	1.12	11.22	22.45	N
													Propylene G	57-55-6	≤3	3.00	3.00	0.13	1.35	2.69	N
													1,3,5-Triazin	4719-04-4	≤0.3	0.30	0.30	0.01	0.13	0.27	N

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	**Sherwin Williams**	**Bulkhead Gray**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**95.68%**	**54**	**10.44**	**3.45**	**34.50**										
			N41A350										Aluminum Hy	21645-51-2	≥10 - ≤25	25.00	25.00	0.90	9.00	90.05	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	25.00	0.90	9.00	90.05	N
													Propylene G	57-55-6	≤3	3.00	3.00	0.11	1.08	10.81	N
													Carbon Blac	1333-86-4	≤0.3	0.30	0.30	0.01	0.11	1.08	N
													1,3,5-Triazin	4719-04-4	≤0.3	0.30	0.30	0.01	0.11	1.08	N
NOVA-PLATE UHS PRIMER EPOXY B62H220/B62V221	**Sherwin Williams**	**BUFF**		**4:1**		**SPRAY ONLY**	**97.39%**	**35**	**11.20**	**3.45**	**6.90**										
			B62H220	4	48				11.93				Phenol, poly	28064-14-4	≥50 - ≤75	75.00	64.41	0.03	0.35	0.70	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.47	0.01	0.12	0.23	N
													Phenylmetha	100-51-6	≤10	10.00	8.59	0.00	0.05	0.09	N
													Titanium Dio	1317-80-2	≤5	5.00	4.29	0.00	0.02	0.05	N
													Titanium Dio	13463-67-7	≤3	3.00	2.58	0.00	0.01	0.03	N
												Solid	Crystalline S	14808-60-7	≤0.3	0.30	0.26	1.39E-04	1.39E-03	2.79E-03	Y
			B62V221	1	8				7.84				Cyclohexana	6864-37-5	≥75 - ≤90	90.00	12.70	0.49	4.91	9.82	N
												Liquid	Methyl Ethyl	78-93-3	≤10	10.00	1.41	0.05	0.55	1.09	Y
													2,4,6-tris(dim	90-72-2	≤8.8	8.80	1.24	0.05	0.48	0.96	N
													Phenylmetha	100-51-6	≤3	3.00	0.42	0.02	0.16	0.33	N
													Aminoethylat	1760-24-3	<1	1.00	0.14	0.01	0.05	0.11	N
NOVA-PLATE UHS EPOXY B62W220/B62V221	**Sherwin Williams**	**OFF WHITE**		**4:1**		**SPRAY ONLY**	**97.28%**	**36**	**11.06**	**7.76**	**15.53**										
			B62W220	4	47				11.85				Phenol, poly	28064-14-4	≥50 - ≤75	75.00	64.35	0.08	0.77	1.55	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.45	0.03	0.26	0.52	N
													Phenylmetha	100-51-6	≤10	10.00	8.58	0.01	0.10	0.21	N
													Titanium Dio	13463-67-7	≤10	10.00	8.58	0.01	0.10	0.21	N
												Solid	Crystalline S	14808-60-7	≤0.3	0.30	0.26	3.09E-04	3.09E-03	0.01	Y
			B62V221	1	8				7.84				Cyclohexana	6864-37-5	≥75 - ≤90	90.00	12.78	1.10	10.97	21.94	N
												Liquid	Methyl Ethyl	78-93-3	≤10	10.00	1.42	0.12	1.22	2.44	Y
													2,4,6-tris(dim	90-72-2	≤8.8	8.80	1.25	0.11	1.07	2.15	N
													Phenylmetha	100-51-6	≤3	3.00	0.43	0.04	0.37	0.73	N
													Aminoethylat	1760-24-3	<1	1.00	0.14	0.01	0.12	0.24	N
SHERPLATE PW POTABLE WATER EPOXY OAP WHITE B62W260/B62V265	**Sherwin Williams**	**OAP WHITE**		**1:1**		**SPRAY ONLY**	**94.60%**	**76**	**11.75**	**3.45**	**34.50**										
			B62W260	1	14				13.85				Styrenated-P	61788-44-1	≥10 - ≤25	25.00	14.77	0.60	5.99	59.87	N
													Phenylmetha	100-51-6	≤10	10.00	5.91	0.24	2.39	23.95	N
													Titanium Dio	13463-67-7	≤10	10.00	5.91	0.24	2.39	23.95	N
													1,3-Benzene	1477-55-0	≤10	10.00	5.91	0.24	2.39	23.95	N
													Cyclohexane	2579-20-6	≤8.8	8.80	5.20	0.21	2.11	21.07	N
			B62V265	1	10				9.60				Epoxy Polym	1675-54-3	≥75 - ≤90	90.00	36.83	1.49	14.93	149.31	N
													Alkyl Glycidy	17557-23-2	≥10 - ≤25	25.00	10.23	0.41	4.15	41.48	N
SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	**Sherwin Williams**	**WHITE FS27880**		**n/a**		**BRUSH, ROLL, OR SPRAY**	**96.46%**	**44**	**10.37**	**0.43**	**0.86**										
			N41W350										Aluminum Hy	21645-51-2	≥10 - ≤25	25.00	25.00	0.11	1.12	2.24	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	25.00	0.11	1.12	2.24	N
													Propylene G	57-55-6	≤3	3.00	3.00	0.01	0.13	0.27	N
													Decylpoly(et	9014-85-1	<3	3.00	3.00	0.01	0.13	0.27	N
													1,3,5-Triazin	4719-04-4	≤0.3	0.30	0.30	0.00	0.01	0.03	N

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (DARK GRAY FS26008)	**Sherwin Williams**	**DARK GRAY FS26008**		**4:1**		**BRUSH, ROLL**	**92.56%**	**100**	**11.22**	**0.86**	**1.73**										
			B80AW451	4	45				11.35				Epoxy Polym	30583-72-3	≥25 - ≤50	50.00	42.54	0.00	0.00	0.00	N
													Amorphous F	112926-00-8	≤10	10.00	8.51	0.00	0.00	0.00	N
													Titanium Dio	13463-67-7	≤5	5.00	4.25	0.00	0.00	0.00	N
													Bis(pentame	41556-26-7	≤5	5.00	4.25	0.00	0.00	0.00	N
												Solid	Chromium gr	68909-79-5	≤3	3.00	2.55	0.00E+00	0.00E+00	0.00E+00	Y
													Methyl penta	82919-37-7	≤3	3.00	2.55	0.00	0.00	0.00	N
												Liquid	Toluene	108-88-3	≤0.3	0.30	0.26	2.47E-03	0.02	0.05	Y
			B80V500	1	8				7.96				Triethyoxysil	919-30-2	≥90	90.00	13.43	0.13	1.30	2.60	N
													Dibutyltin Dil	77-58-7	≤10	10.00	1.49	0.01	0.14	0.29	N
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	**Sherwin Williams**	**DARK GRAY FS16081**		**N/A**		**BRUSH, ROLL, OR SPRAY**	**76.57%**	**315**	**11.22**	**3.45**	**6.90**										
			N40A203						9.35				Talc	14807-96-6	≤10	10.00	10.000	0.39	3.87	7.74	N
													Med. Aliphati	64742-88-7	≤8.7	8.70	8.700	0.34	3.37	6.74	N
													Light Aromat	64742-95-6	≤7.8	7.80	7.800	0.30	3.02	6.04	N
													Titanium Dio	13463-67-7	≤5	5.00	5.000	0.19	1.94	3.87	N
												Liquid	trimethylbenz	25551-13-7	≤5	5.00	5.00	0.19	1.94	3.87	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤1.7	1.70	1.70	0.07	0.66	1.32	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤1.7	1.70	1.70	0.07	0.66	1.32	Y
												Liquid	Xylene, mixe	1330-20-7	<1	1.00	1.00	0.04	0.39	0.77	Y
													Carbon Black	1333-86-4	≤1	1.00	1.000	0.04	0.39	0.77	N
												Liquid	1,2,3-Trimeth	526-73-8	<1	1.00	1.00	0.04	0.39	0.77	Y
													Cumene	98-82-8	<1	1.00	1.000	0.04	0.39	0.77	N
													Hydrotreated	64742-48-9	≤1	1.00	1.000	0.04	0.39	0.77	N
													Zirconium 2-	22464-99-9	≤0.3	0.30	0.300	0.01	0.12	0.23	N
													Methyl Ethyl	96-29-7	≤0.3	0.30	0.300	0.01	0.12	0.23	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.30	0.01	0.12	0.23	Y
												Solid	Cobalt 2-Eth	136-52-7	≤0.3	0.30	0.30	1.63E-04	1.63E-03	3.25E-03	Y
													Light Aliphati	64742-47-8	≤0.3	0.30	0.300	0.01	0.12	0.23	N
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	**Sherwin Williams**	**GLOSS BLACK FS17038**		**N/A**		**BRUSH, ROLL, OR SPRAY**	**72.80%**	**293**	**8.99**	**3.45**	**6.90**										
			N40B100										Med. Aliphati	64742-88-7	≤14	14.00	14.000	0.43	4.34	8.68	N
													Calcium Carl	1317-65-3	≤10	10.00	10.000	0.31	3.10	6.20	N
													Light Aromat	64742-95-6	≤5.7	5.70	5.700	0.18	1.77	3.54	N
												Liquid	trimethylbenz	25551-13-7	≤3	3.00	3.00	0.09	0.93	1.86	Y
													Carbon Black	1333-86-4	≤3	3.00	3.000	0.09	0.93	1.86	N
												Liquid	1,3,5-Trimeth	108-67-8	≤3	3.00	3.00	0.09	0.93	1.86	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤3	3.00	3.00	0.09	0.93	1.86	Y
													Zirconium 2-	22464-99-9	≤1	1.00	1.000	0.03	0.31	0.62	N
												Liquid	Xylene, mixe	1330-20-7	<1	1.00	1.00	0.03	0.31	0.62	Y
													Hydrotreated	64742-48-9	≤1	1.00	1.000	0.03	0.31	0.62	N
													Methyl Ethyl	96-29-7	<1	1.00	1.000	0.03	0.31	0.62	N
												Liquid	1,2,3-Trimeth	526-73-8	<1	1.00	1.00	0.03	0.31	0.62	Y
													Cumene	98-82-8	<1	1.00	1.000	0.03	0.31	0.62	N
												Solid	Cobalt 2-Eth	136-52-7	≤0.3	0.30	0.30	1.30E-04	1.30E-03	2.61E-03	Y
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.30	0.01	0.09	0.19	Y
													Calcium 2-Et	136-51-6	≤0.3	0.30	0.300	0.01	0.09	0.19	N
													2-(2-Methoxy	111-77-3	≤0.3	0.30	0.300	0.01	0.09	0.19	N
MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	**Sherwin Williams**	**GLOSS RED FS11105**		**N/A**		**BRUSH, ROLL, OR SPRAY**	**74.77%**	**283**	**9.36**	**3.45**	**6.90**										
			N40R100						9.35				Med. Aliphati	64742-88-7	≤13	13.00	13.000	0.42	4.20	8.40	N
													Calcium Carl	1317-65-3	≤10	10.00	10.000	0.32	3.23	6.46	N
													Light Aromat	64742-95-6	≤6.5	6.50	6.500	0.21	2.10	4.20	N
													Quinacridone	1047-16-1	≤10	10.00	10.000	0.32	3.23	6.46	N
												Liquid	trimethylbenz	25551-13-7	≤3	3.00	3.00	0.10	0.97	1.94	Y
												Liquid	1,3,5-Trimeth	108-67-8	≤3	3.00	3.00	0.10	0.97	1.94	Y
												Liquid	1,2,4-Trimeth	95-63-6	≤3	3.00	3.00	0.10	0.97	1.94	Y
													Titanium Dio	13463-67-7	≤3	3.00	3.000	0.10	0.97	1.94	N
												Liquid	Xylene, mixe	1330-20-7	<1	1.00	1.00	0.03	0.32	0.65	Y
													Zirconium 2-	22464-99-9	≤1	1.00	1.000	0.03	0.32	0.65	N
													Hydrotreated	64742-48-9	≤1	1.00	1.000	0.03	0.32	0.65	N
												Liquid	1,2,3-Trimeth	526-73-8	<1	1.00	1.00	0.03	0.32	0.65	Y
													Cumene	98-82-8	<1	1.00	1.000	0.03	0.32	0.65	N
													Methyl Ethyl	96-29-7	≤0.3	0.30	0.300	0.01	0.10	0.19	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.30	0.01	0.10	0.19	Y
												Solid	Fatty acids, C	68955-83-9	≤0.3	0.30	0.30	1.36E-04	1.36E-03	2.71E-03	Y

OPC Steel Pier_TAC Emissions

Coating Product	Manufacturer	Color	Product Code	Mix Ratio by vol.	Mix Ratio by weight	Application Method	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS #	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
CLEARKIN CORROSION BATTLER BLACK	Sherwin Williams	BLACK		N/A		FLOAT COAT	99.99%	0	7.81	0.86	1.73										
													No. 5 fuel Oil		65.6	65.60					N
													Lanolin	8006-54-0	23.06						N
MIL-DTL-24607B NON-FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	Sherwin Williams	WHITE FS27880		n/a		BRUSH, ROLL, OR SPRAY	86.25%	223	13.53	0.43	0.86										
													Aluminum Hy	21645-51-2	≥10 - ≤25	25.00	25.000	0.15	1.46	2.92	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	25.000	0.15	1.46	2.92	N
												Liquid	p-Chlorobenz	98-56-6	<12	12.00	12.00	0.07	0.70	1.40	Y
													Light Aromat	64742-95-6	≤6.5	6.50	6.500	0.04	0.38	0.76	N
													Calcium Met	13701-64-9	≤5	5.00	5.000	0.03	0.29	0.58	N
			N41W150									Liquid	1,2,4-Trimeth	95-63-6	<2.8	2.80	2.80	0.02	0.16	0.33	Y
													Methyl n-Am	110-43-0	≤3	3.00	3.000	0.02	0.18	0.35	N
													Talc	14807-96-6	≤3	3.00	3.000	0.02	0.18	0.35	N
													Methyl Ethyl	96-29-7	≤0.3	0.30	0.300	0.00	0.02	0.04	N
												Liquid	Xylene, mixe	1330-20-7	≤0.21	0.21	0.21	1.23E-03	0.01	0.02	Y
													Amino Polym	162627-17-0	≤0.3	0.30	0.300	0.00	0.02	0.04	N
													Hydrotreated	64742-48-9	≤0.12	0.12	0.120	0.00	0.01	0.01	N
MIL-DTL-24607B NON- FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	Sherwin Williams	GREEN FS24585		n/a		BRUSH, ROLL, OR SPRAY	86.00%	226	13.47	4.31	8.63										
													Aluminum Hy	21645-51-2	≥10 - ≤25	25.00	25.000	1.45	14.52	29.04	N
													Titanium Dio	13463-67-7	≥10 - ≤25	25.00	25.000	1.45	14.52	29.04	N
												Liquid	p-Chlorobenz	98-56-6	<12	12.00	12.00	0.70	6.97	13.94	Y
													Light Aromat	64742-95-6	≤6.5	6.50	6.500	0.38	3.78	7.55	N
													Calcium Met	13701-64-9	≤5	5.00	5.000	0.29	2.90	5.81	N
			N41G150						13.52			Liquid	1,2,4-Trimeth	95-63-6	<2.8	2.80	2.80	0.16	1.63	3.25	Y
													Methyl n-Am	110-43-0	≤3	3.00	3.000	0.17	1.74	3.49	N
													Methyl Ethyl	96-29-7	≤0.3	0.30	0.300	0.02	0.17	0.35	N
												Liquid	Xylene, mixe	1330-20-7	≤0.22	0.22	0.22	0.01	0.13	0.26	Y
													Amino Polym	162627-17-0	≤0.3	0.30	0.300	0.02	0.17	0.35	N
													Hydrotreated	64742-48-9	≤0.12	0.12	0.120	0.007	0.070	0.1394145	N
Highlighted Cells are TACS per Rule 1200										146.60	1207.53										
										Sum from Provided Usage	146.95	1208.22										
										QA/QC	FALSE	FALSE									

Conversion Factors

119.826	(g/L)/(lbs/gal)
8.345	lbs/gal
2000	lbs/ton

Max Operating Schedule

NO. OF HOURS/DAY:	10

PM Control Efficiency

Overall Emission	0.9

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES						
	LARGE SURFACES		MEDIUM SURFACES			SMALL SURFACES	
	Fallout	Transfer	Fallout	Transfer		Fallout	Transfer
Conventional	50%	50%	65%	30%		70%	20%
Airless	50%	70%	65%	50%		70%	30%
HVLP	50%	75%	65%	60%		70%	40%
Electrostatic							
Air Atomized	70%	75%	80%	65%		80%	65%
Airless	70%	80%	80%	70%		80%	70%
Disc	70%	95%	80%	90%		80%	90%
Brush, Roller & Dip	0%	100%	0%	100%		0%	100%

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/instructions/Painting-and-Surface-Coating-Operations.pdf

Contents	CAS #	lb/hr	lb/day	lb/yr	ton/yr
1,2,3-Trimethylbenze	526-73-8	5.39E-01	5.39E+00	4.95E+01	2.47E-02
1,2,4-Trimethylbenze	95-63-6	1.93E+00	1.93E+01	1.70E+02	8.48E-02
1,3,5-Trimethylbenze	108-67-8	1.57E+00	1.57E+01	1.47E+02	7.37E-02
1-METHOXY 2-PRO	107-98-2	1.39E-01	1.39E+00	1.39E+01	6.95E-03
Antimony Chromium	68186-90-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium green-bla	68909-79-5	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt 2-Ethylhexano	136-52-7	2.93E-04	2.93E-03	5.86E-03	2.93E-06
Crystalline Silica, res	14808-60-7	5.82E-04	5.82E-03	1.16E-02	5.82E-06
Ethylbenzene	100-41-4	4.98E-01	4.98E+00	3.74E+01	1.87E-02
Fatty acids, C9-13-no	68955-83-9	1.36E-04	1.36E-03	2.71E-03	1.36E-06
Methyl Ethyl Ketone	78-93-3	1.76E-01	1.76E+00	3.53E+00	1.76E-03
p-Chlorobenzotrifluo	98-56-6	7.67E-01	7.67E+00	1.53E+01	7.67E-03
Toluene	108-88-3	1.74E-02	1.74E-01	1.16E+00	5.80E-04
trimethylbenzene	25551-13-7	2.57E+00	2.57E+01	2.45E+02	1.22E-01
Xylene, mixed isome	1330-20-7	2.18E+00	2.18E+01	1.69E+02	8.43E-02
	Sum of Summary Ta	10.39	103.91	851.46	0.43
	Sum of Raw Data Ta	10.39	103.91	851.46	0.43
	QA/QC	TRUE	TRUE	TRUE	TRUE

OPC Steel Pier_Criteria Pollutants Emissions

COATING CATEGORY	NAME	COLOR	MANUFACTURER	MAX DAILY USAGE (gal/day)	ANNUAL USAGE (gal/yr)	DENSITY (lb/gal)	FROM MSDS VOC CONTENT (lb/gal)	FROM MSDS VOC CONTENT (g/L)	RULE 67.18 VOC (g/L)	COMPLIANT?	SOLID % WEIGHT	APPLICATION METHOD	PM EMISSIONS RATE[1] (lb/hr)	PM EMISSIONS RATE[1] (lb/day)	PM EMISSIONS RATE[1] (lb/yr)	VOC EMISSIONS RATE (lb/hr)	VOC EMISSIONS RATE (lb/day)	VOC EMISSIONS RATE (lb/yr)
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11A350/N11V350	GRAY	Sherwin Williams	10.83	108.33	11.63	2.09	250.00	280	Yes	82.05%	BRUSH, ROLL,	0.00	0.00	0.00	2.26	22.60	226.02
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11H350/N11V350	BUFF	Sherwin Williams	15.73	157.32	11.98	2.09	250.00	280	Yes	82.58%	BRUSH, ROLL,	0.00	0.00	0.00	3.28	32.82	328.23
High Solids Epoxy Coating	RANDOGRIP NAVY G NON-SKID 600D01/610C01	DARK GRAY FS36076	Randolph Products	1.62	16.22	18.08	1.60	191.72	280	Yes	91.15%	ROLL OR SPRAY	0.37	3.74	37.42	0.26	2.59	25.94
Air Dried Coatings	NCP SILOXOGRIP N-9020 NON-SKID	DARK GRAY FS36076	NCP	9.14	91.43	16.70	1.50	180.00	340	Yes	91.00%	ROLL OR SPRAY	1.95	19.45	194.52	1.37	13.73	137.34
Air Dried Coatings	FAST CLAD ZINC HS B69A352/B69V352	GREEN/GRAY	Sherwin Williams	8.45	84.53	20.00	2.78	333.00	340	Yes	86.10%	SPRAY ONLY	2.04	20.38	203.78	2.35	23.49	234.90
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11R350/N11V350	RED OXIDE	Sherwin Williams	24.92	256.20	11.53	2.09	250.00	280	Yes	81.91%	BRUSH, ROLL, OR SPRAY	3.30	32.96	338.77	5.20	52.00	534.53
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (HAZE GRAY FS26270)	HAZE GRAY FS26270	Sherwin Williams	3.53	35.34	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL[2]	0.00	0.00	0.00	0.29	2.95	29.49
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (RED FS11105)	RED FS11105	Sherwin Williams	0.43	0.86	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL, OR SPRAY	0.06	0.63	1.25	0.04	0.36	0.72
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (WHITE FS17975)	WHITE FS17975	Sherwin Williams	0.43	0.86	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL, OR SPRAY	0.06	0.63	1.25	0.04	0.36	0.72
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (BLUE FS15182)	BLUE FS15182	Sherwin Williams	0.43	0.86	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL, OR SPRAY	0.06	0.63	1.25	0.04	0.36	0.72
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (YELLOW FS13538)	YELLOW FS13538	Sherwin Williams	0.43	0.86	9.88	0.73	87.00	340	Yes	92.65%	BRUSH, ROLL[2]	0.00	0.00	0.00	0.03	0.31	0.63
Air Dried Coatings	SHERGLASS FLAKE FILLED EPOXY B62B525/B62V525	BLACK	Sherwin Williams	2.59	5.18	11.50	1.84	220.00	340	Yes	84.03%	BRUSH, ROLL, OR SPRAY	0.35	3.50	7.00	0.48	4.75	9.50
Air Dried Coatings	SHERGLASS FLAKE FILLED EPOXY B62R525/B62V525	RED OXIDE	Sherwin Williams	0.86	1.73	11.74	1.79	214.00	340	Yes	84.79%	BRUSH OR ROLL	0.00	0.00	0.00	0.15	1.54	3.08
Air Dried Coatings	SHERGLASS FLAKE FILLED EPOXY B62A525/B62V525	GRAY	Sherwin Williams	2.59	5.18	11.62	1.99	239.00	340	Yes	82.84%	BRUSH, ROLL, OR SPRAY	0.35	3.49	6.97	0.52	5.16	10.32
High Solids Epoxy Coating	SEAGUARD 5000 HS EPOXY N11W350/N11V350	OFF WHITE	Sherwin Williams	24.92	308.10	11.91	2.09	250.00	280	Yes	82.48%	BRUSH, ROLL, OR SPRAY	3.43	34.28	423.79	5.20	52.00	642.81
Specialty Interior Coating	SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	GREEN FS24585	Sherwin Williams	4.31	8.63	10.41	0.45	54.00	340	Yes	95.67%	BRUSH, ROLL, OR SPRAY	0.60	6.01	12.03	0.19	1.94	3.89
Specialty Interior Coating	SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	Bulkhead Gray	Sherwin Williams	3.45	34.50	10.41	0.45	54.00	340	Yes	95.67%	BRUSH, ROLL, OR SPRAY	0.48	4.81	48.10	0.16	1.55	15.55

OPC Steel Pier_Criteria Pollutants Emissions

COATING CATEGORY	NAME	COLOR	MANUFACTURER	MAX DAILY USAGE (gal/day)	ANNUAL USAGE (gal/yr)	DENSITY (lb/gal)	FROM MSDS VOC CONTENT (lb/gal)	(g/L)	RULE 67.18 VOC (g/L)	COMPLIANT?	SOLID % WEIGHT	APPLICATION METHOD	PM EMISSIONS RATE[1] (lb/hr)	(lb/day)	(lb/yr)	VOC EMISSIONS RATE (lb/hr)	(lb/day)	(lb/yr)
High Solids Epoxy Coating	NOVA-PLATE UHS PRIMER EPOXY B62H220/B62V221	BUFF	Sherwin Williams	3.45	6.90	11.20	0.29	35.00	280	Yes	97.39%	SPRAY ONLY	0.53	5.27	10.54	0.10	1.01	2.02
High Solids Epoxy Coating	NOVA-PLATE UHS EPOXY B62W220/B62V221	OFF WHITE	Sherwin Williams	7.76	15.53	11.06	0.30	36.00	280	Yes	97.28%	SPRAY ONLY	1.17	11.69	23.39	0.23	2.33	4.66
High Solids Epoxy Coating	SHERPLATE PW POTABLE WATER EPOXY OAP WHITE B62W260/B62V265	OAP WHITE	Sherwin Williams	3.45	34.50	11.75	0.63	76.00	280	Yes	94.60%	SPRAY ONLY	0.54	5.37	53.69	0.22	2.19	21.88
Specialty Interior Coating	SEAGUARD 2400 MIL-PRF-24695 NON-FLAMING WB ENAMEL N41-350 SERIES	WHITE FS27880	Sherwin Williams	0.43	0.86	10.41	0.45	54.00	340	Yes	95.67%	BRUSH, ROLL, OR SPRAY	0.06	0.60	1.20	0.02	0.19	0.39
Air Dried Coatings	SHERLOXANE 800 POLYSILOXANE B80-450 & B80-500 Series (DARK GRAY FS26008)	DARK GRAY FS26008	Sherwin Williams	0.86	1.73	11.22	0.83	100.00	340	Yes	92.56%	BRUSH, ROLL[2]	0.00	0.00	0.00	0.07	0.72	1.44
Specialty Interior Coating	MIL-DTL-24607B NON- FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	GREEN FS24585	Sherwin Williams	4.31	8.63	13.47	1.89	226.00	340	Yes	86.00%	BRUSH, ROLL, OR SPRAY	0.70	6.99	13.99	0.81	8.13	16.27
Air Dried Coatings	MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	DARK GRAY FS16081	Sherwin Williams	3.45	6.90	11.22	2.63	315.00	340	Yes	76.57%	BRUSH, ROLL, OR SPRAY	0.41	4.15	8.30	0.91	9.07	18.14
Air Dried Coatings	MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	GLOSS BLACK FS17038	Sherwin Williams	3.45	6.90	11.22	2.63	315.00	340	Yes	76.57%	BRUSH, ROLL, OR SPRAY	0.41	4.15	8.30	0.91	9.07	18.14
Air Dried Coatings	MIL-PRF-24635E TY2 CL1 SILICONE ALKYD	GLOSS RED FS11105	Sherwin Williams	3.45	6.90	11.22	2.63	315.00	340	Yes	76.57%	BRUSH, ROLL, OR SPRAY	0.41	4.15	8.30	0.91	9.07	18.14
Air Dried Coatings	CLEARKIN CORROSION BATTLER BLACK	BLACK	Sherwin Williams	0.86	1.73	7.81	0.00	0.10	340	Yes	99.99%	FLOAT COAT	0.00	0.00	0.00	0.00	0.00	0.00
Specialty Interior Coating	MIL-DTL-24607B NON-FLAMING CHLORINATED ALKYD ENAMEL N41-150 SERIES	WHITE FS27880	Sherwin Williams	0.43	0.86	13.53	1.86	223.00	340	Yes	86.25%	BRUSH, ROLL, OR SPRAY	0.07	0.70	1.41	0.08	0.80	1.61

Note:
1. For application methods (column M) that contain "spray", assume all usage is applied by spray application to conservatively estimate PM emissions.
2. Materials contain NESHAP 6H targeted toxic metals, highlighted in green, can only be applied by hand application.

146.60	1207.53
146.60	1207.53
TRUE	TRUE

Max Operating Schedule

NO. OF HOURS/DAY:	10

Conversions

1	pound/gallon	=	119.826	gram/liter
1	ton	=	2000	pounds

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	Large Surfaces		Medium Surfaces		Small Surfaces	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	50%	75%	65%	60%	70%	40%
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	0%	100%	0%	100%	0%	100%

Potential To Emit: (w/o PM Control)			
PM (LB/HR)	17.36	VOC (LB/HR)	26.11
PM (LB/DAY)	173.58	VOC (LB/DAY)	**261.12**
PM (LB/YR)	1405.27	VOC (LB/YR)	2307.05
PM (TON/YR)	0.70	VOC (TON/YR)	1.15

LCS Aluminum DSRA_TAC Emissions

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Intergard 264 (Red)	**International Paint**						**88.60%**	**194**	**14.20**	**6.38**	**25.50**										
													Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	4.02	40.22	160.87	N
													Barium sulfate	7727-43-7	10 - 25	25.00	22.21	2.01	20.11	80.44	N
													Oxirane, 2,2'-4-butylidenebisphenyleneoxymethylene (DGEBA)	25085-99-8	10 - 25	25.00	22.21	2.01	20.11	80.44	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	Y
Intergard 264 (Red)	International Paint	FPL274	4	63.09	A				15.77				EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Iron oxide	1309-37-1	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	Y
													Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.51	5.05	20.22	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.25	2.53	10.11	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.25	2.53	10.11	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.25	2.53	10.11	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				2,4,6-Tri(dimethylaminomethyl) phenol	90-72-2	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.01	0.10	0.40	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.01	0.10	0.40	N
Intergard 264 (Black)	**International Paint**						**88.60%**	**194**	**14.20**	**11.40**	**45.60**										
													Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	7.19	71.92	287.68	N
													Barium sulfate	7727-43-7	25 - 50	50.00	44.42	7.19	71.92	287.68	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	10 - 25	25.00	22.21	3.60	35.96	143.84	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	Y
Intergard 264 (Black)	International Paint	FPY999	4	63.09	A				15.77				EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	Y
													Carbon black	1333-86-4	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
													Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.90	9.04	36.15	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.45	4.52	18.08	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.45	4.52	18.08	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.45	4.52	18.08	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				2,4,6-Tri(dimethylaminomethyl) phenol	90-72-2	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.02	0.18	0.72	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.02	0.18	0.72	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Intershield 5150LWT (Dark Gray)	**International Paint**						**90.74%**	**145**	**13.07**	**34.28**	**137.10**										
Intershield 5150LWT (Dark Gray)	International Paint	EGA515	4	56.75	A				14.19				Nepheline syenite	37244-96-5	10 - 25	25.00	21.71	0.00	0.00	0.00	N
													Borosilicate glass	65997-17-3	10 - 25	25.00	21.71	0.00	0.00	0.00	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Wollastonite	13983-17-0	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Magnesium silicate talc	14807-96-6	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													1,2,3-Propanetriyl ester of 12-(oxiranylmethoxy)-9-octadecanoic acid	74398-71-3	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
												Solid	Chromium Iron Oxide	12737-27-8	1.0 - 10	10.00	8.68	0.00E+00	0.00E+00	0.00E+00	Y
													Titanium dioxide	13463-67-7	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
INTERSHIELD 5150LWT	International Paint	EGA519	1	8.60	B				8.60				Butyl alcohol, n	71-36-3	10 - 25	25.00	3.29	1.47	14.73	58.92	N
													Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2	10 - 25	25.00	3.29	1.47	14.73	58.92	N
													Wollastonite	13983-17-0	10 - 25	25.00	3.29	1.47	14.73	58.92	N
													2,4,6-Tri(dimethylaminomethyl) phenol	90-72-2	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	1.32	0.59	5.89	23.57	Y
													4,4'-Diaminodicyclohexylmethane	1761-71-3	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
													Triethylene tetramine	112-24-3	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
												Liquid	1,3,5-trimethylbenzene	108-67-8	1.0 - 10	10.00	1.32	0.59	5.89	23.57	Y
												Solid	Crystalline Silica - Quartz	14808-60-7	0.10 - 1.0	1.00	0.13	8.25E-04	0.01	0.03	Y
Interthane 990 (Dark Gray)	**International Paint**						**61.96%**	**420**	**9.22**	**11.40**	**45.60**										
Interthane 990 (Dark Gray)	International Paint	PHY69E	6	55.58	A				9.26				Solvent naphtha (petroleum), light arom.	64742-95-6	≥10 - <15	15.00	12.92	1.36	13.58	54.31	N
												Liquid	xylene	1330-20-7	≥10 - <21	21.00	18.09	1.90	19.01	76.03	Y
												Liquid	1,2,4-trimethylbenzene	95-63-6	≥5 - <7.9	7.90	6.81	0.72	7.15	28.60	Y
												Liquid	ethylbenzene	100-41-4	≥2 - <3	3.00	2.58	0.27	2.72	10.86	Y
													2-methoxy-1-methylethyl acetate	108-65-6	≥1 - <3	3.00	2.58	0.27	2.72	10.86	N
												Liquid	mesitylene	108-67-8	≥1 - <1.9	1.90	1.64	0.17	1.72	6.88	Y
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	13.84	0.12	1.18	4.71	Y
													solvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.46	0.03	0.29	1.18	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.38	0.15	1.45	5.82	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.35	0.04	0.36	1.45	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.14	1.18E-03	0.01	0.05	Y

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Interthane 990 (Red)	**International Paint**						**62.22%**	**420**	**9.28**	**0.60**	**0.60**										
Interthane 990 (Red)	International Paint	PHA066	6	56.02	A				9.34			Liquid	Pseudocumene	95-63-6	1.0 - 10	10.00	8.63	0.05	0.48	0.48	Y
												Liquid	Ethyl benzene	100-41-4	1.0 - 10	10.00	8.63	0.05	0.48	0.48	Y
													Propylene glycol monomethyl ether acetate	108-65-6	1.0 - 10	10.00	8.63	0.05	0.48	0.48	N
													n-Butyl acetate	123-86-4	1.0 - 10	10.00	8.63	0.05	0.48	0.48	N
													Limestone	1317-65-3	10 - 25	25.00	21.56	0.12	1.20	1.20	N
												Liquid	Xylenes	1330-20-7	10 - 25	25.00	21.56	0.12	1.20	1.20	Y
												Liquid	Trimethyl benzene	25551-13-7	10 - 25	25.00	21.56	0.12	1.20	1.20	Y
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	13.75	0.01	0.06	0.06	Y
													solvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.44	0.00	0.02	0.02	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.37	0.01	0.08	0.08	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.34	1.91E-03	0.02	0.02	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.14	6.20E-05	6.20E-04	6.20E-04	Y
Interthane 990 (Yellow)	**International Paint**						**63.11%**	**420**	**9.50**	**0.60**	**0.60**										
Interthane 990 (Yellow)	International Paint	PHA055	6	57.58	A				9.60			Liquid	Benzene, 1,2,4−trimethyl−	95-63-6	1.0 − 10	10.00	8.66	4.94E-02	0.49	0.49	Y
												Liquid	Benzene, ethyl−	100-41-4	1.0 − 10	10.00	8.66	4.94E-02	0.49	0.49	Y
													Propylene glycol monomethyl ether acetate	108-65-6	1.0 − 10	10.00	8.66	0.05	0.49	0.49	N
													BUTYL ACETATE	123-86-4	1.0 − 10	10.00	8.66	0.05	0.49	0.49	N
													Limestone	1317-65-3	10 − 25	25.00	21.64	0.12	1.23	1.23	N
												Liquid	Xylenes (o−, m−, p− isomers)	1330-20-7	10 − 25	25.00	21.64	0.12	1.23	1.23	Y
													Titanium dioxide	13463-67-7	1.0 − 10	10.00	8.66	0.05	0.49	0.49	N
												Solid	Quartz	14808-60-7	0.10 − 1.0	1.00	0.87	6.91E-05	6.91E-04	6.91E-04	Y
													Petroleum naphtha, light aromatic	64742-95-6	10 − 25	25.00	21.64	0.12	1.23	1.23	N
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	13.43	0.01	0.06	0.06	Y
													solvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.36	0.00	0.02	0.02	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.34	0.01	0.08	0.08	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.34	0.00	0.02	0.02	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.13	6.20E-05	6.20E-04	6.20E-04	Y
Interthane 990 (White)	**International Paint**						**65.69%**	**420**	**10.22**	**1.50**	**1.50**										
Interthane 990 (White)	International Paint	PHB000	6	62.59	A				10.43				Acrylic Polymer	9047-32-9	25- <50	50.00	43.76	0.67	6.71	6.71	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	21.88	0.34	3.35	3.35	N
												Liquid	Xylene	1330-20-7	10- <25	25.00	21.88	0.34	3.35	3.35	Y
													1-Methoxy-2-propyl acetate	108-65-6	2.5- <10	10.00	8.75	0.13	1.34	1.34	N
												Liquid	Ethyl Benzene	100-41-4	2.5- <10	10.00	8.75	0.13	1.34	1.34	Y
													Zirconium, adipate chloro hydroxy propylene glycol aluminum complexes	125904-14-5	1- <2.5	2.50	2.19	0.03	0.34	0.34	N
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	12.49	0.02	0.15	0.15	Y
													solvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.12	0.05	0.48	0.48	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.25	0.02	0.19	0.19	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.31	4.78E-03	0.05	0.05	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.12	1.55E-04	1.55E-03	1.55E-03	Y

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Nova-Plate UHS Primer (Buff)	**SHERWIN-WILLIAMS**						**96.74%**	**43.8**	**11.20**	**0.12**	**0.12**										
Nova-Plate UHS Primer (Buff)	SHERWIN-WILLIAMS	B62H220	4	47.80	A			35	11.95				Phenol, polymer with formaldehyde, glycidylether	28064-14-4	≥50 - ≤75	75.00	64.46	0.00	0.01	0.01	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.49	0.00	0.00	0.00	N
													Phenylmethanol	100-51-6	≤10	10.00	8.59	0.00	0.00	0.00	N
													Titanium Dioxide, Rutile	1317-80-2	≤5	5.00	4.30	0.00	0.00	0.00	N
													Titanium Dioxide	13463-67-7	≤3	3.00	2.58	0.00	0.00	0.00	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.26	4.85E-06	4.85E-05	4.85E-05	Y
NOVA-PLATE® UHS Ultra High Solids Epoxy (Part B), Standard Hardener	SHERWIN-WILLIAMS	B62V221	1	7.82	B			79	7.82				Cyclohexanamine	6864-37-5	≥75 - ≤90	90.00	12.65	0.02	0.17	0.17	N
												Liquid	Methyl Ethyl Ketone	78-93-3	≤10	10.00	1.41	1.89E-03	0.02	0.02	Y
													Tri(dimethylaminomethyl) phenol	90-72-2	≤10	10.00	1.41	0.00	0.02	0.02	N
													Phenylmethanol	100-51-6	≤3	3.00	0.42	0.00	0.01	0.01	N
													Aminoethylaminopropyltri methoxysilane	1760-24-3	<1	1.00	0.14	0.00	0.00	0.00	N
Nova-Plate UHS Epoxy (Light Gray)	**SHERWIN-WILLIAMS**						**96.58%**	**45.4**	**11.09**	**0.06**	**0.06**										
Nova-Plate UHS Epoxy (Light Gray)	SHERWIN-WILLIAMS	B62A220	4	47.24	A			37	11.81				Phenol, polymer with formaldehyde, glycidylether	28064-14-4	≥50 - ≤75	75.00	64.35	0.00	0.01	0.01	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.45	0.00	0.00	0.00	N
													Phenylmethanol	100-51-6	≤10	10.00	8.58	0.00	0.00	0.00	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.58	0.00	0.00	0.00	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.26	2.40E-06	2.40E-05	2.40E-05	Y
NOVA-PLATE® UHS Ultra High Solids Epoxy (Part B), Standard Hardener	SHERWIN-WILLIAMS	B62V221	1	7.82	B			79	7.82				Cyclohexanamine	6864-37-5	≥75 - ≤90	90.00	12.78	0.01	0.09	0.09	N
												Liquid	Methyl Ethyl Ketone	78-93-3	≤10	10.00	1.42	9.45E-04	0.01	0.01	Y
													Tri(dimethylaminomethyl) phenol	90-72-2	≤10	10.00	1.42	0.00	0.01	0.01	N
													Phenylmethanol	100-51-6	≤3	3.00	0.43	0.00	0.00	0.00	N
													Aminoethylaminopropyltri methoxysilane	1760-24-3	<1	1.00	0.14	0.00	0.00	0.00	N
Nova-Plate UHS Epoxy (White)	**SHERWIN-WILLIAMS**						**96.63%**	**44.6**	**11.06**	**0.24**	**0.24**										
Nova-Plate UHS Epoxy (White)	SHERWIN-WILLIAMS	B62W220	4	47.24	A			36	11.81				Phenol, polymer with formaldehyde, glycidylether	28064-14-4	≥50 - ≤75	75.00	64.35	0.00	0.02	0.02	N
													Talc	14807-96-6	≥10 - ≤25	25.00	21.45	0.00	0.01	0.01	N
													Phenylmethanol	100-51-6	≤10	10.00	8.58	0.00	0.00	0.00	N
													Titanium Dioxide	13463-67-7	≤10	10.00	8.58	0.00	0.00	0.00	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤0.3	0.30	0.26	9.57E-06	9.57E-05	9.57E-05	Y
NOVA-PLATE® UHS Ultra High Solids Epoxy (Part B), Standard Hardener	SHERWIN-WILLIAMS	B62V221	1	7.82	B			79	7.82				Cyclohexanamine	6864-37-5	≥75 - ≤90	90.00	12.78	0.03	0.34	0.34	N
												Liquid	Methyl Ethyl Ketone	78-93-3	≤10	10.00	1.42	3.77E-03	0.04	0.04	Y
													Tri(dimethylaminomethyl) phenol	90-72-2	≤10	10.00	1.42	0.00	0.04	0.04	N
													Phenylmethanol	100-51-6	≤3	3.00	0.43	0.00	0.01	0.01	N
													Aminoethylaminopropyltri methoxysilane	1760-24-3	<1	1.00	0.14	0.00	0.00	0.00	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Sherwin Williams SeaGuard 5000 HS (Red)	**SHERWIN-WILLIAMS**					**79.00%**	**81.90%**	**250**	**11.53**	**9.64**	**48.18**										
Sherwin Williams SeaGuard 5000 HS (Red)	SHERWIN-WILLIAMS	N11R350	1	11.63	A			381	11.63				Talc	14807-96-6	≥25 - ≤50	50.00	25.22	2.80	28.02	140.08	N
													1-Butanol	71-36-3	≥10 - ≤24	24.00	12.10	1.34	13.45	67.24	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.61	1.40	14.01	70.04	N
													Phenylmethanol	100-51-6	≤10	10.00	5.04	0.56	5.60	28.02	N
													Iron Oxide	1309-37-1	≤10	10.00	5.04	0.56	5.60	28.02	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.51	0.17	1.68	8.41	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.50	0.06	0.56	2.80	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.15	0.02	0.17	0.84	N
Sherwin Williams SeaGuard 5000 HS Part B	SHERWIN-WILLIAMS	N11V350	1	11.43	B			204	11.43				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	24.78	2.75	27.53	137.67	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.78	2.75	27.53	137.67	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	4.96	0.55	5.51	27.53	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.48	0.28	2.75	13.77	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.49	0.17	1.65	8.26	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.49	0.17	1.65	8.26	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.50	0.06	0.55	2.75	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.50	0.06	0.55	2.75	Y
													Cumene	98-82-8	<1	1.00	0.50	0.06	0.55	2.75	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	0.02	0.17	0.83	Y
Sherwin Williams SeaGuard Tie Coat (Yellow)	**SHERWIN-WILLIAMS**						**75.73%**	**340**	**11.69**	**9.62**	**48.12**										
Sherwin Williams SeaGuard Tie Coat (Yellow)	SHERWIN-WILLIAMS	P23Y00001	7	85.47	A			382	12.21				Talc	14807-96-6	≥10 - ≤25	25.00	22.85	2.57	25.71	128.53	N
													Aluminum Oxide	1344-28-1	≥10 - ≤25	25.00	22.85	2.57	25.71	128.53	N
												Liquid	Xylene, mixed isomers	1330-20-7	≥10 - ≤25	25.00	22.85	2.57	25.71	128.53	Y
													Methylstyrenated Phenolic Resin	68512-30-1	≤10	10.00	9.14	1.03	10.28	51.41	N
													Epoxy Polymer	25068-38-6	≤10	10.00	9.14	1.03	10.28	51.41	N
													Epoxy Polymer	25068-38-6	≤5	5.00	4.57	0.51	5.14	25.71	N
													Titanium Dioxide	13463-67-7	≤3	3.00	2.74	0.31	3.08	15.42	N
													1-Butanol	71-36-3	<3	3.00	2.74	0.31	3.08	15.42	N
												Liquid	t-Butyl Acetate	540-88-5	≤3	3.00	2.74	0.31	3.08	15.42	Y
												Solid	Crystalline Silica, respirable powder	14808-60-7	≤3	3.00	2.74	4.32E-03	0.04	0.22	Y
												Liquid	Ethylbenzene	100-41-4	≤3	3.00	2.74	0.31	3.08	15.42	Y
													Methyl Isobutyl Ketone	108-10-1	<1	1.00	0.91	0.10	1.03	5.14	N
SEAGUARD® TIE COAT (PART B), HARDENER	SHERWIN-WILLIAMS	P23V00001	1	8.05	B			221	8.05			Liquid	Xylene, mixed isomers	1330-20-7	≤10	10.00	0.86	0.10	0.97	4.84	Y
													1-Butanol	71-36-3	≤10	10.00	0.86	0.10	0.97	4.84	N
													1,3-Benzenedimethanamine	1477-55-0	≤7.5	7.50	0.65	0.07	0.73	3.63	N
													Methyl Isobutyl Ketone	108-10-1	≤7.6	7.60	0.65	0.07	0.74	3.68	N
													2,4,6-tris(dimethylaminomethyl) phenol	90-72-2	≤4.5	4.50	0.39	0.04	0.44	2.18	N
													3,3'-oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	≤5	5.00	0.43	0.05	0.48	2.42	N
												Liquid	Ethylbenzene	100-41-4	≤1.5	1.50	0.13	0.01	0.15	0.73	Y
Sherwin Williams SeaVoyage Copper Free Antifouling (Red)	**SHERWIN-WILLIAMS**	**N51R301**					**80.19%**	**314**	**13.23**	**9.62**	**48.12**										
													Zinc Oxide	1314-13-2	≥25 - ≤50	50.00	50.00	6.37	63.66	318.31	N
													Rosin	8050-09-7	≥10 - ≤25	25.00	25.00	3.18	31.83	159.16	N
													Calcium Carbonate	1317-65-3	≤10	10.00	10.00	1.27	12.73	63.66	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	10.00	1.27	12.73	63.66	N
													Chlorophenyl-cyano-bromo-trifluoromethyl Pyrrole	122454-29-9	≤9.7	9.70	9.70	1.24	12.35	61.75	N
													Zinc Pyrithione	13463-41-7	≤8.5	8.50	8.50	1.08	10.82	54.11	N
													Iron Oxide	1309-37-1	≤10	10.00	10.00	1.27	12.73	63.66	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	5.00	0.64	6.37	31.83	Y
												Liquid	Xylene, mixed isomers	1330-20-7	≤3	5.00	5.00	0.64	6.37	31.83	Y
													Polyaminoamide Salt	-	≤3	3.00	3.00	0.38	3.82	19.10	N
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤2.2	2.20	2.20	0.28	2.80	14.01	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	3.00	0.38	3.82	19.10	Y
												Liquid	Ethylbenzene	100-41-4	<1	1.00	1.00	0.13	1.27	6.37	Y
													Cumene	98-82-8	<1	1.00	1.00	0.13	1.27	6.37	N
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	1.00	0.13	1.27	6.37	Y
													Light Aliphatic Hydrocarbon	64742-47-8	≤0.3	0.30	0.30	0.04	0.38	1.91	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Sherwin Williams SeaVoyage Copper Free Antifouling (Black)	**SHERWIN-WILLIAMS**	**N51B301**					**79.25%**	**317**	**12.75**	**9.62**	**48.12**										
													Zinc Oxide	1314-13-2	≥25 - ≤50	50.00	50.00	6.14	61.35	306.77	N
													Rosin	8050-09-7	≥10 - ≤25	25.00	25.00	3.07	30.68	153.38	N
													Calcium Carbonate	1317-65-3	≥10 - ≤25	25.00	25.00	3.07	30.68	153.38	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	10.00	1.23	12.27	61.35	N
													Chlorophenyl-cyano-bromo-trifluoromethyl Pyrrole	122454-29-9	≤9.7	9.70	9.70	1.19	11.90	59.51	N
													Zinc Pyrithione	13463-41-7	≤8.5	8.50	8.50	1.04	10.43	52.15	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	5.00	0.61	6.14	30.68	Y
												Liquid	Xylene, mixed isomers	1330-20-7	≤3	3.00	3.00	0.37	3.68	18.41	Y
													Polyaminoamide Salt	-	≤3	3.00	3.00	0.37	3.68	18.41	N
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤2.3	2.30	2.30	0.28	2.82	14.11	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	3.00	0.37	3.68	18.41	Y
													Carbon Black	1333-86-4	≤3	3.00	3.00	0.37	3.68	18.41	N
												Liquid	Ethylbenzene	100-41-4	<1	1.00	1.00	0.12	1.23	6.14	Y
													Cumene	98-82-8	<1	1.00	1.00	0.12	1.23	6.14	N
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	1.00	0.12	1.23	6.14	Y
													Light Aliphatic Hydrocarbon	64742-47-8	≤0.3	0.30	0.30	0.04	0.37	1.84	N
Sherwin Williams SeaGuard 5000 HS (Black)	**SHERWIN-WILLIAMS**					**79.00%**	**81.38%**	**250**	**11.21**	**0.12**	**0.12**										
													Talc	14807-96-6	≥25 - ≤50	50.00	24.50	0.03	0.33	0.33	N
													1-Butanol	71-36-3	≥10 - ≤23	23.00	11.27	0.02	0.15	0.15	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.25	0.02	0.16	0.16	N
													Phenylmethanol	100-51-6	≤10	10.00	4.90	0.01	0.07	0.07	N
													Carbon Black	1333-86-4	≤5	5.00	2.45	0.00	0.03	0.03	N
Sherwin Williams SeaGuard 5000 HS (Black)	SHERWIN-WILLIAMS	N11B350	1	10.98	A			378	10.98				Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.47	0.00	0.02	0.02	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.49	0.00	0.01	0.01	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.15	0.00	0.00	0.00	N
													Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	25.50	0.03	0.34	0.34	N
													Talc	14807-96-6	≥25 - ≤50	50.00	25.50	0.03	0.34	0.34	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	5.10	0.01	0.07	0.07	N
Sherwin Williams SeaGuard 5000 HS Clear Hardener	SHERWIN-WILLIAMS	N11V350	1	11.43	B			204	11.43			Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.55	3.43E-03	0.03	0.03	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.53	2.06E-03	0.02	0.02	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.53	2.06E-03	0.02	0.02	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.51	6.86E-04	0.01	0.01	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.51	6.86E-04	0.01	0.01	Y
													Cumene	98-82-8	<1	1.00	0.51	0.00	0.01	0.01	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	2.06E-04	2.06E-03	2.06E-03	Y
PVDC Coating (NCP Coatings N-6091 or alternate NTA approved coating system)	**NCP Coating**						**92.26%**	**103.8754219**	**11.21**	**0.18**	**0.18**										
													Titanium Dioxide	13463-67-7	17.89	17.89	17.89	0.04	0.36	0.36	N
													Aluminum Trihydrate	21645-51-2	1-5	5.00	5.00	0.01	0.10	0.10	N
													Propylene Glycol	57-55-6	1-5	5.00	5.00	0.01	0.10	0.10	N
													Trime-1,3Pentanediol,Monoisobutyrate	25265-77-4	1-5	5.00	5.00	0.01	0.10	0.10	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Sherwin Williams SeaGuard 5000 HS (Light Gray)	**SHERWIN-WILLIAMS**						**82.05%**	**250**	**11.63**	**0.06**	**0.06**										
Sherwin Williams SeaGuard 5000 HS (Light Gray)	SHERWIN-WILLIAMS	N11A350	1	11.82	A			378	11.82				Talc	14807-96-6	≥25 - ≤50	50.00	25.42	0.02	0.18	0.18	N
													1-Butanol	71-36-3	≥10 - ≤24	24.00	12.20	0.01	0.09	0.09	N
													Polyamide	68410-23-1	≥10 - ≤25	25.00	12.71	0.01	0.09	0.09	N
													Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	12.71	0.01	0.09	0.09	N
													Phenylmethanol	100-51-6	≤10	10.00	5.08	0.00	0.04	0.04	N
													Fatty acids, tall-oil, reaction products with tetraethylenepentamine	68953-36-6	≤3	3.00	1.53	0.00	0.01	0.01	N
													Iron Oxide	1317-61-9	≤3	3.00	1.53	0.00	0.01	0.01	N
													Triethylene Tetramine	112-24-3	<1	1.00	0.51	0.00	0.00	0.00	N
													3,6,9-triazaundecamethylenediamine	112-57-2	≤0.3	0.30	0.15	0.00	0.00	0.00	N
Sherwin Williams SeaGuard 5000 HS Part B	SHERWIN-WILLIAMS	N11V350	1	11.43	B			204	11.43				Epoxy Polymer	1675-54-3	≥25 - ≤50	50.00	24.58	0.02	0.17	0.17	N
													Talc	14807-96-6	≥25 - ≤50	50.00	24.58	0.02	0.17	0.17	N
													Light Aromatic Hydrocarbons	64742-95-6	≤10	10.00	4.92	0.00	0.03	0.03	N
												Liquid	trimethylbenzene	25551-13-7	≤5	5.00	2.46	1.71E-03	0.02	0.02	Y
												Liquid	1,3,5-Trimethylbenzene	108-67-8	≤3	3.00	1.47	1.03E-03	0.01	0.01	Y
												Liquid	1,2,4-Trimethylbenzene	95-63-6	≤3	3.00	1.47	1.03E-03	0.01	0.01	Y
												Liquid	Xylene, mixed isomers	1330-20-7	<1	1.00	0.49	3.43E-04	3.43E-03	3.43E-03	Y
												Liquid	1,2,3-Trimethylbenzene	526-73-8	<1	1.00	0.49	3.43E-04	3.43E-03	3.43E-03	Y
													Cumene	98-82-8	<1	1.00	0.49	0.00	0.00	0.00	N
												Liquid	Ethylbenzene	100-41-4	≤0.3	0.30	0.15	1.03E-04	1.03E-03	1.03E-03	Y
Sherwin Williams Polysiloxane XLE-80 HAPS Free	**SHERWIN-WILLIAMS**						**94.21%**	**74**	**10.67**	**0.18**	**0.18**										
Sherwin Williams Polysiloxane XLE-80 HAPS Free, Part A	SHERWIN-WILLIAMS	B80WW600	4	42.68	A			82	10.67				Titanium Dioxide	13463-67-7	≥10 - ≤25	25.00	21.15	0.04	0.41	0.41	N
												Liquid	p-Chlorobenzotrifluoride	98-56-6	≤4.1	4.10	3.47	0.01	0.07	0.07	Y
													n-Butyl Acetate	123-86-4	≤3.2	3.20	2.71	0.01	0.05	0.05	N
													Epoxy Polymer	30583-72-3	≤5	5.00	4.23	0.01	0.08	0.08	N
													2-Methyl-1-propanol	78-83-1	≤1.4	1.40	1.18	0.00	0.02	0.02	N
													Amide Wax	-	≤3	3.00	2.54	0.00	0.05	0.05	N
													Ethanol	64-17-5	≤1	1.00	0.85	0.00	0.02	0.02	N
Polysiloxane XLE-80 HF (Part B), Hardener	SHERWIN-WILLIAMS	B80V600	1	7.76	B			247	7.76				Triethyoxysilyl Propylamine	919-30-2	≥25 - ≤46	46.00	7.08	0.01	0.14	0.14	N
													Poly(oxypropylene)diamine	9046-10-0	≥25 - ≤44	44.00	6.77	0.01	0.13	0.13	N
												Liquid	t-Butyl Acetate	540-88-5	≥10 - ≤29	29.00	4.46	0.01	0.09	0.09	Y
													Polypropylene Glycol	25322-69-4	≤2.3	2.30	0.35	0.00	0.01	0.01	N
INTERSHIELD 6GV (DARK GREY)	**INTERNATIONAL**	**MIL-PRF 24667C TYPE I, II OR V**			**Mix**		**95.74%**	**92**	**18.03**	**1.15**	**1.15**										
													Aluminum oxide	1344-28-1	10 - 25	25.00	25.00	0.52	5.19	5.19	N
													Nepheline syenite	37244-96-5	10 - 25	25.00	25.00	0.52	5.19	5.19	N
													Wollastonite	13983-17-0	10 - 25	25.00	25.00	0.52	5.19	5.19	N
													Borosilicate glass	65997-17-3	10 - 25	25.00	25.00	0.52	5.19	5.19	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	1.0-10	10.00	10.00	0.21	2.08	2.08	N
													Magnesium silicate talc	14807-96-6	1.0 - 10	10.00	10.00	0.21	2.08	2.08	N
													Trimetylolpropan triglycidyl ete	30499-70-8	1.0 - 10	10.00	10.00	0.21	2.08	2.08	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	10.00	0.21	2.08	2.08	N
													Tung oil	8001-20-5	1.0 - 10	10.00	10.00	0.21	2.08	2.08	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	10.00	0.21	2.08	2.08	N
													Titanium dioxide	13463-67-7	1.0 - 10	10.00	10.00	0.21	2.08	2.08	N
													Isophorone diamine	2855-13-2	0.1-1	1.00	1.00	0.02	0.21	0.21	N
													4-Nonylphenol, branched	84852-15-3	0.1-1.0	1.00	1.00	0.02	0.21	0.21	N
													4-tert-butyl phenol	98-54-4	0.1-1.0	1.00	1.00	0.02	0.21	0.21	N
													Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	41556-26-7	0.1-1.0	1.00	1.00	0.02	0.21	0.21	N
													Trimethylhexamethylenediamine	25620-58-0	0.1-1.0	1.00	1.00	0.02	0.21	0.21	N
													Decanedioic acid, methyl 1,2,2,6,6-pentamethyl-4-piperidinyl ester	82919-37-7	0.1-1.0	1.00	1.00	0.02	0.21	0.21	N
													Tetraethylenepentamine	112-57-2	0.1-1.0	1.00	1.00	0.02	0.21	0.21	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
SS5000 (HAZE GREY)	**SYNDECK**						**100.00%**	**0**	**9.10**	**0.86**	**0.86**										
SS5000 (HAZE GREY)	SYNDECK	SA5000	2	18.89	A				9.45				bisphenol-A-(epichlorhydrin)	25068-38-6	75-90	90.00	62.31	0.49	4.90	4.90	N
													2,3-epoxypropyl o-tolyl ether	2210-79-9	≤10	10.00	6.92	0.05	0.54	0.54	N
													oxirane,mono[(C12-14-alkyloxy)methyl]	68609-97-2	≤10	10.00	6.92	0.05	0.54	0.54	N
HARDNER	SYNDECK	SB5000	1	8.40	B				8.40				Propylidynetrimethanol, propoxylated	39423-51-3	25-34	34.00	10.46	0.08	0.82	0.82	N
													Benzyl alcoh	100-51-6	10-25	25.00	7.69	0.06	0.60	0.60	N
													Isophorone diamine	2855-13-2	10-20	20.00	6.15	0.05	0.48	0.48	N
													m-phenylenebis(methylamine)	1477-55-0	10-25	25.00	7.69	0.06	0.60	0.60	N
													4-nonylphenol,branched	84852-15-3	10-25	25.00	7.69	0.06	0.60	0.60	N
													Cyclohexanemethanamine	68609-08-5	3	3.00	0.92	0.01	0.07	0.07	N
													1,3-Benzenedimethanamine	110839-13-9	3	3.00	0.92	0.01	0.07	0.07	N
													salicylic acid	69-72-7	3	3.00	0.92	0.01	0.07	0.07	N
ARC 855 (GRAY)	**CHESTERTON**					**100.00%**	**100.00%**	**0**	**14.51**	**0.14**	**0.14**										
ARC 855 (GRAY)	CHESTERTON	MIL-PRF-32171B		6.80	A				16.27				Epoxy resin (number average molecular weight <= 700)	9003-36-5	10-30	30.00	26.15	0.00	0.01	0.01	N
													Epoxy resin (number average molecular weight <= 700)	25068-38-6	10-30	30.00	26.15	0.00	0.01	0.01	N
													Silicon carbide	409-21-2	15-40	40.00	34.87	0.00	0.01	0.01	N
													Graphite	7782-42-5	1-5	5.00	4.36	0.00	0.00	0.00	N
												Solid	Silica (Quartz)	14808-60-7	1-5	5.00	4.36	1.27E-04	1.27E-03	1.27E-03	Y
													Titanium dioxide	13463-67-7	0-4	4.00	3.49	0.00	0.00	0.00	N
ARC 855 (PART B)	CHESTERTON			1.00	B				8.35				3-Aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	30-60	60.00	0.00	0.00	0.00	0.00	N
													d-Aminomethyl-3,5,5-trimethylcyclohexylamine, reaction products with bisphenol A diglycidyle ether homopolymer	68609-08-5	15-40	40.00	0.00	0.00	0.00	0.00	N
													Benzyl alcohol	100-51-6	30-60	60.00	0.00	0.00	0.00	0.00	N
FLAKE SYSTEM (BLUE 705)	**DEX-O-TEX**						**99.66%**	**5**	**11.89**	**0.43**	**0.43**										
Colorflake M Pigmented BSCT, Part A	DEX-O-TEX	441		9.10	A			7	13.35				Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	25068-38-6	15 - 40	40.00	31.11	0.00	0.02	0.02	N
												Solid	Silicone Dioxide *	14808-60-7	15 - 45	45.00	35.00	2.52E-03	0.03	0.03	Y
													Calcium Carbonate *	1317-65-3	0 - 25	25.00	19.44	0.00	0.01	0.01	N
													Alkyl c12-c14 glycidyl ether	68609-97-2	7 - 13	13.00	10.11	0.00	0.01	0.01	N
													Titanium Dioxide *	13463-67-7	0 - 7	7.00	5.44	0.00	0.00	0.00	N
													Iron Oxide (Yellow) *	51274-00-1	0 - 5	5.00	3.89	0.00	0.00	0.00	N
													Iron Oxide *	1309-37-1	0 - 5	5.00	3.89	0.00	0.00	0.00	N
													Carbon Black *	1333-86-4	0 - 1	1.00	0.78	0.00	0.00	0.00	N
Colorflake M Basecoat Resin, Part B	DEX-O-TEX	442		2.60	B			0	8.60				Methylene Oxide, polymer with benzeneamine, hydrogenated	135108-88-2	40 - 70	70.00	15.56	0.00	0.01	0.01	N
													benzyl alcohol	100-51-6	15-40	40.00	8.89	0.00	0.01	0.01	N
													Aminoethyl piperazine, 1-2-, (AEP)	140-31-8	<15	15.00	3.33	0.00	0.00	0.00	N
													Methylenebiscyclohexanamine, 4,4'-	1761-71-3	<5	5.00	1.11	0.00	0.00	0.00	N
													Tris-2.4.6(dimethylaminomethyl)phenol	90-72-2	<5	5.00	1.11	0.00	0.00	0.00	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
International Intergard 264 FPL274 SurfaceTolerant Epoxy (Red)	**International Paint**						**88.60%**	**194**	**14.20**	**3.70**	**18.48**										
Intergard 264 (Red)	International Paint	FPL274	4	63.09	A				15.77				Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	2.33	23.32	116.59	N
													Barium sulfate	7727-43-7	10 - 25	25.00	22.21	1.17	11.66	58.29	N
													Oxirane, 2,2'-4-butylidenebisphenyleneoxymethylene (DGEBA)	25085-99-8	10 - 25	25.00	22.21	1.17	11.66	58.29	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	Y
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Iron oxide	1309-37-1	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	Y
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.29	2.93	14.65	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.15	1.47	7.33	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.15	1.47	7.33	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.15	1.47	7.33	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													2,4,6-Tri(dimethylaminomethyl) phenol	90-72-2	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N
International Intergard 264 FPJ034 SurfaceTolerant Epoxy (Light Gray)	**International Paint**						**88.65%**	**194**	**14.27**	**3.70**	**18.48**										
Intergard 264 (Light Gray)	International Paint	FPJ034	4	63.09	A				15.86				Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	2.34	23.43	117.13	N
													Barium sulfate	7727-43-7	10 - 25	25.00	22.21	1.17	11.71	58.57	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	10 - 25	25.00	22.21	1.17	11.71	58.57	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	Y
													Titanium dioxide	13463-67-7	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Iron oxide	1309-37-1	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	Y
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.29	2.94	14.72	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.15	1.47	7.36	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.15	1.47	7.36	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.15	1.47	7.36	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													2,4,6-Tri(dimethylaminomethyl) phenol	90-72-2	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Sherwin Williams SherPlate PW (White (B62W260))	**Sherwin Williams**						**94.60%**	**76**	**11.75**	**2.25**	**4.50**										
SherPlate PW (White)	Sherwin Williams	B62W260	1	13.85	A				13.85				Styrenated-Phenolic Resin	61788-44-1	≥10 - ≤25	25	10.28	0.00	0.04	0.08	N
													Phenylmethanol	100-51-6	≤10	10	4.11	0.00	0.02	0.03	N
													Titanium Dioxide	13463-67-7	≤10	10	4.11	0.00	0.02	0.03	N
													1,3-Benzenedimethanamine	1477-55-0	≤10	10	4.11	0.00	0.02	0.03	N
													Cyclohexanedimethanamine	2579-20-6	≤8.8	8.8	3.62	0.00	0.01	0.03	N
SherPlate PW (Part B)	Sherwin Williams	B62V260	1	9.68	B			1	9.68				Epoxy Polymer	1675-54-3	≥75 - ≤90	90	37.02	0.01	0.14	0.27	N
													Alkyl Glycidyl Ether	17557-23-2	≥10 - ≤25	25	10.28	0.00	0.04	0.08	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	<1	1	0.41	1.52E-04	1.52E-03	3.05E-03	Y
Highlighted Cells are TACS per Rule 1200										117.85	494.05										
								Sum from Provided Usage		119.70	503.29										
								QA/QC		FALSE	FALSE										

Conversion Factors

119.826	(g/L)/(lbs/gal)
2000	lbs/ton
8.345	lbs/gal

Max Operating Schedule

NO. OF HOURS/DAY:	10

PM Control Efficiency

Overall Emission	0.9

Polymerization Factor

Hexamethylene diisocyanate	**0.081**

Source: HTTPs://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/painting-and-surface-coating/APCD-painting.pdf

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	LARGE SURFACES		MEDIUM SURFACES		SMALL SURFACES	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	**50%**	**75%**	**65%**	**60%**	**70%**	**40%**
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	**0%**	**100%**	**0%**	**100%**	**0%**	**100%**

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/instructions/Painting-and-Surface-Coating-Operations.pdf

Contents	CAS #	lb/hr	lb/day	lb/yr	ton/yr
1,2,3-Trimethylbenzene	526-73-8	3.06E-01	3.06E+00	1.53E+01	7.63E-03
1,2,4-trimethylbenzene	95-63-6	5.68E+00	5.68E+01	2.42E+02	1.21E-01
1,3,5-trimethylbenzene	108-67-8	1.54E+00	1.54E+01	6.84E+01	3.42E-02
Chromium Iron Oxide	12737-27-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ethylbenzene	100-41-4	1.09E+00	1.09E+01	4.27E+01	2.13E-02
HDI Homopolymer	28182-81-2	1.46E-01	1.46E+00	4.99E+00	2.50E-03
Hexamethylene diisocyanate	822-06-0	1.46E-03	1.46E-02	4.99E-02	2.50E-05
Methyl Ethyl Ketone	78-93-3	6.60E-03	6.60E-02	6.60E-02	3.30E-05
p-Chloro-a,a,a-trifluorotoluene	98-56-6	3.18E+00	3.18E+01	1.37E+02	6.83E-02
Silica (Quartz)	14808-60-7	8.03E-03	8.03E-02	2.79E-01	1.40E-04
t-Butyl Acetate	540-88-5	3.17E-01	3.17E+00	1.55E+01	7.75E-03
trimethylbenzene	25551-13-7	1.65E+00	1.65E+01	7.75E+01	3.88E-02
Xylene, mixed isomers	1330-20-7	6.21E+00	6.21E+01	2.68E+02	1.34E-01
	Sum of summary table	20.13	201.35	871.00	0.44
	Sum of upper table	20.13	201.35	871.00	0.44
QA/QC	TRUE	TRUE	TRUE	TRUE	TRUE

LCS Aluminum DSRA_Criteria Pollutants Emissions

COATING CATEGORY	NAME	MANUFACTURER	MAX DAILY USAGE (gal/day)	ANNUAL USAGE (gal/yr)	DENSITY (lb/gal)	FROM SDS or EDS VOC CONTENT (lb/gal)	(g/L)	RULE 67.18 VOC (g/L)	COMPLIANT?	SOLID % WEIGHT	APPLICATION METHOD	PM EMISSIONS RATE[1] (lb/hr)	(lb/day)	(lb/yr)	VOC EMISSIONS RATE (lb/hr)	(lb/day)	(lb/yr)
Air Dried Coatings	Intergard 264 (Red)	International Paint	6.38	25.50	14.20	1.62	194.00	340	Yes	88.60%	Spray, or Brush/Roller	1.12	11.23	44.93	1.03	10.32	41.28
Air Dried Coatings	Intergard 264 (Black)	International Paint	11.40	45.60	14.20	1.62	194.00	340	Yes	88.60%	Spray, or Brush/Roller	2.01	20.08	80.34	1.85	18.46	73.83
Air Dried Coatings	Intershield 5150LWT (Dark Gray)	International Paint	34.28	137.10	13.07	1.21	145.00	340	Yes	90.74%	Brush/Roller[2]	0.00	0.00	0.00	4.15	41.48	165.90
High Gloss Coating	Interthane 990 (Dark Gray)	International Paint	11.40	45.60	9.22	3.51	420.00	420	Yes	61.96%	Spray, or Brush/Roller	0.91	9.11	36.45	4.00	39.96	159.83
High Gloss Coating	Interthane 990 (Red)	International Paint	0.60	0.60	9.28	3.51	420.00	420	Yes	62.22%	Spray, or Brush/Roller	0.05	0.48	0.48	0.21	2.10	2.10
High Gloss Coating	Interthane 990 (Yellow)	International Paint	0.60	0.60	9.50	3.51	420.00	420	Yes	63.11%	Spray, or Brush/Roller	0.05	0.50	0.50	0.21	2.10	2.10
High Gloss Coating	Interthane 990 (White)	International Paint	1.50	1.50	10.22	3.51	420.00	420	Yes	65.69%	Spray, or Brush/Roller	0.14	1.41	1.41	0.53	5.26	5.26
High Solids Epoxy Coating	Nova-Plate UHS Primer (Buff)	SHERWIN-WILLIAMS	0.12	0.12	11.20	0.37	43.80	280	Yes	96.74%	Spray, or Brush/Roller	0.02	0.18	0.18	0.004	0.04	0.04
High Solids Epoxy Coating	Nova-Plate UHS Epoxy (Light Gray)	SHERWIN-WILLIAMS	0.06	0.06	11.09	0.38	45.40	280	Yes	96.58%	Spray, or Brush/Roller	0.01	0.09	0.09	0.002	0.02	0.02
High Solids Epoxy Coating	Nova-Plate UHS Epoxy (White)	SHERWIN-WILLIAMS	0.24	0.24	11.06	0.37	44.60	280	Yes	96.63%	Spray, or Brush/Roller	0.04	0.36	0.36	0.01	0.09	0.09
High Solids Epoxy Coating	Sherwin Williams SeaGuard 5000 HS (Red)	SHERWIN-WILLIAMS	9.64	48.18	11.53	2.09	250.00	280	Yes	79.00%	Spray, or Brush/Roller	1.23	12.29	61.44	2.01	20.10	100.52
Antifoulant Coating (except for pleas	Sherwin Williams SeaGuard Tie Coat (Yellow)	SHERWIN-WILLIAMS	9.62	48.12	11.69	2.84	340.00	400	Yes	75.73%	Spray, or Brush/Roller	1.19	11.93	59.64	2.73	27.31	136.54
Antifoulant Coating (except for pleas	Sherwin Williams SeaVoyage Copper Free Antifouling (Red)	SHERWIN-WILLIAMS	9.62	48.12	13.23	2.62	314.00	400	Yes	80.19%	Spray, or Brush/Roller	1.43	14.29	71.47	2.52	25.22	126.10
Antifoulant Coating (except for pleas	Sherwin Williams SeaVoyage Copper Free Antifouling (Black)	SHERWIN-WILLIAMS	9.62	48.12	12.75	2.65	317.00	400	Yes	79.25%	Spray, or Brush/Roller	1.36	13.61	68.07	2.55	25.46	127.30
High Solids Epoxy Coating	Sherwin Williams SeaGuard 5000 HS (Black)	SHERWIN-WILLIAMS	0.12	0.12	11.21	2.09	250.00	280	Yes	79.00%	Spray, or Brush/Roller	0.01	0.15	0.15	0.03	0.25	0.25
Specialty Interior Coating	PVDC Coating (NCP Coatings N-6091 or alternate NTA approved coating system)	NCP Coating	0.18	0.18	11.21	0.87	103.88	340	Yes	92.26%	Spray, or Brush/Roller	0.03	0.26	0.26	0.02	0.16	0.16
High Solids Epoxy Coating	Sherwin Williams SeaGuard 5000 HS (Light Gray)	SHERWIN-WILLIAMS	0.06	0.06	11.63	2.09	250.00	280	Yes	82.05%	Spray, or Brush/Roller	0.01	0.08	0.08	0.01	0.13	0.13
High Solids Epoxy Coating	Sherwin Williams Polysiloxane XLE-80 HAPS Free	SHERWIN-WILLIAMS	0.18	0.18	10.67	0.62	74.00	280	Yes	94.21%	Spray, or Brush/Roller	0.03	0.25	0.25	0.01	0.11	0.11
High Solids Epoxy Coating	INTERSHIELD 6GV (DARK GREY)	INTERNATIONAL	1.15	1.15	18.03	0.77	92.00	280	Yes	95.74%	Spray, or Brush/Roller	0.28	2.78	2.78	0.09	0.88	0.88
High Gloss Coating	SS5000 (HAZE GREY)	SYNDECK	0.86	0.86	9.10	0.00	0.00	420	Yes	100.00%	Spray, or Brush/Roller	0.11	1.10	1.10	0.00	0.00	0.00

LCS Aluminum DSRA_Criteria Pollutants Emissions

COATING CATEGORY	NAME	MANUFACTURER	MAX DAILY USAGE (gal/day)	ANNUAL USAGE (gal/yr)	DENSITY (lb/gal)	FROM SDS or EDS VOC CONTENT (lb/gal)	(g/L)	RULE 67.18 VOC (g/L)	COMPLIANT?	SOLID % WEIGHT	APPLICATION METHOD	PM EMISSIONS RATE[1] (lb/hr)	(lb/day)	(lb/yr)	VOC EMISSIONS RATE (lb/hr)	(lb/day)	(lb/yr)
Air Dried Coatings	ARC 855 (GRAY)	CHESTERTON	0.14	0.14	14.51	0.00	0.00	340	Yes	100.00%	Spray, or Brush/Roller	0.03	0.29	0.29	0.00	0.00	0.00
Air Dried Coatings	FLAKE SYSTEM (BLUE 705)	DEX-O-TEX	0.43	0.43	11.89	0.04	4.85	340	Yes	99.66%	Spray, or Brush/Roller	0.07	0.72	0.72	0.002	0.02	0.02
Air Dried Coatings	International Intergard 264 FPL274 SurfaceTolerant Epoxy (Red)	International Paint	3.70	18.48	14.20	1.62	194.00	340	Yes	88.60%	Spray, or Brush/Roller	0.65	6.51	32.56	0.60	5.98	29.92
Air Dried Coatings	International Intergard 264 FPJ034 SurfaceTolerant Epoxy (Light Gray)	International Paint	3.70	18.48	14.27	1.62	194.00	340	Yes	88.65%	Spray, or Brush/Roller	0.65	6.55	32.73	0.60	5.98	29.92
High Solids Epoxy Coating	Sherwin Williams SherPlate PW (White (B62W260))	Sherwin Williams	2.25	4.50	11.75	0.63	76.00	280	Yes	94.60%	Spray, or Brush/Roller	0.35	3.50	7.00	0.14	1.43	2.85

Note:
1. For application methods (column L) that contain "spray", assume all usage is applied by spray application to conservatively estimate PM emissions.
2. Materials contain NESHAP 6H targeted toxic metals, highlighted in green, can only be applied by hand application.

	117.85	494.05
	117.85	494.05
	TRUE	TRUE

Max Operating Schedule

NO. OF HOURS/DAY:	10

Conversions

1	pound/gallon	=	119.8264	gram/liter
1	ton	=	2000	pounds

Potential To Emit: (w/o PM Control)

PM (LB/HR)	11.78	VOC (LB/HR)	23.29
PM (LB/DAY)	117.78	VOC (LB/DAY)	232.86
PM (LB/YR)	503.30	VOC (LB/YR)	1005.16
PM (TON/YR)	0.25	VOC (TON/YR)	0.50

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	Large Surfaces		Medium Surfaces		Small Surfaces	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	50%	75%	65%	60%	70%	40%
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	0%	100%	0%	100%	0%	100%

LCS Aluminum Pier_TAC Emissions

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Intergard 264 (Red)	**International Paint**						**88.60%**	**194**	**14.20**	**6.375**	**25.50**										
Intergard 264 (Red)	International Paint	FPL274	4	63.09	A				15.77				Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	4.02	40.22	160.87	N
													Barium sulfate	7727-43-7	10 - 25	25.00	22.21	2.01	20.11	80.44	N
													Oxirane, 2,2'-4-butylidenebisphenyleneoxymethylene (DGEBA)	25085-99-8	10 - 25	25.00	22.21	2.01	20.11	80.44	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	Y
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Iron oxide	1309-37-1	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	0.80	8.04	32.17	Y
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.51	5.05	20.22	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.25	2.53	10.11	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.25	2.53	10.11	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.25	2.53	10.11	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
													2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.10	1.01	4.04	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.01	0.10	0.40	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.01	0.10	0.40	N
Intergard 264 (Black)	**International Paint**						**88.60%**	**194**	**14.20**	**11.4**	**45.60**										
Intergard 264 (Black)	International Paint	FPY999	4	63.09	A				15.77				Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	7.19	71.92	287.68	N
													Barium sulfate	7727-43-7	25 - 50	50.00	44.42	7.19	71.92	287.68	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	10 - 25	25.00	22.21	3.60	35.96	143.84	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	Y
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	1.44	14.38	57.54	Y
													Carbon black	1333-86-4	1.0 - 10	10.00	8.88	1.44	14.38	57.54	N
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.90	9.04	36.15	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.45	4.52	18.08	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.45	4.52	18.08	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.45	4.52	18.08	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
													2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.18	1.81	7.23	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.02	0.18	0.72	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.02	0.18	0.72	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Intershield 5150LWT (Dark Gray)	**International Paint**						**90.74%**	**145**	**13.07**	**34.275**	**137.10**										
Intershield 5150LWT (Dark Gray)	International Paint	EGA515	4	56.75	A				14.19				Nepheline syenite	37244-96-5	10 - 25	25.00	21.71	0.00	0.00	0.00	N
													Borosilicate glass	65997-17-3	10 - 25	25.00	21.71	0.00	0.00	0.00	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Wollastonite	13983-17-0	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Magnesium silicate talc	14807-96-6	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
													1,2,3-Propanetriyl ester of 12-(oxiranylmethoxy)-9-octadecanoic acid	74398-71-3	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
												Solid	Chromium Iron Oxide	12737-27-8	1.0 - 10	10.00	8.68	0.00E+00	0.00E+00	0.00E+00	Y
													Titanium dioxide	13463-67-7	1.0 - 10	10.00	8.68	0.00	0.00	0.00	N
INTERSHIELD 5150LWT	International Paint	EGA519	1	8.60	B				8.60				Butyl alcohol, n	71-36-3	10 - 25	25.00	3.29	1.47	14.73	58.92	N
													Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2	10 - 25	25.00	3.29	1.47	14.73	58.92	N
													Wollastonite	13983-17-0	10 - 25	25.00	3.29	1.47	14.73	58.92	N
													2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	1.32	0.59	5.89	23.57	Y
													4,4'-Diaminodicyclohexylmethane	1761-71-3	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
													Triethylene tetramine	112-24-3	1.0 - 10	10.00	1.32	0.59	5.89	23.57	N
												Liquid	1,3,5-trimethylbenzene	108-67-8	1.0 - 10	10.00	1.32	0.59	5.89	23.57	Y
												Solid	Crystalline Silica - Quartz	14808-60-7	0.10 - 1.0	1.00	0.13	8.25E-04	0.01	0.03	Y
Interthane 990 (Dark Gray)	**International Paint**						**61.96%**	**420**	**9.22**	**11.4**	**45.60**										
Interthane 990 (Dark Gray)	International Paint	PHY69E	6	55.58	A				9.26				Solvent naphtha (petroleum), light arom.	64742-95-6	≥10 - <15	15.00	12.92	1.36	13.58	54.31	N
												Liquid	xylene	1330-20-7	≥10 - <21	21.00	18.09	1.90	19.01	76.03	Y
												Liquid	1,2,4-trimethylbenzene	95-63-6	≥5 - <7.9	7.90	6.81	0.72	7.15	28.60	Y
												Liquid	ethylbenzene	100-41-4	≥2 - <3	3.00	2.58	0.27	2.72	10.86	Y
													2-methoxy-1-methylethyl acetate	108-65-6	≥1 - <3	3.00	2.58	0.27	2.72	10.86	N
												Liquid	mesitylene	108-67-8	≥1 - <1.9	1.90	1.64	0.17	1.72	6.88	Y
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	13.84	0.12	1.18	4.71	Y
													olvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.46	0.36	3.64	14.54	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.38	0.15	1.45	5.82	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.35	0.04	0.36	1.45	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.14	1.18E-03	0.01	0.05	Y

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
Interthane 990 (Red)	**International Paint**						**62.22%**	**420**	**9.28**	**0.6**	**0.60**										
Interthane 990 (Red)	International Paint	PHA066	6	56.02	A				9.34			Liquid	Pseudocumene	95-63-6	1.0 - 10	10.00	8.63	0.05	0.48	0.48	Y
												Liquid	Ethyl benzene	100-41-4	1.0 - 10	10.00	8.63	0.05	0.48	0.48	Y
													Propylene glycol monomethyl ether acetate	108-65-6	1.0 - 10	10.00	8.63	0.05	0.48	0.48	N
													n-Butyl acetate	123-86-4	1.0 - 10	10.00	8.63	0.05	0.48	0.48	N
													Limestone	1317-65-3	10 - 25	25.00	21.56	0.12	1.20	1.20	N
												Liquid	Xylenes	1330-20-7	10 - 25	25.00	21.56	0.12	1.20	1.20	Y
												Liquid	Trimethyl benzene	25551-13-7	10 - 25	25.00	21.56	0.12	1.20	1.20	Y
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	13.75	0.01	0.06	0.06	Y
													olvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.44	0.00	0.02	0.02	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.37	0.01	0.08	0.08	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.34	1.91E-03	0.02	0.02	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.14	6.20E-05	6.20E-04	6.20E-04	Y
Interthane 990 (Yellow)	**International Paint**						**63.11%**	**420**	**9.50**	**0.6**	**0.60**										
Interthane 990 (Yellow)	International Paint	PHA055	6	57.58	A				9.60			Liquid	Benzene, 1,2,4−trimethyl−	95-63-6	1.0 − 10	10.00	8.66	4.94E-02	0.49	0.49	Y
												Liquid	Benzene, ethyl−	100-41-4	1.0 − 10	10.00	8.66	4.94E-02	0.49	0.49	Y
													Propylene glycol monomethyl ether acetate	108-65-6	1.0 − 10	10.00	8.66	0.05	0.49	0.49	N
													BUTYL ACETATE	123-86-4	1.0 − 10	10.00	8.66	0.05	0.49	0.49	N
													Limestone	1317-65-3	10 − 25	25.00	21.64	0.12	1.23	1.23	N
												Liquid	Xylenes (o−, m−, p− isomers)	1330-20-7	10 − 25	25.00	21.64	0.12	1.23	1.23	Y
													Titanium dioxide	13463-67-7	1.0 − 10	10.00	8.66	0.05	0.49	0.49	N
												Solid	Quartz	14808-60-7	0.10 − 1.0	1.00	0.87	6.91E-05	6.91E-04	6.91E-04	Y
													Petroleum naphtha, light aromatic	64742-95-6	10 − 25	25.00	21.64	0.12	1.23	1.23	N
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	13.43	0.01	0.06	0.06	Y
													olvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.36	0.00	0.02	0.02	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.34	7.65E-03	7.65E-02	7.65E-02	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.34	1.91E-03	1.91E-02	1.91E-02	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.13	6.20E-05	6.20E-04	6.20E-04	Y
Interthane 990 (White)	**International Paint**						**65.69%**	**420**	**10.22**	**1.5**	**1.50**										
Interthane 990 (White)	International Paint	PHB000	6	62.59	A				10.43				Acrylic Polymer	9047-32-9	25- <50	50.00	43.76	0.67	6.71	6.71	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	21.88	0.34	3.35	3.35	N
												Liquid	Xylene	1330-20-7	10- <25	25.00	21.88	0.34	3.35	3.35	Y
													1-Methoxy-2-propyl acetate	108-65-6	2.5- <10	10.00	8.75	0.13	1.34	1.34	N
												Liquid	Ethyl Benzene	100-41-4	2.5- <10	10.00	8.75	0.13	1.34	1.34	Y
													Zirconium, adipate chloro hydroxy propylene glycol aluminum complexes	125904-14-5	1- <2.5	2.50	2.19	0.03	0.34	0.34	N
Interthane 990 Part B	International Paint	PHA046	1	8.93	B				8.93			Liquid	HDI Homopolymer	28182-81-2	50- <100	100.00	12.49	0.02	0.15	0.15	Y
													olvent naphtha (petroleum), light aromatic	64742-95-6	10- <25	25.00	3.12	0.00	0.04	0.04	N
												Liquid	1,2,4-trimethylbenzene	95-63-6	2.5- <10	10.00	1.25	0.02	0.19	0.19	Y
												Liquid	1,3,5-trimethylbenzene	108-67-8	1- <2.5	2.50	0.31	4.78E-03	0.05	0.05	Y
												Liquid	Hexamethylene diisocyanate	822-06-0	<1	1.00	0.12	1.55E-04	1.55E-03	1.55E-03	Y

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
INTERSHIELD 6GV (DARK GREY)	**INTERNATIONAL**	**MIL-PRF 24667C TYPE I, II OR V**			**Mix**		**95.74%**	**92**	**18.03**	**1.152**	**1.15**										
													Aluminum oxide	1344-28-1	10 - 25	25.00	25.00	0.04	0.42	0.42	N
													Nepheline syenite	37244-96-5	10 - 25	25.00	25.00	0.04	0.42	0.42	N
													Wollastonite	13983-17-0	10 - 25	25.00	25.00	0.04	0.42	0.42	N
													Borosilicate glass	65997-17-3	10 - 25	25.00	25.00	0.04	0.42	0.42	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	1.0-10	10.00	10.00	0.02	0.17	0.17	N
													Magnesium silicate talc	14807-96-6	1.0 - 10	10.00	10.00	0.02	0.17	0.17	N
													Trimetylolpropan triglycidyl ete	30499-70-8	1.0 - 10	10.00	10.00	0.02	0.17	0.17	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	10.00	0.02	0.17	0.17	N
													Tung oil	8001-20-5	1.0 - 10	10.00	10.00	0.02	0.17	0.17	N
													Benzyl alcoho	100-51-6	1.0 - 10	10.00	10.00	0.02	0.17	0.17	N
													Titanium dioxide	13463-67-7	1.0 - 10	10.00	10.00	0.02	0.17	0.17	N
													Isophorone diamine	2855-13-2	0.1-1	1.00	1.00	0.00	0.02	0.02	N
													4-Nonylphenol, branched	84852-15-3	0.1-1.0	1.00	1.00	0.00	0.02	0.02	N
													4-tert-butyl phenol	98-54-4	0.1-1.0	1.00	1.00	0.00	0.02	0.02	N
													Bis(1,2,2,6,6-pentamethyl-4-piperidinyl) sebacate	41556-26-7	0.1-1.0	1.00	1.00	0.00	0.02	0.02	N
													Trimethylhexamethylenediamine	25620-58-0	0.1-1.0	1.00	1.00	0.00	0.02	0.02	N
													Decanedioic acid, methyl 1,2,2,6,6-pentamethyl-4-piperidinyl ester	82919-37-7	0.1-1.0	1.00	1.00	0.00	0.02	0.02	N
													Tetraethylenepentamine	112-57-2	0.1-1.0	1.00	1.00	0.00	0.02	0.02	N
SS5000 (HAZE GREY)	**SYNDECK**						**100.00%**	**0**	**9.10**	**0.864**	**0.86**										
SS5000 (HAZE GREY)	SYNDECK	SA5000	2	18.89	A				9.45				bisphenol-A-(epichlorhydrin)	25068-38-6	75-90	90.00	62.31	0.01	0.07	0.07	N
													2,3-epoxypropyl o-tolyl ether	2210-79-9	≤10	10.00	6.92	0.00	0.01	0.01	N
													oxirane,mono[(C12-14-alkyloxy)methyl]	68609-97-2	≤10	10.00	6.92	0.00	0.01	0.01	N
HARDNER	SYNDECK	SB5000	1	8.40	B				8.40				Propylidynetrimethanol, propoxylated	39423-51-3	25-34	34.00	10.46	0.00	0.01	0.01	N
													Benzyl alcoh	100-51-6	10-25	25.00	7.69	0.00	0.01	0.01	N
													Isophorone diamine	2855-13-2	10-20	20.00	6.15	0.00	0.01	0.01	N
													m-phenylenebis(methylamine)	1477-55-0	10-25	25.00	7.69	0.00	0.01	0.01	N
													4-nonylphenol,branched	84852-15-3	10-25	25.00	7.69	0.00	0.01	0.01	N
													Cyclohexanemethanamine	68609-08-5	3	3.00	0.92	0.00	0.00	0.00	N
													1,3-Benzenedimethanamine	110839-13-9	3	3.00	0.92	0.00	0.00	0.00	N
													salicylic acid	69-72-7	3	3.00	0.92	0.00	0.00	0.00	N
ARC 855 (GRAY)	**CHESTERTON**					**100.00%**	**100.00%**	**0**	**14.51**	**0.144**	**0.14**										
ARC 855 (GRAY)	CHESTERTON	MIL-PRF-32171B		6.80	A				16.27				Epoxy resin (number average molecular weight <= 700)	9003-36-5	10-30	30.00	26.15	0.00	0.01	0.01	N
													Epoxy resin (number average molecular weight <= 700)	25068-38-6	10-30	30.00	26.15	0.00	0.01	0.01	N
													Silicon carbide	409-21-2	15-40	40.00	34.87	0.00	0.01	0.01	N
													Graphite	7782-42-5	1-5	5.00	4.36	0.00	0.00	0.00	N
												Solid	Silica (Quartz)	14808-60-7	1-5	5.00	4.36	1.27E-04	1.27E-03	1.27E-03	Y
													Titanium dioxide	13463-67-7	0-4	4.00	3.49	0.00	0.00	0.00	N
ARC 855 (PART B)	CHESTERTON			1.00	B				8.35				3-Aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	30-60	60.00	7.69	0.00	0.00	0.00	N
													d-Aminomethyl-3,5,5-trimethylcyclohexylamine,reaction products with bisphenol A diglycidyle ether homopolymer	68609-08-5	15-40	40.00	5.13	0.00	0.00	0.00	N
													Benzyl alcohol	100-51-6	30-60	60.00	7.69	0.00	0.00	0.00	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
FLAKE SYSTEM (BLUE 705)	**DEX-O-TEX**						**99.66%**	**5**	**11.89**	**0.432**	**0.43**										
Colorflake M Pigmented BSCT, Part A	DEX-O-TEX	441		9.10	A			7	13.35				Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane	25068-38-6	15 - 40	40.00	31.11	0.00	0.02	0.02	N
												Solid	Silicone Dioxide *	14808-60-7	15 - 45	45.00	35.00	2.52E-03	0.03	0.03	Y
													Calcium Carbonate *	1317-65-3	0 - 25	25.00	19.44	0.00	0.01	0.01	N
													Alkyl c12-c14 glycidyl ether	68609-97-2	7 - 13	13.00	10.11	0.00	0.01	0.01	N
													Titanium Dioxide *	13463-67-7	0 - 7	7.00	5.44	0.00	0.00	0.00	N
													Iron Oxide (Yellow) *	51274-00-1	0 - 5	5.00	3.89	0.00	0.00	0.00	N
													Iron Oxide *	1309-37-1	0 - 5	5.00	3.89	0.00	0.00	0.00	N
													Carbon Black *	1333-86-4	0 - 1	1.00	0.78	0.00	0.00	0.00	N
Colorflake M Basecoat Resin, Part B	DEX-O-TEX	442		2.60	B			0	8.60				Methylene Oxide, polymer with benzeneamine, hydrogenated	135108-88-2	40 - 70	70.00	15.56	0.00	0.01	0.01	N
													benzyl alcohol	100-51-6	15-40	40.00	8.89	0.00	0.01	0.01	N
													Aminoethyl piperazine, 1-2 , (AEP)	140-31-8	<15	15.00	3.33	0.00	0.00	0.00	N
													Methylenebiscyclohexanamine, 4,4'-	1761-71-3	<5	5.00	1.11	0.00	0.00	0.00	N
													Tris-2.4.6(dimethylaminomethyl)phenol	90-72-2	<5	5.00	1.11	0.00	0.00	0.00	N
International Intergard 264 FPL274 SurfaceTolerant Epoxy (Red)	**International Paint**						**88.60%**	**194**	**14.20**	**3.696**	**18.48**										
Intergard 264 (Red)	International Paint	FPL274	4	63.09	A				15.77				Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	2.33	23.32	116.59	N
													Barium sulfate	7727-43-7	10 - 25	25.00	22.21	1.17	11.66	58.29	N
													Oxirane, 2,2'-4-butylidenebisphenyleneoxymethylene (DGEBA)	25085-99-8	10 - 25	25.00	22.21	1.17	11.66	58.29	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	Y
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Iron oxide	1309-37-1	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	0.47	4.66	23.32	Y
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.29	2.93	14.65	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.15	1.47	7.33	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.15	1.47	7.33	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.15	1.47	7.33	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.06	0.59	2.93	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	
International Intergard 264 FPJ034 SurfaceTolerant Epoxy (Light Gray)	**International Paint**						**88.65%**	**194**	**14.27**	**3.696**	**18.48**										
Intergard 264 (Light Gray)	International Paint	FPJ034	4	63.09	A				15.86				Magnesium silicate talc	14807-96-6	25 - 50	50.00	44.42	2.34	23.43	117.13	N
													Barium sulfate	7727-43-7	10 - 25	25.00	22.21	1.17	11.71	58.57	N
													Bisphenol A - Epichlorohydrin polymer	25068-38-6	10 - 25	25.00	22.21	1.17	11.71	58.57	N
												Liquid	p-Chloro-a,a,a-trifluorotoluene	98-56-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	Y
													Titanium dioxide	13463-67-7	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													EPOXY RESIN	25036-25-3	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Iron oxide	1309-37-1	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Methyl Amyl Ketone	110-43-0	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
													Solvent naphtha (petroleum), light aromatic	64742-95-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	N
												Liquid	1,2,4-trimethyl benzene	95-63-6	1.0 - 10	10.00	8.88	0.47	4.69	23.43	Y
Intergard 264 Part B	International Paint	FCA321	1	7.93	B				7.93				Alkylated phenolic polyamine	68413-29-6	25 - 50	50.00	5.58	0.29	2.94	14.72	N
													Alkylated phenolic diamine	68413-28-5	10 - 25	25.00	2.79	0.15	1.47	7.36	N
													Alkyl(C12-C14)glycidyl ether	68609-97-2	10 - 25	25.00	2.79	0.15	1.47	7.36	N
													Butyl alcohol, n	71-36-3	10 - 25	25.00	2.79	0.15	1.47	7.36	N
													Benzyl alcohol	100-51-6	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													Diethylenetriamine (DETA)	111-40-0	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													Stoddard solvent	8052-41-3	1.0 - 10	10.00	1.12	0.06	0.59	2.94	N
													Fatty acids, C18, Unsatd. trimers.Compd. with 9-octadecen-1-amine, (z)	147900-93-4	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N
													Ethanediamine	107-15-3	0.10 - 1.0	1.00	0.11	0.01	0.06	0.29	N
Sherwin Williams SherPlate PW (White (B62W260))	**Sherwin Williams**						**94.60%**	**76**	**11.75**	**2.25**	**4.50**										
SherPlate PW (White)	Sherwin Williams	B62W260	1	13.85	A				13.85				Styrenated-Phenolic Resin	61788-44-1	≥10 - ≤25	25	10.28368794	0.00	0.04	0.08	N
													Phenylmethanol	100-51-6	≤10	10	4.113475177	0.00	0.02	0.03	N
													Titanium Dioxide	13463-67-7	≤10	10	4.113475177	0.00	0.02	0.03	N
													1,3-Benzenedimethanamine	1477-55-0	≤10	10	4.113475177	0.00	0.02	0.03	N
													Cyclohexanedimethanamine	2579-20-6	≤8.8	8.8	3.619858156	0.00	0.01	0.03	N
SherPlate PW (Part B)	Sherwin Williams	B62V260	1	9.68	B			1	9.68				Epoxy Polymer	1675-54-3	≥75 - ≤90	90	37.0212766	0.01	0.14	0.27	N
													Alkyl Glycidyl Ether	17557-23-2	≥10 - ≤25	25	10.28368794	0.00	0.04	0.08	N
												Solid	Crystalline Silica, respirable powder	14808-60-7	<1	1	0.41	1.52E-04	1.52E-03	3.05E-03	Y
Highlighted Cells are TACS per Rule 1200										78.38	300.55										
									Sum from Provided	80.232	309.79										
									QA/QC	FALSE	FALSE										

Coating	Manufacturer	Product Code	Mix Ratio (by Volume)	Mix Ratio (by Weight)	Part #	Solid Wt (%)	wt% Solid _Calculated	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (wt %)			Emissions			Rule 1200?
															wt%_SDS	wt%_ High End	wt% _Weighted	lb/hr	lb/day	lb/yr	

Conversion Factors

119.826	(g/L)/(lbs/gal)
2000	lbs/ton
8.345	lbs/gal

Max Operating Schedule

NO. OF HOURS/DAY:	10

PM Control Efficiency

Overall Emission	0.9

Polymerization Factor

Hexamethylene diisocyanate Polymerization Factor	8.10%

Source:https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/painting-and-surface-coating/APCD-painting.pdf

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	LARGE SURFACES		MEDIUM SURFACES		SMALL SURFACES	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	**50%**	**75%**	**65%**	**60%**	**70%**	**40%**
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	**0%**	**100%**	**0%**	**100%**	**0%**	**100%**

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/instructions/Painting-and-Surface-Coating-Operations.pdf

Contents	CAS #	lb/hr	lb/day	lb/yr	ton/yr
1,2,4-trimethyl benzene	95-63-6	4.76E+00	4.76E+01	1.96E+02	9.79E-02
1,3,5-trimethylbenzene	108-67-8	8.06E-01	8.06E+00	3.20E+01	1.60E-02
Chromium Iron Oxide	12737-27-8	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crystalline Silica - Quartz	14808-60-7	3.69E-03	3.69E-02	6.32E-02	3.16E-05
ethylbenzene	100-41-4	5.03E-01	5.03E+00	1.32E+01	6.59E-03
HDI Homopolymer	28182-81-2	1.46E-01	1.46E+00	4.99E+00	2.50E-03
Hexamethylene diisocyanate	822-06-0	1.46E-03	1.46E-02	4.99E-02	2.50E-05
p-Chloro-a,a,a-trifluorotoluene	98-56-6	3.18E+00	3.18E+01	1.36E+02	6.82E-02
Trimethyl benzene	25551-13-7	1.20E-01	1.20E+00	1.20E+00	6.00E-04
Xylenes	1330-20-7	2.48E+00	2.48E+01	8.18E+01	4.09E-02
	Sum of summary table	12.00	119.96	465.50	0.23
	Sum of upper table	12.00	119.96	465.50	0.23
	QA/QC	TRUE	TRUE	TRUE	TRUE

LCS Aluminum Pier_Criteria Pollutants Emissions

COATING CATEGORY	NAME	MANUFACTURER	MAX DAILY USAGE (gal/day)	ANNUAL USAGE (gal/yr)	DENSITY (lb/gal)	FROM MSDS VOC CONTENT (lb/gal)	(g/L)	RULE 67.18 VOC (g/L)	COMPLIANT?	SOLID % WEIGHT	APPLICATION METHOD	PM EMISSIONS RATE[1] (lb/hr)	(lb/day)	(lb/yr)	VOC EMISSIONS RATE (lb/hr)	(lb/day)	(lb/yr)
Air Dried Coatings	Intergard 264 (Red)	International Paint	6.38	25.50	14.20	1.62	194.00	340	Yes	88.60%	Spray, or Brush/Roller	1.12	11.23	44.93	1.03	10.32	41.28
Air Dried Coatings	Intergard 264 (Black)	International Paint	11.40	45.60	14.20	1.62	194.00	340	Yes	88.60%	Spray, or Brush/Roller	2.01	20.08	80.34	1.85	18.46	73.83
Air Dried Coatings	Intershield 5150LWT (Dark Gray)	International Paint	34.28	137.10	13.07	1.21	145.00	340	Yes	90.74%	Brush/Roller[2]	0.00	0.00	0.00	4.15	41.48	165.90
High Gloss Coating	Interthane 990 (Dark Gray)	International Paint	11.40	45.60	9.22	3.51	420.00	420	Yes	61.96%	Spray, or Brush/Roller	0.91	9.11	36.45	4.00	39.96	159.83
High Gloss Coating	Interthane 990 (Red)	International Paint	0.60	0.60	9.28	3.51	420.00	420	Yes	62.22%	Spray, or Brush/Roller	0.05	0.48	0.48	0.21	2.10	2.10
High Gloss Coating	Interthane 990 (Yellow)	International Paint	0.60	0.60	9.50	3.51	420.00	420	Yes	63.11%	Spray, or Brush/Roller	0.05	0.50	0.50	0.21	2.10	2.10
High Gloss Coating	Interthane 990 (White)	International Paint	1.50	1.50	10.22	3.51	420.00	420	Yes	65.69%	Spray, or Brush/Roller	0.14	1.41	1.41	0.53	5.26	5.26
High Solids Epoxy Coating	INTERSHIELD 6GV (DARK GREY)	INTERNATIONAL	1.15	1.15	18.03	0.77	92.00	280	Yes	95.74%	Spray, or Brush/Roller	0.28	2.78	2.78	0.09	0.88	0.88
High Gloss Coating	SS5000 (HAZE GREY)	SYNDECK	0.86	0.86	9.10	0.00	0.00	420	Yes	100.00%	Spray, or Brush/Roller	0.11	1.10	1.10	0.00	0.00	0.00
Air Dried Coatings	ARC 855 (GRAY)	CHESTERTON	0.14	0.14	14.51	0.00	0.00	340	Yes	100.00%	Spray, or Brush/Roller	0.03	0.29	0.29	0.00	0.00	0.00
Air Dried Coatings	FLAKE SYSTEM (BLUE 705)	DEX-O-TEX	0.43	0.43	11.89	0.04	4.85	340	Yes	99.66%	Spray, or Brush/Roller	0.07	0.72	0.72	0.002	0.02	0.02
Air Dried Coatings	International Intergard 264 FPL274 SurfaceTolerant Epoxy (Red)	International Paint	3.70	18.48	14.20	1.62	194.00	340	Yes	88.60%	Spray, or Brush/Roller	0.65	6.51	32.56	0.60	5.98	29.92
Air Dried Coatings	International Intergard 264 FPJ034 SurfaceTolerant Epoxy (Light Gray)	International Paint	3.70	18.48	14.27	1.62	194.00	340	Yes	88.65%	Spray, or Brush/Roller	0.65	6.55	32.73	0.60	5.98	29.92
High Solids Epoxy Coating	Sherwin Williams SherPlate PW (White (B62W260))	Sherwin Williams	2.25	4.50	11.75	0.63	76.00	280	Yes	94.60%	Spray, or Brush/Roller	0.35	3.50	7.00	0.14	1.43	2.85

Note:

1. For application methods (column L) that contain "spray", assume all usage is applied by spray application to conservatively estimate PM emissions.
2. Materials contain NESHAP 6H targeted toxic metals, highlighted in green, can only be applied by hand application.

	78.38	300.55
	78.38	300.55
	TRUE	TRUE

Max Operating Schedule

NO. OF HOURS/DAY:	10

Conversions

1	pound/gallon	=	119.8264	gram/liter
1	ton	=	2000	pounds

APPLICATION METHOD	FALLOUT AND TRANSFER EFFICIENCIES					
	Large Surfaces		Medium Surfaces		Small Surfaces	
	Fallout	Transfer	Fallout	Transfer	Fallout	Transfer
Conventional	50%	50%	65%	30%	70%	20%
Airless	50%	70%	65%	50%	70%	30%
HVLP	50%	75%	65%	60%	70%	40%
Electrostatic						
Air Atomized	70%	75%	80%	65%	80%	65%
Airless	70%	80%	80%	70%	80%	70%
Disc	70%	95%	80%	90%	80%	90%
Brush, Roller & Dip	0%	100%	0%	100%	0%	100%

Potential To Emit: (w/o PM Control)			
PM (LB/HR)	6.43	VOC (LB/HR)	13.40
PM (LB/DAY)	64.28	VOC (LB/DAY)	133.97
PM (LB/YR)	241.30	VOC (LB/YR)	513.90
PM (TON/YR)	0.12	VOC (TON/YR)	0.26

LCS Aluminum Pier_TAC Emissions

Coating	Manufacturer	VOC Content (g/L)	Density (lb/gal)	Max Daily Usage (gal/day)	Annual Usage (gal/yr)	Phase (Solid/Liquid)	Contents	CAS#	Weight Percent (v	Emissions			Rule 1200?
									wt%_SDS	lb/hr	lb/day	lb/yr	
Isopropyl Alcohol R6K20	**Sherwin Williams**	**780**	**6.51**	**0.46**	**115.22**								
						Liquid	2-Propanol	67-63-0	100	0.30	3.00	750.07	Y

Highlighted Cells are TACS per Rule 1200

Conversion Factor

119.826	(g/L)/(lbs/gal)
2000	lbs/ton
8.345	lbs/gal

Max Operating Schedule

NO. OF HOURS/DAY:	10

Contents	CAS #	lb/hr	lb/day	lb/yr	ton/yr
2-Propanol	67-63-0	3.00E-01	3.00E+00	7.50E+02	3.75E-01

LCS Aluminum Pier_Criteria Pollutants Emissions

COATING CATEGORY	NAME	MANUFACTURER	MAX DAILY USAGE (gal/day)	ANNUAL USAGE (gal/yr)	DENSITY (lb/gal)	FROM EDS VOC CONTENT (lb/gal)	(g/L)	RULE 67.18 VOC (g/L)	COMPLIANT?	VOC EMISSIONS RATE (lb/hr)	(lb/day)	(lb/yr)
PREP SOLVENTS, SPRIPPERS, CLEANUP SOLVENTS	Isopropyl Alcohol R6K20	Sherwin Williams	0.46	115.22	6.51	6.51	780.00	200	Yes	0.30	3.00	750.00

Expected Operating Schedule

NO. OF HOURS/DAY:	10
DAYS PER YEAR	250

Potential To Emit:

VOC (LB/HR)	0.30
VOC (LB/DAY)	3.00
VOC (LB/YR)	750.00
VOC (TON/YR)	0.38

Conversions

1	pound/gallon	=	119.826	gram/liter
1	ton	=	2000	pounds

Attachment 2
Construction Emission Calculations

Austal USA
San Diego Floating Dry Dock
Construction Emissions Summary
April 2025

Criteria Air Pollutant (CAP) Hourly Emissions Summary

Emission Process	Hourly Emissions (lbs/hour)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile Sources	0.03	0.09	1.15	0.00	0.02	0.01
Construction Equipment	0.60	7.88	3.52	0.53	0.55	0.54
Welding	--	--	--	--	0.01	0.01
Total Hourly Emissions	**0.64**	**7.97**	**4.68**	**0.53**	**0.58**	**0.55**

Criteria Air Pollutant (CAP) Annual Emissions Summary

Emission Process	Annual Emissions (tons/year)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile Sources	6.81E-04	1.84E-03	2.31E-02	6.95E-05	3.80E-04	1.40E-04
Construction Equipment	1.58E-01	2.06E+00	9.26E-01	1.37E-01	1.45E-01	1.41E-01
Welding	--	--	--	--	2.04E-03	2.04E-03
Total Annual Emissions	**0.16**	**2.06**	**0.95**	**0.14**	**0.15**	**0.14**

VOC = volatile organic compound(s)

NOx = oxides of nitrogen

CO = carbon monoxide

SO_2 = sulfur dioxide

PM_{10} = Particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

Toxic Air Contaminant (TAC) Emissions Summary

Emission Process	CAS Number	Construction Equipment			Welding		
		Hourly Emissions (lbs/hour)	Annual Emissions (lbs/year)	Annual Emissions (tons/year)	Hourly Emissions (lbs/hour)	Annual Emissions (lbs/year)	Annual Emissions (tons/year)
1,3-Butadiene	106-99-0	4.02E-04	2.20E-01	1.10E-04	--	--	--
Acetaldehyde	75-07-0	4.96E-03	2.51E+00	1.26E-03	--	--	--
Acrolein	107-02-8	7.82E-04	3.78E-01	1.89E-04	--	--	--
Arsenic	7440-38-2	3.04E-06	1.69E-03	8.44E-07	--	--	--
Benzene	71-43-2	2.02E-03	1.03E+00	5.13E-04	--	--	--
Cadmium	7440-43-9	2.30E-06	1.29E-03	6.43E-07	--	--	--
Chlorobenzene	108-90-7	3.06E-07	1.71E-04	8.57E-08	--	--	--
Chromium Hexavalent	18540-29-9	1.55E-07	8.67E-05	4.34E-08	4.14E-06	2.32E-03	1.16E-06
Chromium Nonhexavalent	7440-47-3	7.65E-07	4.28E-04	2.14E-07	2.44E-06	1.37E-03	6.84E-07
Copper	7440-50-8	6.27E-06	3.51E-03	1.76E-06	6.57E-06	3.68E-03	1.84E-06
Diesel Particulate	9901	1.15E-02	5.91E+00	2.95E-03	--	--	--
Ethyl Benzene	100-41-4	2.16E-04	1.05E-01	5.26E-05	--	--	--
Formaldehyde	50-00-0	1.31E-02	6.57E+00	3.29E-03	--	--	--
Hexane	110-54-3	6.90E-05	3.44E-02	1.72E-05	--	--	--
Hydrogen Chloride	7647-01-0	2.85E-04	1.59E-01	7.97E-05	--	--	--
Lead	7439-92-1	1.27E-05	7.11E-03	3.56E-06	6.57E-06	3.68E-03	1.84E-06
Manganese	7439-96-5	5.53E-06	3.08E-03	1.54E-06	7.62E-06	4.27E-03	2.13E-06
Mercury	7439-97-6	3.06E-06	1.71E-03	8.57E-07	--	--	--
Naphthalene	91-20-3	1.96E-04	9.88E-02	4.94E-05	--	--	--
Nickel	7440-02-0	7.33E-06	4.07E-03	2.04E-06	6.57E-06	3.68E-03	1.84E-06
Total PAHs	1151	7.78E-05	4.18E-02	2.09E-05	--	--	--
Propylene	115-07-1	7.15E-04	4.00E-01	2.00E-04	--	--	--
Selenium	7782-49-2	3.37E-06	1.88E-03	9.42E-07	--	--	--
Toluene	108-88-3	1.45E-03	7.30E-01	3.65E-04	--	--	--
Xylenes	1330-20-7	7.26E-04	3.60E-01	1.80E-04	--	--	--
Zinc	7440-66-6	3.43E-05	1.92E-02	9.60E-06	6.57E-06	3.68E-03	1.84E-06
2,2,4-Trimethylpentane	540-84-1	3.01E-04	1.46E-01	7.30E-05	--	--	--
Total TACs		**0.04**	**18.74**	**0.01**	**0.00**	**0.02**	**0.00**

Austal USA
San Diego Floating Dry Dock
Construction Equipment Emissions
April 2025

Construction Equipment Emissions from the Mole Pier Mooring Dolphin and Fender Pile Construction

Equipment Type	Model Year	Maximum Horsepower	Assumed Daily Operation (hours/day)	Assumed Annual Operation (days/year)	Fuel Flow Rate (gal/hp-hour) [a]
Diesel Hammer	2000	300	8	70	--
225-ton Crane	2000	300	8	70	--
Loader	2000	150	4	70	--
Vibratory Hammer	2000	300	8	70	--
Forklift	2000	85	8	70	--
Generator Set	2000	30	8	70	0.05

Source: Final Environmental Assessment for the Floating Dry Dock Project at Naval Base San Diego, San Diego, California (May 2020).

[a] Fuel flow rate for the generator set was included in order to calculate toxic air contaminant (TAC) emissions using SDAPCD default emission factors rather than MOVES4. This fuel flow rate is from Austal's portable equipment engine data to be used and permitted for operational purposes.

Construction Equipment Emission Factors

Equipment	Load Factor	Emission Factors (lb/1000 HP-hr)					
		VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Diesel Hammer	59	0.99	13.01	6.46	0.82	0.95	0.93
225-ton Crane	43	0.84	12.06	3.02	0.82	0.64	0.62
Loader	59	0.86	11.75	4.87	0.84	0.82	0.79
Vibratory Hammer	59	0.99	13.01	6.46	0.82	0.95	0.93
Forklift	59	0.9	9.97	6.5	0.88	0.9	0.88
Generator Set	43	1.85	13.98	6.95	0.88	1.35	1.3

Source: Air Emissions Guide for Air Force Mobile Sources (USAF 2013).

Construction Equipment Hourly Emissions

Equipment		Hourly Emissions (lbs/hour)					
		VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Diesel Hammer		0.18	2.30	1.14	0.15	0.17	0.16
225-ton Crane		0.11	1.56	0.39	0.11	0.08	0.08
Loader		0.08	1.04	0.43	0.07	0.07	0.07
Vibratory Hammer		0.18	2.30	1.14	0.15	0.17	0.16
Forklift		0.05	0.50	0.33	0.04	0.05	0.04
Generator Set		0.02	0.18	0.09	0.01	0.02	0.02
Total Hourly Emissions	**lbs/hour**	**0.60**	**7.88**	**3.52**	**0.53**	**0.55**	**0.54**

Construction Equipment Daily Emissions

Equipment		Daily Emissions (lbs/day)					
		VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Diesel Hammer		1.4	18.4	9.1	1.2	1.3	1.3
225-ton Crane		0.9	12.4	3.1	0.8	0.7	0.6
Loader		0.3	4.2	1.7	0.3	0.3	0.3
Vibratory Hammer		1.4	18.4	9.1	1.2	1.3	1.3
Forklift		0.4	4.0	2.6	0.4	0.4	0.4
Generator Set		0.2	1.4	0.7	0.1	0.1	0.1
Total Daily Emissions	**lbs/day**	**4.53**	**58.89**	**26.46**	**3.91**	**4.14**	**4.04**

Construction Equipment Annual Emissions

Equipment		Annual Emissions (lbs/year)					
		VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Diesel Hammer		98	1,290	640	81	94	92
225-ton Crane		61	871	218	59	46	45
Loader		21	291	121	21	20	20
Vibratory Hammer		98	1,290	640	81	94	92
Forklift		25	280	183	25	25	25
Generator Set		13	101	50	6	10	9
Total Annual Emissions	**lbs/year**	**317**	**4,122**	**1,852**	**274**	**290**	**283**
	tons/year	**0.16**	**2.06**	**0.93**	**0.14**	**0.14**	**0.14**

Notes:

lb/1,000 HP-hr = pound(s) per 1,000 horsepower-hour

lbs/hour = pound(s) per hour

lbs/day = pound(s) per day

lbs/year = pound(s) per year

tons/year = ton(s) per year

Toxic Air Contaminant (TAC) Emission Factors

TAC	CAS Number	Diesel Hammer	225-ton Crane	Loader	Vibratory Hammer	Forklift	Generator Set [a]
		grams/hour	grams/hour	grams/hour	grams/hour	grams/hour	lbs, 1,000 gal of fuel burned
1,3-Butadiene	106-99-0	0.006	0.007	0.009	0.006	0.004	0.217
Acetaldehyde	75-07-0	0.339	0.369	0.428	0.339	0.230	0.783
Acrolein	107-02-8	0.063	0.067	0.097	0.063	0.042	0.034
Arsenic	7440-38-2	0.000	0.000	0.000	0.000	0.000	0.002
Benzene	71-43-2	0.163	0.176	0.173	0.163	0.114	0.186
Beryllium	7440-41-7	--	--	--	--	--	0.000
Cadmium	7440-43-9	--	--	--	--	--	0.002
Chlorobenzene	108-90-7	--	--	--	--	--	0.000
Chromium Hexavalent	18540-29-9	0.000	0.000	0.000	0.000	0.000	0.000
Chromium Nonhexavalent	7440-47-3	--	--	--	--	--	0.001
Copper	7440-50-8	--	--	--	--	--	0.004
Diesel Particulate [b]	1333-86-4	0.950	0.640	0.820	0.950	0.900	1.350
Ethyl Benzene	100-41-4	0.017	0.020	0.025	0.017	0.011	0.011
Formaldehyde	50-00-0	0.939	1.007	1.203	0.939	0.638	1.730
Hexane	110-54-3	0.002	0.002	0.007	0.002	0.001	0.027
Hydrogen Chloride	7647-01-0	--	--	--	--	--	0.186
Lead	7439-92-1	--	--	--	--	--	0.008
Manganese	7439-96-5	0.000	0.000	0.000	0.000	0.000	0.003
Mercury	7439-97-6	0.000	0.000	0.000	0.000	0.000	0.002
Naphthalene	91-20-3	0.015	0.016	0.018	0.015	0.010	0.020
Nickel	7440-02-0	0.000	0.000	0.000	0.000	0.000	0.004
Total PAHs	1151	0.002	0.002	0.003	0.002	0.001	0.036
Propylene	115-07-1	--	--	--	--	--	0.467
Selenium	7782-49-2	--	--	--	--	--	0.002
Toluene	108-88-3	0.120	0.132	0.129	0.120	0.083	0.105
Xylenes	1330-20-7	0.058	0.074	0.076	0.058	0.034	0.042
Zinc	7440-66-6	--	--	--	--	--	0.022
2,2,4-Trimethylpentane	540-84-1	0.027	0.029	0.037	0.027	0.018	--

[a] Generator set emission factors assume a diesel fired engine <= 600 BHP uncontrolled emission factors for the TAC emission profile for the most conservative estimate. From SDAPCD E15-Portable Engine, Diesel Fired, 50-600 BHP, Uncontrolled.

[b] Diesel Particulate emission factor in pounds per 1,000 horsepower-hour (lb/1000 HP-hr) and assumed equal to PM_{10}.

Toxic Air Contaminant (TAC) Hourly Emissions

TAC	CAS Number	Diesel Hammer	225-ton Crane	Loader	Vibratory Hammer	Forklift	Generator Set	Total
		lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	lbs/hour	
1,3-Butadiene	106-99-0	1.35E-05	1.44E-05	1.97E-05	1.35E-05	9.03E-06	3.32E-04	**4.02E-04**
Acetaldehyde	75-07-0	7.48E-04	8.14E-04	9.43E-04	7.48E-04	5.06E-04	1.20E-03	**4.96E-03**
Acrolein	107-02-8	1.39E-04	1.48E-04	2.13E-04	1.39E-04	9.15E-05	5.19E-05	**7.82E-04**
Arsenic	7440-38-2	1.24E-07	1.83E-07	4.52E-08	1.24E-07	1.12E-07	2.45E-06	**3.04E-06**
Benzene	71-43-2	3.59E-04	3.88E-04	3.81E-04	3.59E-04	2.52E-04	2.85E-04	**2.02E-03**
Beryllium	7440-41-7	--	--	--	--	--	0.00E+00	**0.00E+00**
Cadmium	7440-43-9	--	--	--	--	--	2.30E-06	**2.30E-06**
Chlorobenzene	108-90-7	--	--	--	--	--	3.06E-07	**3.06E-07**
Chromium Hexavalent	18540-29-9	4.14E-10	5.84E-10	1.74E-10	4.14E-10	3.95E-10	1.53E-07	**1.55E-07**
Chromium Nonhexavalent	7440-47-3	--	--	--	--	--	7.65E-07	**7.65E-07**
Copper	7440-50-8	--	--	--	--	--	6.27E-06	**6.27E-06**
Diesel Particulate [b]	9901	2.09E-03	1.41E-03	1.81E-03	2.09E-03	1.98E-03	2.07E-03	**1.15E-02**
Ethyl Benzene	100-41-4	3.79E-05	4.37E-05	5.58E-05	3.79E-05	2.39E-05	1.67E-05	**2.16E-04**
Formaldehyde	50-00-0	2.07E-03	2.22E-03	2.65E-03	2.07E-03	1.41E-03	2.65E-03	**1.31E-02**
Hexane	110-54-3	3.82E-06	3.62E-06	1.53E-05	3.82E-06	1.31E-06	4.12E-05	**6.90E-05**
Hydrogen Chloride	7647-01-0	--	--	--	--	--	2.85E-04	**2.85E-04**
Lead	7439-92-1	--	--	--	--	--	1.27E-05	**1.27E-05**
Manganese	7439-96-5	1.65E-07	2.37E-07	7.06E-08	1.65E-07	1.55E-07	4.74E-06	**5.53E-06**
Mercury	7439-97-6	4.77E-10	7.05E-10	1.74E-10	4.77E-10	4.33E-10	3.06E-06	**3.06E-06**
Naphthalene	91-20-3	3.42E-05	3.55E-05	3.92E-05	3.42E-05	2.29E-05	3.01E-05	**1.96E-04**
Nickel	7440-02-0	2.83E-07	4.09E-07	1.22E-07	2.83E-07	2.65E-07	5.97E-06	**7.33E-06**
Total PAHs	1151	4.32E-06	4.59E-06	6.34E-06	4.32E-06	2.90E-06	5.54E-05	**7.78E-05**
Propylene	115-07-1	--	--	--	--	--	7.15E-04	**7.15E-04**
Selenium	7782-49-2	--	--	--	--	--	3.37E-06	**3.37E-06**
Toluene	108-88-3	2.64E-04	2.90E-04	2.85E-04	2.64E-04	1.82E-04	1.61E-04	**1.45E-03**
Xylenes	1330-20-7	1.27E-04	1.62E-04	1.68E-04	1.27E-04	7.60E-05	6.49E-05	**7.26E-04**
Zinc	7440-66-6	--	--	--	--	--	3.43E-05	**3.43E-05**
2,2,4-Trimethylpentane	540-84-1	5.88E-05	6.39E-05	8.09E-05	5.88E-05	3.90E-05	--	**3.01E-04**

Grams per pound 453.592

Toxic Air Contaminant (TAC) Annual Emissions

TAC	CAS Number	Diesel Hammer	225-ton Crane	Loader	Vibratory Hammer	Forklift	Generator Set	Total
		lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	lbs/year	
1,3-Butadiene	106-99-0	7.57E-03	8.07E-03	5.50E-03	7.57E-03	5.06E-03	1.86E-01	**2.20E-01**
Acetaldehyde	75-07-0	4.19E-01	4.56E-01	2.64E-01	4.19E-01	2.83E-01	6.71E-01	**2.51E+00**
Acrolein	107-02-8	7.78E-02	8.29E-02	5.96E-02	7.78E-02	5.13E-02	2.90E-02	**3.78E-01**
Arsenic	7440-38-2	6.93E-05	1.02E-04	1.26E-05	6.93E-05	6.30E-05	1.37E-03	**1.69E-03**
Benzene	71-43-2	2.01E-01	2.17E-01	1.07E-01	2.01E-01	1.41E-01	1.59E-01	**1.03E+00**
Beryllium	7440-41-7	--	--	--	--	--	0.00E+00	**0.00E+00**
Cadmium	7440-43-9	--	--	--	--	--	1.29E-03	**1.29E-03**
Chlorobenzene	108-90-7	--	--	--	--	--	1.71E-04	**1.71E-04**
Chromium Hexavalent	18540-29-9	2.32E-07	3.27E-07	4.86E-08	2.32E-07	2.21E-07	8.57E-05	**8.67E-05**
Chromium Nonhexavalent	7440-47-3	--	--	--	--	--	4.28E-04	**4.28E-04**
Copper	7440-50-8	--	--	--	--	--	3.51E-03	**3.51E-03**
Diesel Particulate [b]	9901	1.17E+00	7.90E-01	5.06E-01	1.17E+00	1.11E+00	1.16E+00	**5.91E+00**
Ethyl Benzene	100-41-4	2.12E-02	2.45E-02	1.56E-02	2.12E-02	1.34E-02	9.34E-03	**1.05E-01**
Formaldehyde	50-00-0	1.16E+00	1.24E+00	7.42E-01	1.16E+00	7.88E-01	1.48E+00	**6.57E+00**
Hexane	110-54-3	2.14E-03	2.03E-03	4.28E-03	2.14E-03	7.36E-04	2.30E-02	**3.44E-02**
Hydrogen Chloride	7647-01-0	--	--	--	--	--	1.59E-01	**1.59E-01**
Lead	7439-92-1	--	--	--	--	--	7.11E-03	**7.11E-03**
Manganese	7439-96-5	9.21E-05	1.32E-04	1.98E-05	9.21E-05	8.67E-05	2.66E-03	**3.08E-03**
Mercury	7439-97-6	2.67E-07	3.95E-07	4.87E-08	2.67E-07	2.42E-07	1.71E-03	**1.71E-03**
Naphthalene	91-20-3	1.91E-02	1.99E-02	1.10E-02	1.91E-02	1.28E-02	1.69E-02	**9.88E-02**
Nickel	7440-02-0	1.59E-04	2.29E-04	3.41E-05	1.59E-04	1.49E-04	3.34E-03	**4.07E-03**
Total PAHs	1151	2.42E-03	2.57E-03	1.77E-03	2.42E-03	1.62E-03	3.10E-02	**4.18E-02**
Propylene	115-07-1	--	--	--	--	--	4.00E-01	**4.00E-01**
Selenium	7782-49-2	--	--	--	--	--	1.88E-03	**1.88E-03**
Toluene	108-88-3	1.48E-01	1.62E-01	7.99E-02	1.48E-01	1.02E-01	9.00E-02	**7.30E-01**
Xylenes	1330-20-7	7.13E-02	9.09E-02	4.70E-02	7.13E-02	4.25E-02	3.63E-02	**3.60E-01**
Zinc	7440-66-6	--	--	--	--	--	1.92E-02	**1.92E-02**
2,2,4-Trimethylpentane	540-84-1	3.29E-02	3.58E-02	2.27E-02	3.29E-02	2.18E-02	--	**1.46E-01**

Austal USA
San Diego Floating Dry Dock
Welding Emissions
April 2025

Welding Criteria Pollutant Emissions [a]

Welding Source	PM_{10} Emissions (lbs/hour)	$PM_{2.5}$ Emissions (lbs/hour) [a]	PM_{10} Emissions (lbs/day)	$PM_{2.5}$ Emissions (lbs/day) [a]	PM_{10} Emissions (tons/year)	$PM_{2.5}$ Emissions (tons/year) [a]
All Welding	7.29E-03	7.29E-03	7.29E-03	7.29E-03	2.04E-03	2.04E-03
Total Emissions	**7.29E-03**	**7.29E-03**	**7.29E-03**	**7.29E-03**	**2.04E-03**	**2.04E-03**

[a] $PM_{2.5}$ emissions assumed equal to PM_{10} emissions.
lbs/hour = pound(s) per hour
lbs/day = pound(s) per day
tons/year = ton(s) per year
PM_{10} = Particulate matter less than 10 micrometers in diameter
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

Welding Toxic Air Contaminant Emissions

TAC	CAS Number	Hourly Emissions	Daily Emissions	Annual Emissions	Annual Emissions
		lbs/hour	lbs/day	lbs/year	tons/year
Chromium, Hexavalent	18540-29-9	4.14E-06	3.31E-05	2.32E-03	1.16E-06
Chromium, NonHexavalent	7440-47-3	2.44E-06	1.95E-05	1.37E-03	6.84E-07
Manganese	7439-96-5	7.62E-06	6.10E-05	4.27E-03	2.13E-06
Nickel	7440-02-0	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Copper	7440-50-8	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Zinc	7440-66-6	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Aluminum	7429-90-5	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Lead	7439-92-1	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Vanadium	7440-62-2	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Beryllium	7440-41-7	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Molybdenum (Mo)	7439-98-7	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Iron (Fe)	7439-89-6	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Titanium (Ti)	12039-70-2	6.57E-06	5.25E-05	3.68E-03	1.84E-06
Magnesium (Mg)	7439-95-4	6.57E-06	5.25E-05	3.68E-03	1.84E-06

Austal USA
San Diego Floating Dry Dock
Welding Usage and Emission Factors
April 2025

Welding Usage During Remaining Construction [a]

	Hourly (lb/hr)	Daily (lb/day)	Annual (lb/yr) [b]
	E7018, Stick Electrode		
Other Misc. Shipyard Welding at the Welding Shop	0.2	1.4	100
	NR-232 Flux-Cored Wire		
	0.2	1.6	112

[a] Welding operations during construction based on 70 days of remaining construction for 8 hours per day.
[b] Annual usage for each type of welding material was provided directly from Austal.

SDAPCD Emission Factor Set	CAS Number	S120	F99
Process		Shielded Metal Arc Welding (SMAW) [Stick Electrode]	Flux-Cored Arc Welding (FCAW)
Rod		E7018	NR-232
Rod/Weld Combo_Client		E7018 Shielded Metal Arc Welding (SMAW) [Stick Electrode]	NR-232 Flux-Cored Arc Welding (FCAW)
Pollutant		lbs/lb rod	lbs/lb rod
Total Particulates (TSP)	--	1.84E-02	2.00E-02
Particulate Matter (PM10)	--	1.84E-02	2.00E-02
Chromium, Hexavalent	18540-29-9	3.68E-08	2.07E-05
Chromium, Nonhexavalent	7440-47-3	6.70E-08	1.21E-05
Manganese	7439-96-5	5.90E-06	3.28E-05
Nickel	7440-02-0	1.15E-08	3.28E-05
Copper	7440-50-8	0.00E+00	3.28E-05
Zinc	7440-66-6	0.00E+00	3.28E-05
Aluminum	7429-90-5	0.00E+00	3.28E-05
Lead	7439-92-1	0.00E+00	3.28E-05
Vanadium	7440-62-2	0.00E+00	3.28E-05
Beryllium	7440-41-7	0.00E+00	3.28E-05
Molybdenum (Mo)	7439-98-7	0.00E+00	3.28E-05
Iron (Fe)	7439-89-6	0.00E+00	3.28E-05
Titanium (Ti)	12039-70-2	0.00E+00	3.28E-05
Magnesium (Mg)	7439-95-4	0.00E+00	3.28E-05

Cr to Cr+6 conversion rate

0.05	GMAW
0.05	GTAW
0.55	SMAW
0.0005	SAW
0.10	FCAW

Fume Correction Factor

0.2865	SMAW
0.2865	FCAW
0.2865	SAW
0.5464	GMAW
0.5464	GTAW

Fume Generation Rate

0.02	SMAW
0.02	FCAW
0.00005	SAW
0.01	GMAW
0.01	GTAW

Source: https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/welding/APCD-Welding-EF-SAW-EM12K.pdf (Version: 07/07/2022)

Austal USA
San Diego Floating Dry Dock
Construction Mobile Source Emissions
April 2025

Construction Worker Commute Data

Trip Type	One Way Trip Length (miles) [a]	Number of New Employees/Trips [b]	Hours Per Day	Work Days Per Week	Work Weeks Per Year [b]	Vehicle Type
Local San Diego Worker	11.8	20	1	5	8	50% gasoline light duty cars, 50% light duty trucks (type 1 and 2)

[a] Trip length based upon CalEEMOD Version 2022.1.1 Default Data for San Diego Air Pollution Control District residential trip length for home to work for local San Diego Workers and Work-Other nonresidential trip length for Local Haul Trucks

[b] It is anticipated that there will be up to 20 construction workers for 8 weeks of work to complete construction of the facility.

Construction Worker Commute Emission Factors [a]

Trip Type	Emission Factors (lbs/VMT)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Local San Diego Worker	7.21E-05	1.94E-04	2.45E-03	7.36E-06	4.02E-05	1.48E-05

[a] Equipment emission factors were obtained from EFMAC 2021 for San Diego Air Pollution Control District defaults and aggregated speed and vehicle age. Emission factors assume 50% LDA, 25 LDT1, and 25% LDT2 vehicle types.

lbs/VMT = pound(s) per vehicle mile traveled

VOC = volatile organic compound(s)

NOx = oxides of nitrogen

CO = carbon monoxide

SO_2 = sulfur dioxide

PM_{10} = Particulate matter less than 10 micrometers in diameter

$PM_{2.5}$ = Particulate matter less than 2.5 micrometers in diameter

Construction Worker Commute Hourly Emissions

Trip Type	Hourly Emissions (lbs/hour)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Local San Diego Worker	3.41E-02	9.18E-02	1.15E+00	3.47E-03	1.90E-02	7.00E-03
Total Emissions	**3.41E-02**	**9.18E-02**	**1.15E+00**	**3.47E-03**	**1.90E-02**	**7.00E-03**

Construction Worker Commute Annual Emissions

Trip Type	Annual Emissions (tons/year)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Local San Diego Worker	6.81E-04	1.84E-03	2.31E-02	6.95E-05	3.80E-04	1.40E-04
Total Emissions	**6.81E-04**	**1.84E-03**	**2.31E-02**	**6.95E-05**	**3.80E-04**	**1.40E-04**

tons/year = ton(s) per year

grams per pound 453.6

Attachment 3
Operation Health Risk Assessment Details

Austal USA Floating Dry Dock

Health Risk Assessment

Table 1. Nearest Sensitive Receptors

April 2025

Austal Nearby Sensitive Receptors

Receptor Number	Receptor Description	X Coordinate	Y Coordinate
3,361	Sensitive	490,893.88	3,614,144.11
3,362	Sensitive	490,355.70	3,614,348.16
3,363	Sensitive	489,988.22	3,615,418.58
3,364	Sensitive	489,961.50	3,614,226.92
3,365	Sensitive	490,350.45	3,614,846.09
3,366	Sensitive	490,444.62	3,614,726.21
3,367	Sensitive	490,205.81	3,614,748.00
3,368	Sensitive	491,122.83	3,613,855.38
3,369	Sensitive	490,037.71	3,614,126.15
3,371	Sensitive	490,437.17	3,615,111.44
3,372	Sensitive	489,485.55	3,615,131.18
3,373	Sensitive	491,186.66	3,613,574.49
3,374	Sensitive	490,748.81	3,613,872.66
3,375	Sensitive	490,879.25	3,614,625.34

Note: Coordinates presented are UTM NAD83 Zone 11, meters

Austal USA Floating Dry Dock

Health Risk Assessment

Table 2. Nearest Residential Receptors

April 2025

Austal Nearby Residential Receptors

Receptor Number	Receptor Description	X Coordinate	Y Coordinate
677	Residential	489,650	3,613,750
703	Residential	489,600	3,613,800
992	Residential	489,700	3,613,800
1,022	Residential	490,100	3,614,000
1,036	Residential	489,800	3,614,100
1,056	Residential	489,800	3,614,200
5,383	Residential	489,937	3,614,018

Note: Coordinates presented are UTM NAD83 Zone 11, meters

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
OPS_1	67641	[D] Acetone	0.00E+00	0.00E+00
OPS_1	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
OPS_1	106990	1,3-Butadiene	0.00E+00	0.00E+00
OPS_1	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
OPS_1	83329	Acenaphthene	0.00E+00	0.00E+00
OPS_1	208968	Acenaphthylene	0.00E+00	0.00E+00
OPS_1	75070	Acetaldehyde	0.00E+00	0.00E+00
OPS_1	107028	Acrolein	0.00E+00	0.00E+00
OPS_1	1344281	Alumin Oxide	0.00E+00	0.00E+00
OPS_1	7429905	Aluminum	1.49E-03	2.64E-04
OPS_1	120127	Anthracene	0.00E+00	0.00E+00
OPS_1	7440360	Antimony	0.00E+00	0.00E+00
OPS_1	7440382	Arsenic	0.00E+00	0.00E+00
OPS_1	56553	B[a]anthracene	0.00E+00	0.00E+00
OPS_1	50328	B[a]P	0.00E+00	0.00E+00
OPS_1	205992	B[b]fluoranthen	0.00E+00	0.00E+00
OPS_1	207089	B[k]fluoranthen	0.00E+00	0.00E+00
OPS_1	71432	Benzene	0.00E+00	0.00E+00
OPS_1	7440417	Beryllium	1.50E-09	2.79E-10
OPS_1	7440439	Cadmium	0.00E+00	0.00E+00
OPS_1	108907	Chlorobenzn	0.00E+00	0.00E+00
OPS_1	7440473	Chromium	0.00E+00	0.00E+00
OPS_1	218019	Chrysene	0.00E+00	0.00E+00
OPS_1	7440484	Cobalt	0.00E+00	0.00E+00
OPS_1	7440508	Copper	1.15E-03	1.05E-04
OPS_1	18540299	Cr(VI)	1.81E-05	1.49E-06
OPS_1	98828	Cumene	0.00E+00	0.00E+00
OPS_1	110827	Cyclohexane	0.00E+00	0.00E+00
OPS_1	53703	D[a,h]anthracen	0.00E+00	0.00E+00
OPS_1	111773	DEGME	0.00E+00	0.00E+00
OPS_1	9901	DieselExhPM	0.00E+00	0.00E+00
OPS_1	100414	Ethyl Benzene	0.00E+00	0.00E+00
OPS_1	206440	Fluoranthene	0.00E+00	0.00E+00
OPS_1	86737	Fluorene	0.00E+00	0.00E+00
OPS_1	1101	Fluorides&cmpds	4.36E-06	5.45E-09
OPS_1	50000	Formaldehyde	0.00E+00	0.00E+00
OPS_1	7647010	HCl	0.00E+00	0.00E+00
OPS_1	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
OPS_1	110543	Hexane	0.00E+00	0.00E+00
OPS_1	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
OPS_1	1125	Isocyanates	0.00E+00	0.00E+00
OPS_1	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
OPS_1	7439921	Lead	6.60E-08	6.60E-09
OPS_1	7439965	Manganese	1.33E-03	7.07E-06
OPS_1	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
OPS_1	78933	MEK	0.00E+00	0.00E+00
OPS_1	7439976	Mercury	0.00E+00	0.00E+00
OPS_1	108101	MIBK	0.00E+00	0.00E+00
OPS_1	91203	Naphthalene	0.00E+00	0.00E+00
OPS_1	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
OPS_1	7664417	NH3	0.00E+00	0.00E+00
OPS_1	7440020	Nickel	6.90E-04	6.66E-05
OPS_1	97563	o-Aminoazotolue	0.00E+00	0.00E+00
OPS_1	95487	o-Cresol	0.00E+00	0.00E+00
OPS_1	95476	o-Xylene	0.00E+00	0.00E+00
OPS_1	1150	PAHs-w/	0.00E+00	0.00E+00
OPS_1	1336363	PCBs	0.00E+00	0.00E+00
OPS_1	98566	PCBTF	0.00E+00	0.00E+00
OPS_1	107982	PGME	0.00E+00	0.00E+00
OPS_1	108656	PGMEA	0.00E+00	0.00E+00
OPS_1	85018	Phenanthrene	0.00E+00	0.00E+00
OPS_1	108952	Phenol	0.00E+00	0.00E+00
OPS_1	7723140	Phosphorus	9.15E-06	4.67E-08
OPS_1	123386	Propionaldehyde	0.00E+00	0.00E+00
OPS_1	115071	Propylene	0.00E+00	0.00E+00
OPS_1	129000	Pyrene	0.00E+00	0.00E+00
OPS_1	7782492	Selenium	0.00E+00	0.00E+00
OPS_1	1175	Silica, Crystln	0.00E+00	0.00E+00
OPS_1	100425	Styrene	0.00E+00	0.00E+00
OPS_1	540885	t-Butyl acetate	0.00E+00	0.00E+00
OPS_1	108883	Toluene	0.00E+00	0.00E+00
OPS_1	25551137	TriMeBenzns	0.00E+00	0.00E+00
OPS_1	7440622	Vanadium	1.41E-05	1.77E-08
OPS_1	1330207	Xylenes	0.00E+00	0.00E+00
OPS_1	7440666	Zinc	1.50E-07	2.79E-08
OPS_1	1314132	Zinc Oxide	0.00E+00	0.00E+00
OPS_2	67641	[D] Acetone	1.42E-01	2.51E-01
OPS_2	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
OPS_2	106990	1,3-Butadiene	0.00E+00	0.00E+00
OPS_2	540841	2,2,4TriMePentn	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
OPS_2	83329	Acenaphthene	0.00E+00	0.00E+00
OPS_2	208968	Acenaphthylene	0.00E+00	0.00E+00
OPS_2	75070	Acetaldehyde	0.00E+00	0.00E+00
OPS_2	107028	Acrolein	0.00E+00	0.00E+00
OPS_2	1344281	Alumin Oxide	0.00E+00	0.00E+00
OPS_2	7429905	Aluminum	0.00E+00	0.00E+00
OPS_2	120127	Anthracene	0.00E+00	0.00E+00
OPS_2	7440360	Antimony	0.00E+00	0.00E+00
OPS_2	7440382	Arsenic	0.00E+00	0.00E+00
OPS_2	56553	B[a]anthracene	0.00E+00	0.00E+00
OPS_2	50328	B[a]P	0.00E+00	0.00E+00
OPS_2	205992	B[b]fluoranthen	0.00E+00	0.00E+00
OPS_2	207089	B[k]fluoranthen	0.00E+00	0.00E+00
OPS_2	71432	Benzene	0.00E+00	0.00E+00
OPS_2	7440417	Beryllium	0.00E+00	0.00E+00
OPS_2	7440439	Cadmium	0.00E+00	0.00E+00
OPS_2	108907	Chlorobenzn	0.00E+00	0.00E+00
OPS_2	7440473	Chromium	0.00E+00	0.00E+00
OPS_2	218019	Chrysene	0.00E+00	0.00E+00
OPS_2	7440484	Cobalt	0.00E+00	0.00E+00
OPS_2	7440508	Copper	0.00E+00	0.00E+00
OPS_2	18540299	Cr(VI)	0.00E+00	0.00E+00
OPS_2	98828	Cumene	0.00E+00	0.00E+00
OPS_2	110827	Cyclohexane	0.00E+00	0.00E+00
OPS_2	53703	D[a,h]anthracen	0.00E+00	0.00E+00
OPS_2	111773	DEGME	0.00E+00	0.00E+00
OPS_2	9901	DieselExhPM	0.00E+00	0.00E+00
OPS_2	100414	Ethyl Benzene	1.89E-02	3.35E-02
OPS_2	206440	Fluoranthene	0.00E+00	0.00E+00
OPS_2	86737	Fluorene	0.00E+00	0.00E+00
OPS_2	1101	Fluorides&cmpds	0.00E+00	0.00E+00
OPS_2	50000	Formaldehyde	1.77E-03	3.14E-03
OPS_2	7647010	HCl	0.00E+00	0.00E+00
OPS_2	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
OPS_2	110543	Hexane	8.87E-02	1.57E-01
OPS_2	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
OPS_2	1125	Isocyanates	1.98E-02	3.51E-02
OPS_2	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
OPS_2	7439921	Lead	0.00E+00	0.00E+00
OPS_2	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
OPS_2	101688	MeDiphenDiisocy	1.89E-08	3.35E-08
OPS_2	78933	MEK	0.00E+00	0.00E+00
OPS_2	7439976	Mercury	0.00E+00	0.00E+00
OPS_2	108101	MIBK	0.00E+00	0.00E+00
OPS_2	91203	Naphthalene	0.00E+00	0.00E+00
OPS_2	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
OPS_2	7664417	NH3	0.00E+00	0.00E+00
OPS_2	7440020	Nickel	0.00E+00	0.00E+00
OPS_2	97563	o-Aminoazotolue	0.00E+00	0.00E+00
OPS_2	95487	o-Cresol	1.77E-03	3.14E-03
OPS_2	95476	o-Xylene	0.00E+00	0.00E+00
OPS_2	1150	PAHs-w/	0.00E+00	0.00E+00
OPS_2	1336363	PCBs	0.00E+00	0.00E+00
OPS_2	98566	PCBTF	0.00E+00	0.00E+00
OPS_2	107982	PGME	0.00E+00	0.00E+00
OPS_2	108656	PGMEA	0.00E+00	0.00E+00
OPS_2	85018	Phenanthrene	0.00E+00	0.00E+00
OPS_2	108952	Phenol	1.97E-02	3.49E-02
OPS_2	7723140	Phosphorus	0.00E+00	0.00E+00
OPS_2	123386	Propionaldehyde	0.00E+00	0.00E+00
OPS_2	115071	Propylene	0.00E+00	0.00E+00
OPS_2	129000	Pyrene	0.00E+00	0.00E+00
OPS_2	7782492	Selenium	0.00E+00	0.00E+00
OPS_2	1175	Silica, Crystln	0.00E+00	0.00E+00
OPS_2	100425	Styrene	0.00E+00	0.00E+00
OPS_2	540885	t-Butyl acetate	0.00E+00	0.00E+00
OPS_2	108883	Toluene	3.39E-01	6.01E-01
OPS_2	25551137	TriMeBenzns	0.00E+00	0.00E+00
OPS_2	7440622	Vanadium	0.00E+00	0.00E+00
OPS_2	1330207	Xylenes	9.45E-02	1.68E-01
OPS_2	7440666	Zinc	0.00E+00	0.00E+00
OPS_2	1314132	Zinc Oxide	0.00E+00	0.00E+00
FDD_1	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_1	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_1	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_1	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_1	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_1	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_1	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_1	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_1	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_1	7429905	Aluminum	3.14E-02	0.00E+00
FDD_1	120127	Anthracene	0.00E+00	0.00E+00
FDD_1	7440360	Antimony	0.00E+00	0.00E+00
FDD_1	7440382	Arsenic	0.00E+00	0.00E+00
FDD_1	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_1	50328	B[a]P	0.00E+00	0.00E+00
FDD_1	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_1	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_1	71432	Benzene	0.00E+00	0.00E+00
FDD_1	7440417	Beryllium	2.95E-08	0.00E+00
FDD_1	7440439	Cadmium	9.14E-03	0.00E+00
FDD_1	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_1	7440473	Chromium	9.24E-02	0.00E+00
FDD_1	218019	Chrysene	0.00E+00	0.00E+00
FDD_1	7440484	Cobalt	5.86E-03	0.00E+00
FDD_1	7440508	Copper	2.55E+01	0.00E+00
FDD_1	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_1	98828	Cumene	6.78E+01	0.00E+00
FDD_1	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_1	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_1	111773	DEGME	1.86E-01	0.00E+00
FDD_1	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_1	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_1	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_1	86737	Fluorene	0.00E+00	0.00E+00
FDD_1	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_1	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_1	7647010	HCl	0.00E+00	0.00E+00
FDD_1	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_1	110543	Hexane	3.99E-01	0.00E+00
FDD_1	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_1	1125	Isocyanates	5.08E+00	0.00E+00
FDD_1	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_1	7439921	Lead	8.28E-03	0.00E+00
FDD_1	7439965	Manganese	1.50E-01	0.00E+00
FDD_1	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_1	78933	MEK	4.41E+00	0.00E+00
FDD_1	7439976	Mercury	0.00E+00	0.00E+00
FDD_1	108101	MIBK	2.15E+01	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_1	91203	Naphthalene	0.00E+00	0.00E+00
FDD_1	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_1	7664417	NH3	0.00E+00	0.00E+00
FDD_1	7440020	Nickel	1.02E-01	0.00E+00
FDD_1	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_1	95487	o-Cresol	7.98E-03	0.00E+00
FDD_1	95476	o-Xylene	0.00E+00	0.00E+00
FDD_1	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_1	1336363	PCBs	0.00E+00	0.00E+00
FDD_1	98566	PCBTF	1.52E+02	0.00E+00
FDD_1	107982	PGME	1.39E+01	0.00E+00
FDD_1	108656	PGMEA	1.32E+01	0.00E+00
FDD_1	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_1	108952	Phenol	8.86E-02	0.00E+00
FDD_1	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_1	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_1	115071	Propylene	0.00E+00	0.00E+00
FDD_1	129000	Pyrene	0.00E+00	0.00E+00
FDD_1	7782492	Selenium	0.00E+00	0.00E+00
FDD_1	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_1	100425	Styrene	0.00E+00	0.00E+00
FDD_1	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_1	108883	Toluene	2.69E+00	0.00E+00
FDD_1	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_1	7440622	Vanadium	6.26E-04	0.00E+00
FDD_1	1330207	Xylenes	9.70E+02	0.00E+00
FDD_1	7440666	Zinc	2.95E-06	0.00E+00
FDD_1	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_2	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_2	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_2	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_2	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_2	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_2	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_2	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_2	107028	Acrolein	0.00E+00	0.00E+00
FDD_2	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_2	7429905	Aluminum	3.14E-02	0.00E+00
FDD_2	120127	Anthracene	0.00E+00	0.00E+00
FDD_2	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_2	7440382	Arsenic	0.00E+00	0.00E+00
FDD_2	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_2	50328	B[a]P	0.00E+00	0.00E+00
FDD_2	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_2	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_2	71432	Benzene	0.00E+00	0.00E+00
FDD_2	7440417	Beryllium	2.95E-08	0.00E+00
FDD_2	7440439	Cadmium	9.14E-03	0.00E+00
FDD_2	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_2	7440473	Chromium	9.24E-02	0.00E+00
FDD_2	218019	Chrysene	0.00E+00	0.00E+00
FDD_2	7440484	Cobalt	5.86E-03	0.00E+00
FDD_2	7440508	Copper	2.55E+01	0.00E+00
FDD_2	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_2	98828	Cumene	6.78E+01	0.00E+00
FDD_2	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_2	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_2	111773	DEGME	1.86E-01	0.00E+00
FDD_2	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_2	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_2	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_2	86737	Fluorene	0.00E+00	0.00E+00
FDD_2	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_2	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_2	7647010	HCl	0.00E+00	0.00E+00
FDD_2	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_2	110543	Hexane	3.99E-01	0.00E+00
FDD_2	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_2	1125	Isocyanates	5.08E+00	0.00E+00
FDD_2	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_2	7439921	Lead	8.28E-03	0.00E+00
FDD_2	7439965	Manganese	1.50E-01	0.00E+00
FDD_2	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_2	78933	MEK	4.41E+00	0.00E+00
FDD_2	7439976	Mercury	0.00E+00	0.00E+00
FDD_2	108101	MIBK	2.15E+01	0.00E+00
FDD_2	91203	Naphthalene	0.00E+00	0.00E+00
FDD_2	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_2	7664417	NH3	0.00E+00	0.00E+00
FDD_2	7440020	Nickel	1.02E-01	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_2	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_2	95487	o-Cresol	7.98E-03	0.00E+00
FDD_2	95476	o-Xylene	0.00E+00	0.00E+00
FDD_2	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_2	1336363	PCBs	0.00E+00	0.00E+00
FDD_2	98566	PCBTF	1.52E+02	0.00E+00
FDD_2	107982	PGME	1.39E+01	0.00E+00
FDD_2	108656	PGMEA	1.32E+01	0.00E+00
FDD_2	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_2	108952	Phenol	8.86E-02	0.00E+00
FDD_2	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_2	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_2	115071	Propylene	0.00E+00	0.00E+00
FDD_2	129000	Pyrene	0.00E+00	0.00E+00
FDD_2	7782492	Selenium	0.00E+00	0.00E+00
FDD_2	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_2	100425	Styrene	0.00E+00	0.00E+00
FDD_2	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_2	108883	Toluene	2.69E+00	0.00E+00
FDD_2	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_2	7440622	Vanadium	6.26E-04	0.00E+00
FDD_2	1330207	Xylenes	9.70E+02	0.00E+00
FDD_2	7440666	Zinc	2.95E-06	0.00E+00
FDD_2	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_3	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_3	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_3	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_3	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_3	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_3	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_3	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_3	107028	Acrolein	0.00E+00	0.00E+00
FDD_3	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_3	7429905	Aluminum	3.14E-02	0.00E+00
FDD_3	120127	Anthracene	0.00E+00	0.00E+00
FDD_3	7440360	Antimony	0.00E+00	0.00E+00
FDD_3	7440382	Arsenic	0.00E+00	0.00E+00
FDD_3	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_3	50328	B[a]P	0.00E+00	0.00E+00
FDD_3	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_3	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_3	71432	Benzene	0.00E+00	0.00E+00
FDD_3	7440417	Beryllium	2.95E-08	0.00E+00
FDD_3	7440439	Cadmium	9.14E-03	0.00E+00
FDD_3	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_3	7440473	Chromium	9.24E-02	0.00E+00
FDD_3	218019	Chrysene	0.00E+00	0.00E+00
FDD_3	7440484	Cobalt	5.86E-03	0.00E+00
FDD_3	7440508	Copper	2.55E+01	0.00E+00
FDD_3	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_3	98828	Cumene	6.78E+01	0.00E+00
FDD_3	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_3	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_3	111773	DEGME	1.86E-01	0.00E+00
FDD_3	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_3	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_3	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_3	86737	Fluorene	0.00E+00	0.00E+00
FDD_3	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_3	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_3	7647010	HCl	0.00E+00	0.00E+00
FDD_3	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_3	110543	Hexane	3.99E-01	0.00E+00
FDD_3	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_3	1125	Isocyanates	5.08E+00	0.00E+00
FDD_3	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_3	7439921	Lead	8.28E-03	0.00E+00
FDD_3	7439965	Manganese	1.50E-01	0.00E+00
FDD_3	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_3	78933	MEK	4.41E+00	0.00E+00
FDD_3	7439976	Mercury	0.00E+00	0.00E+00
FDD_3	108101	MIBK	2.15E+01	0.00E+00
FDD_3	91203	Naphthalene	0.00E+00	0.00E+00
FDD_3	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_3	7664417	NH3	0.00E+00	0.00E+00
FDD_3	7440020	Nickel	1.02E-01	0.00E+00
FDD_3	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_3	95487	o-Cresol	7.98E-03	0.00E+00
FDD_3	95476	o-Xylene	0.00E+00	0.00E+00
FDD_3	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_3	1336363	PCBs	0.00E+00	0.00E+00
FDD_3	98566	PCBTF	1.52E+02	0.00E+00
FDD_3	107982	PGME	1.39E+01	0.00E+00
FDD_3	108656	PGMEA	1.32E+01	0.00E+00
FDD_3	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_3	108952	Phenol	8.86E-02	0.00E+00
FDD_3	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_3	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_3	115071	Propylene	0.00E+00	0.00E+00
FDD_3	129000	Pyrene	0.00E+00	0.00E+00
FDD_3	7782492	Selenium	0.00E+00	0.00E+00
FDD_3	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_3	100425	Styrene	0.00E+00	0.00E+00
FDD_3	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_3	108883	Toluene	2.69E+00	0.00E+00
FDD_3	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_3	7440622	Vanadium	6.26E-04	0.00E+00
FDD_3	1330207	Xylenes	9.70E+02	0.00E+00
FDD_3	7440666	Zinc	2.95E-06	0.00E+00
FDD_3	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_4	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_4	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_4	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_4	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_4	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_4	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_4	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_4	107028	Acrolein	0.00E+00	0.00E+00
FDD_4	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_4	7429905	Aluminum	3.14E-02	0.00E+00
FDD_4	120127	Anthracene	0.00E+00	0.00E+00
FDD_4	7440360	Antimony	0.00E+00	0.00E+00
FDD_4	7440382	Arsenic	0.00E+00	0.00E+00
FDD_4	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_4	50328	B[a]P	0.00E+00	0.00E+00
FDD_4	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_4	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_4	71432	Benzene	0.00E+00	0.00E+00
FDD_4	7440417	Beryllium	2.95E-08	0.00E+00
FDD_4	7440439	Cadmium	9.14E-03	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_4	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_4	7440473	Chromium	9.24E-02	0.00E+00
FDD_4	218019	Chrysene	0.00E+00	0.00E+00
FDD_4	7440484	Cobalt	5.86E-03	0.00E+00
FDD_4	7440508	Copper	2.55E+01	0.00E+00
FDD_4	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_4	98828	Cumene	6.78E+01	0.00E+00
FDD_4	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_4	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_4	111773	DEGME	1.86E-01	0.00E+00
FDD_4	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_4	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_4	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_4	86737	Fluorene	0.00E+00	0.00E+00
FDD_4	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_4	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_4	7647010	HCl	0.00E+00	0.00E+00
FDD_4	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_4	110543	Hexane	3.99E-01	0.00E+00
FDD_4	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_4	1125	Isocyanates	5.08E+00	0.00E+00
FDD_4	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_4	7439921	Lead	8.28E-03	0.00E+00
FDD_4	7439965	Manganese	1.50E-01	0.00E+00
FDD_4	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_4	78933	MEK	4.41E+00	0.00E+00
FDD_4	7439976	Mercury	0.00E+00	0.00E+00
FDD_4	108101	MIBK	2.15E+01	0.00E+00
FDD_4	91203	Naphthalene	0.00E+00	0.00E+00
FDD_4	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_4	7664417	NH3	0.00E+00	0.00E+00
FDD_4	7440020	Nickel	1.02E-01	0.00E+00
FDD_4	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_4	95487	o-Cresol	7.98E-03	0.00E+00
FDD_4	95476	o-Xylene	0.00E+00	0.00E+00
FDD_4	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_4	1336363	PCBs	0.00E+00	0.00E+00
FDD_4	98566	PCBTF	1.52E+02	0.00E+00
FDD_4	107982	PGME	1.39E+01	0.00E+00
FDD_4	108656	PGMEA	1.32E+01	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_4	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_4	108952	Phenol	8.86E-02	0.00E+00
FDD_4	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_4	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_4	115071	Propylene	0.00E+00	0.00E+00
FDD_4	129000	Pyrene	0.00E+00	0.00E+00
FDD_4	7782492	Selenium	0.00E+00	0.00E+00
FDD_4	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_4	100425	Styrene	0.00E+00	0.00E+00
FDD_4	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_4	108883	Toluene	2.69E+00	0.00E+00
FDD_4	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_4	7440622	Vanadium	6.26E-04	0.00E+00
FDD_4	1330207	Xylenes	9.70E+02	0.00E+00
FDD_4	7440666	Zinc	2.95E-06	0.00E+00
FDD_4	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_5	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_5	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_5	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_5	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_5	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_5	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_5	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_5	107028	Acrolein	0.00E+00	0.00E+00
FDD_5	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_5	7429905	Aluminum	3.14E-02	0.00E+00
FDD_5	120127	Anthracene	0.00E+00	0.00E+00
FDD_5	7440360	Antimony	0.00E+00	0.00E+00
FDD_5	7440382	Arsenic	0.00E+00	0.00E+00
FDD_5	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_5	50328	B[a]P	0.00E+00	0.00E+00
FDD_5	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_5	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_5	71432	Benzene	0.00E+00	0.00E+00
FDD_5	7440417	Beryllium	2.95E-08	0.00E+00
FDD_5	7440439	Cadmium	9.14E-03	0.00E+00
FDD_5	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_5	7440473	Chromium	9.24E-02	0.00E+00
FDD_5	218019	Chrysene	0.00E+00	0.00E+00
FDD_5	7440484	Cobalt	5.86E-03	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_5	7440508	Copper	2.55E+01	0.00E+00
FDD_5	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_5	98828	Cumene	6.78E+01	0.00E+00
FDD_5	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_5	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_5	111773	DEGME	1.86E-01	0.00E+00
FDD_5	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_5	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_5	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_5	86737	Fluorene	0.00E+00	0.00E+00
FDD_5	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_5	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_5	7647010	HCl	0.00E+00	0.00E+00
FDD_5	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_5	110543	Hexane	3.99E-01	0.00E+00
FDD_5	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_5	1125	Isocyanates	5.08E+00	0.00E+00
FDD_5	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_5	7439921	Lead	8.28E-03	0.00E+00
FDD_5	7439965	Manganese	1.50E-01	0.00E+00
FDD_5	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_5	78933	MEK	4.41E+00	0.00E+00
FDD_5	7439976	Mercury	0.00E+00	0.00E+00
FDD_5	108101	MIBK	2.15E+01	0.00E+00
FDD_5	91203	Naphthalene	0.00E+00	0.00E+00
FDD_5	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_5	7664417	NH3	0.00E+00	0.00E+00
FDD_5	7440020	Nickel	1.02E-01	0.00E+00
FDD_5	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_5	95487	o-Cresol	7.98E-03	0.00E+00
FDD_5	95476	o-Xylene	0.00E+00	0.00E+00
FDD_5	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_5	1336363	PCBs	0.00E+00	0.00E+00
FDD_5	98566	PCBTF	1.52E+02	0.00E+00
FDD_5	107982	PGME	1.39E+01	0.00E+00
FDD_5	108656	PGMEA	1.32E+01	0.00E+00
FDD_5	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_5	108952	Phenol	8.86E-02	0.00E+00
FDD_5	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_5	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_5	115071	Propylene	0.00E+00	0.00E+00
FDD_5	129000	Pyrene	0.00E+00	0.00E+00
FDD_5	7782492	Selenium	0.00E+00	0.00E+00
FDD_5	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_5	100425	Styrene	0.00E+00	0.00E+00
FDD_5	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_5	108883	Toluene	2.69E+00	0.00E+00
FDD_5	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_5	7440622	Vanadium	6.26E-04	0.00E+00
FDD_5	1330207	Xylenes	9.70E+02	0.00E+00
FDD_5	7440666	Zinc	2.95E-06	0.00E+00
FDD_5	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_6	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_6	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_6	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_6	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_6	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_6	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_6	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_6	107028	Acrolein	0.00E+00	0.00E+00
FDD_6	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_6	7429905	Aluminum	3.14E-02	0.00E+00
FDD_6	120127	Anthracene	0.00E+00	0.00E+00
FDD_6	7440360	Antimony	0.00E+00	0.00E+00
FDD_6	7440382	Arsenic	0.00E+00	0.00E+00
FDD_6	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_6	50328	B[a]P	0.00E+00	0.00E+00
FDD_6	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_6	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_6	71432	Benzene	0.00E+00	0.00E+00
FDD_6	7440417	Beryllium	2.95E-08	0.00E+00
FDD_6	7440439	Cadmium	9.14E-03	0.00E+00
FDD_6	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_6	7440473	Chromium	9.24E-02	0.00E+00
FDD_6	218019	Chrysene	0.00E+00	0.00E+00
FDD_6	7440484	Cobalt	5.86E-03	0.00E+00
FDD_6	7440508	Copper	2.55E+01	0.00E+00
FDD_6	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_6	98828	Cumene	6.78E+01	0.00E+00
FDD_6	110827	Cyclohexane	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_6	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_6	111773	DEGME	1.86E-01	0.00E+00
FDD_6	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_6	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_6	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_6	86737	Fluorene	0.00E+00	0.00E+00
FDD_6	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_6	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_6	7647010	HCl	0.00E+00	0.00E+00
FDD_6	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_6	110543	Hexane	3.99E-01	0.00E+00
FDD_6	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_6	1125	Isocyanates	5.08E+00	0.00E+00
FDD_6	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_6	7439921	Lead	8.28E-03	0.00E+00
FDD_6	7439965	Manganese	1.50E-01	0.00E+00
FDD_6	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_6	78933	MEK	4.41E+00	0.00E+00
FDD_6	7439976	Mercury	0.00E+00	0.00E+00
FDD_6	108101	MIBK	2.15E+01	0.00E+00
FDD_6	91203	Naphthalene	0.00E+00	0.00E+00
FDD_6	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_6	7664417	NH3	0.00E+00	0.00E+00
FDD_6	7440020	Nickel	1.02E-01	0.00E+00
FDD_6	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_6	95487	o-Cresol	7.98E-03	0.00E+00
FDD_6	95476	o-Xylene	0.00E+00	0.00E+00
FDD_6	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_6	1336363	PCBs	0.00E+00	0.00E+00
FDD_6	98566	PCBTF	1.52E+02	0.00E+00
FDD_6	107982	PGME	1.39E+01	0.00E+00
FDD_6	108656	PGMEA	1.32E+01	0.00E+00
FDD_6	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_6	108952	Phenol	8.86E-02	0.00E+00
FDD_6	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_6	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_6	115071	Propylene	0.00E+00	0.00E+00
FDD_6	129000	Pyrene	0.00E+00	0.00E+00
FDD_6	7782492	Selenium	0.00E+00	0.00E+00
FDD_6	1175	Silica, Crystln	9.11E-01	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_6	100425	Styrene	0.00E+00	0.00E+00
FDD_6	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_6	108883	Toluene	2.69E+00	0.00E+00
FDD_6	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_6	7440622	Vanadium	6.26E-04	0.00E+00
FDD_6	1330207	Xylenes	9.70E+02	0.00E+00
FDD_6	7440666	Zinc	2.95E-06	0.00E+00
FDD_6	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_7	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_7	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_7	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_7	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_7	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_7	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_7	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_7	107028	Acrolein	0.00E+00	0.00E+00
FDD_7	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_7	7429905	Aluminum	3.14E-02	0.00E+00
FDD_7	120127	Anthracene	0.00E+00	0.00E+00
FDD_7	7440360	Antimony	0.00E+00	0.00E+00
FDD_7	7440382	Arsenic	0.00E+00	0.00E+00
FDD_7	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_7	50328	B[a]P	0.00E+00	0.00E+00
FDD_7	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_7	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_7	71432	Benzene	0.00E+00	0.00E+00
FDD_7	7440417	Beryllium	2.95E-08	0.00E+00
FDD_7	7440439	Cadmium	9.14E-03	0.00E+00
FDD_7	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_7	7440473	Chromium	9.24E-02	0.00E+00
FDD_7	218019	Chrysene	0.00E+00	0.00E+00
FDD_7	7440484	Cobalt	5.86E-03	0.00E+00
FDD_7	7440508	Copper	2.55E+01	0.00E+00
FDD_7	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_7	98828	Cumene	6.78E+01	0.00E+00
FDD_7	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_7	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_7	111773	DEGME	1.86E-01	0.00E+00
FDD_7	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_7	100414	Ethyl Benzene	1.91E+02	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_7	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_7	86737	Fluorene	0.00E+00	0.00E+00
FDD_7	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_7	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_7	7647010	HCl	0.00E+00	0.00E+00
FDD_7	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_7	110543	Hexane	3.99E-01	0.00E+00
FDD_7	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_7	1125	Isocyanates	5.08E+00	0.00E+00
FDD_7	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_7	7439921	Lead	8.28E-03	0.00E+00
FDD_7	7439965	Manganese	1.50E-01	0.00E+00
FDD_7	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_7	78933	MEK	4.41E+00	0.00E+00
FDD_7	7439976	Mercury	0.00E+00	0.00E+00
FDD_7	108101	MIBK	2.15E+01	0.00E+00
FDD_7	91203	Naphthalene	0.00E+00	0.00E+00
FDD_7	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_7	7664417	NH3	0.00E+00	0.00E+00
FDD_7	7440020	Nickel	1.02E-01	0.00E+00
FDD_7	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_7	95487	o-Cresol	7.98E-03	0.00E+00
FDD_7	95476	o-Xylene	0.00E+00	0.00E+00
FDD_7	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_7	1336363	PCBs	0.00E+00	0.00E+00
FDD_7	98566	PCBTF	1.52E+02	0.00E+00
FDD_7	107982	PGME	1.39E+01	0.00E+00
FDD_7	108656	PGMEA	1.32E+01	0.00E+00
FDD_7	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_7	108952	Phenol	8.86E-02	0.00E+00
FDD_7	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_7	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_7	115071	Propylene	0.00E+00	0.00E+00
FDD_7	129000	Pyrene	0.00E+00	0.00E+00
FDD_7	7782492	Selenium	0.00E+00	0.00E+00
FDD_7	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_7	100425	Styrene	0.00E+00	0.00E+00
FDD_7	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_7	108883	Toluene	2.69E+00	0.00E+00
FDD_7	25551137	TriMeBenzns	6.31E+02	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_7	7440622	Vanadium	6.26E-04	0.00E+00
FDD_7	1330207	Xylenes	9.70E+02	0.00E+00
FDD_7	7440666	Zinc	2.95E-06	0.00E+00
FDD_7	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_8	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_8	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_8	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_8	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_8	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_8	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_8	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_8	107028	Acrolein	0.00E+00	0.00E+00
FDD_8	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_8	7429905	Aluminum	3.14E-02	0.00E+00
FDD_8	120127	Anthracene	0.00E+00	0.00E+00
FDD_8	7440360	Antimony	0.00E+00	0.00E+00
FDD_8	7440382	Arsenic	0.00E+00	0.00E+00
FDD_8	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_8	50328	B[a]P	0.00E+00	0.00E+00
FDD_8	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_8	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_8	71432	Benzene	0.00E+00	0.00E+00
FDD_8	7440417	Beryllium	2.95E-08	0.00E+00
FDD_8	7440439	Cadmium	9.14E-03	0.00E+00
FDD_8	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_8	7440473	Chromium	9.24E-02	0.00E+00
FDD_8	218019	Chrysene	0.00E+00	0.00E+00
FDD_8	7440484	Cobalt	5.86E-03	0.00E+00
FDD_8	7440508	Copper	2.55E+01	0.00E+00
FDD_8	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_8	98828	Cumene	6.78E+01	0.00E+00
FDD_8	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_8	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_8	111773	DEGME	1.86E-01	0.00E+00
FDD_8	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_8	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_8	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_8	86737	Fluorene	0.00E+00	0.00E+00
FDD_8	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_8	50000	Formaldehyde	7.98E-03	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_8	7647010	HCl	0.00E+00	0.00E+00
FDD_8	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_8	110543	Hexane	3.99E-01	0.00E+00
FDD_8	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_8	1125	Isocyanates	5.08E+00	0.00E+00
FDD_8	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_8	7439921	Lead	8.28E-03	0.00E+00
FDD_8	7439965	Manganese	1.50E-01	0.00E+00
FDD_8	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_8	78933	MEK	4.41E+00	0.00E+00
FDD_8	7439976	Mercury	0.00E+00	0.00E+00
FDD_8	108101	MIBK	2.15E+01	0.00E+00
FDD_8	91203	Naphthalene	0.00E+00	0.00E+00
FDD_8	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_8	7664417	NH3	0.00E+00	0.00E+00
FDD_8	7440020	Nickel	1.02E-01	0.00E+00
FDD_8	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_8	95487	o-Cresol	7.98E-03	0.00E+00
FDD_8	95476	o-Xylene	0.00E+00	0.00E+00
FDD_8	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_8	1336363	PCBs	0.00E+00	0.00E+00
FDD_8	98566	PCBTF	1.52E+02	0.00E+00
FDD_8	107982	PGME	1.39E+01	0.00E+00
FDD_8	108656	PGMEA	1.32E+01	0.00E+00
FDD_8	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_8	108952	Phenol	8.86E-02	0.00E+00
FDD_8	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_8	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_8	115071	Propylene	0.00E+00	0.00E+00
FDD_8	129000	Pyrene	0.00E+00	0.00E+00
FDD_8	7782492	Selenium	0.00E+00	0.00E+00
FDD_8	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_8	100425	Styrene	0.00E+00	0.00E+00
FDD_8	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_8	108883	Toluene	2.69E+00	0.00E+00
FDD_8	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_8	7440622	Vanadium	6.26E-04	0.00E+00
FDD_8	1330207	Xylenes	9.70E+02	0.00E+00
FDD_8	7440666	Zinc	2.95E-06	0.00E+00
FDD_8	1314132	Zinc Oxide	6.37E+02	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_9	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_9	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_9	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_9	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_9	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_9	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_9	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_9	107028	Acrolein	0.00E+00	0.00E+00
FDD_9	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_9	7429905	Aluminum	3.14E-02	0.00E+00
FDD_9	120127	Anthracene	0.00E+00	0.00E+00
FDD_9	7440360	Antimony	0.00E+00	0.00E+00
FDD_9	7440382	Arsenic	0.00E+00	0.00E+00
FDD_9	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_9	50328	B[a]P	0.00E+00	0.00E+00
FDD_9	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_9	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_9	71432	Benzene	0.00E+00	0.00E+00
FDD_9	7440417	Beryllium	2.95E-08	0.00E+00
FDD_9	7440439	Cadmium	9.14E-03	0.00E+00
FDD_9	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_9	7440473	Chromium	9.24E-02	0.00E+00
FDD_9	218019	Chrysene	0.00E+00	0.00E+00
FDD_9	7440484	Cobalt	5.86E-03	0.00E+00
FDD_9	7440508	Copper	2.55E+01	0.00E+00
FDD_9	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_9	98828	Cumene	6.78E+01	0.00E+00
FDD_9	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_9	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_9	111773	DEGME	1.86E-01	0.00E+00
FDD_9	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_9	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_9	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_9	86737	Fluorene	0.00E+00	0.00E+00
FDD_9	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_9	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_9	7647010	HCl	0.00E+00	0.00E+00
FDD_9	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_9	110543	Hexane	3.99E-01	0.00E+00
FDD_9	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_9	1125	Isocyanates	5.08E+00	0.00E+00
FDD_9	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_9	7439921	Lead	8.28E-03	0.00E+00
FDD_9	7439965	Manganese	1.50E-01	0.00E+00
FDD_9	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_9	78933	MEK	4.41E+00	0.00E+00
FDD_9	7439976	Mercury	0.00E+00	0.00E+00
FDD_9	108101	MIBK	2.15E+01	0.00E+00
FDD_9	91203	Naphthalene	0.00E+00	0.00E+00
FDD_9	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_9	7664417	NH3	0.00E+00	0.00E+00
FDD_9	7440020	Nickel	1.02E-01	0.00E+00
FDD_9	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_9	95487	o-Cresol	7.98E-03	0.00E+00
FDD_9	95476	o-Xylene	0.00E+00	0.00E+00
FDD_9	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_9	1336363	PCBs	0.00E+00	0.00E+00
FDD_9	98566	PCBTF	1.52E+02	0.00E+00
FDD_9	107982	PGME	1.39E+01	0.00E+00
FDD_9	108656	PGMEA	1.32E+01	0.00E+00
FDD_9	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_9	108952	Phenol	8.86E-02	0.00E+00
FDD_9	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_9	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_9	115071	Propylene	0.00E+00	0.00E+00
FDD_9	129000	Pyrene	0.00E+00	0.00E+00
FDD_9	7782492	Selenium	0.00E+00	0.00E+00
FDD_9	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_9	100425	Styrene	0.00E+00	0.00E+00
FDD_9	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_9	108883	Toluene	2.69E+00	0.00E+00
FDD_9	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_9	7440622	Vanadium	6.26E-04	0.00E+00
FDD_9	1330207	Xylenes	9.70E+02	0.00E+00
FDD_9	7440666	Zinc	2.95E-06	0.00E+00
FDD_9	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_10	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_10	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_10	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_10	540841	2,2,4TriMePentn	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_10	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_10	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_10	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_10	107028	Acrolein	0.00E+00	0.00E+00
FDD_10	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_10	7429905	Aluminum	3.14E-02	0.00E+00
FDD_10	120127	Anthracene	0.00E+00	0.00E+00
FDD_10	7440360	Antimony	0.00E+00	0.00E+00
FDD_10	7440382	Arsenic	0.00E+00	0.00E+00
FDD_10	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_10	50328	B[a]P	0.00E+00	0.00E+00
FDD_10	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_10	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_10	71432	Benzene	0.00E+00	0.00E+00
FDD_10	7440417	Beryllium	2.95E-08	0.00E+00
FDD_10	7440439	Cadmium	9.14E-03	0.00E+00
FDD_10	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_10	7440473	Chromium	9.24E-02	0.00E+00
FDD_10	218019	Chrysene	0.00E+00	0.00E+00
FDD_10	7440484	Cobalt	5.86E-03	0.00E+00
FDD_10	7440508	Copper	2.55E+01	0.00E+00
FDD_10	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_10	98828	Cumene	6.78E+01	0.00E+00
FDD_10	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_10	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_10	111773	DEGME	1.86E-01	0.00E+00
FDD_10	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_10	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_10	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_10	86737	Fluorene	0.00E+00	0.00E+00
FDD_10	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_10	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_10	7647010	HCl	0.00E+00	0.00E+00
FDD_10	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_10	110543	Hexane	3.99E-01	0.00E+00
FDD_10	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_10	1125	Isocyanates	5.08E+00	0.00E+00
FDD_10	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_10	7439921	Lead	8.28E-03	0.00E+00
FDD_10	7439965	Manganese	1.50E-01	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_10	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_10	78933	MEK	4.41E+00	0.00E+00
FDD_10	7439976	Mercury	0.00E+00	0.00E+00
FDD_10	108101	MIBK	2.15E+01	0.00E+00
FDD_10	91203	Naphthalene	0.00E+00	0.00E+00
FDD_10	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_10	7664417	NH3	0.00E+00	0.00E+00
FDD_10	7440020	Nickel	1.02E-01	0.00E+00
FDD_10	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_10	95487	o-Cresol	7.98E-03	0.00E+00
FDD_10	95476	o-Xylene	0.00E+00	0.00E+00
FDD_10	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_10	1336363	PCBs	0.00E+00	0.00E+00
FDD_10	98566	PCBTF	1.52E+02	0.00E+00
FDD_10	107982	PGME	1.39E+01	0.00E+00
FDD_10	108656	PGMEA	1.32E+01	0.00E+00
FDD_10	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_10	108952	Phenol	8.86E-02	0.00E+00
FDD_10	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_10	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_10	115071	Propylene	0.00E+00	0.00E+00
FDD_10	129000	Pyrene	0.00E+00	0.00E+00
FDD_10	7782492	Selenium	0.00E+00	0.00E+00
FDD_10	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_10	100425	Styrene	0.00E+00	0.00E+00
FDD_10	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_10	108883	Toluene	2.69E+00	0.00E+00
FDD_10	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_10	7440622	Vanadium	6.26E-04	0.00E+00
FDD_10	1330207	Xylenes	9.70E+02	0.00E+00
FDD_10	7440666	Zinc	2.95E-06	0.00E+00
FDD_10	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_11	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_11	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_11	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_11	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_11	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_11	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_11	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_11	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_11	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_11	7429905	Aluminum	3.14E-02	0.00E+00
FDD_11	120127	Anthracene	0.00E+00	0.00E+00
FDD_11	7440360	Antimony	0.00E+00	0.00E+00
FDD_11	7440382	Arsenic	0.00E+00	0.00E+00
FDD_11	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_11	50328	B[a]P	0.00E+00	0.00E+00
FDD_11	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_11	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_11	71432	Benzene	0.00E+00	0.00E+00
FDD_11	7440417	Beryllium	2.95E-08	0.00E+00
FDD_11	7440439	Cadmium	9.14E-03	0.00E+00
FDD_11	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_11	7440473	Chromium	9.24E-02	0.00E+00
FDD_11	218019	Chrysene	0.00E+00	0.00E+00
FDD_11	7440484	Cobalt	5.86E-03	0.00E+00
FDD_11	7440508	Copper	2.55E+01	0.00E+00
FDD_11	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_11	98828	Cumene	6.78E+01	0.00E+00
FDD_11	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_11	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_11	111773	DEGME	1.86E-01	0.00E+00
FDD_11	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_11	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_11	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_11	86737	Fluorene	0.00E+00	0.00E+00
FDD_11	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_11	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_11	7647010	HCl	0.00E+00	0.00E+00
FDD_11	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_11	110543	Hexane	3.99E-01	0.00E+00
FDD_11	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_11	1125	Isocyanates	5.08E+00	0.00E+00
FDD_11	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_11	7439921	Lead	8.28E-03	0.00E+00
FDD_11	7439965	Manganese	1.50E-01	0.00E+00
FDD_11	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_11	78933	MEK	4.41E+00	0.00E+00
FDD_11	7439976	Mercury	0.00E+00	0.00E+00
FDD_11	108101	MIBK	2.15E+01	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_11	91203	Naphthalene	0.00E+00	0.00E+00
FDD_11	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_11	7664417	NH3	0.00E+00	0.00E+00
FDD_11	7440020	Nickel	1.02E-01	0.00E+00
FDD_11	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_11	95487	o-Cresol	7.98E-03	0.00E+00
FDD_11	95476	o-Xylene	0.00E+00	0.00E+00
FDD_11	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_11	1336363	PCBs	0.00E+00	0.00E+00
FDD_11	98566	PCBTF	1.52E+02	0.00E+00
FDD_11	107982	PGME	1.39E+01	0.00E+00
FDD_11	108656	PGMEA	1.32E+01	0.00E+00
FDD_11	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_11	108952	Phenol	8.86E-02	0.00E+00
FDD_11	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_11	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_11	115071	Propylene	0.00E+00	0.00E+00
FDD_11	129000	Pyrene	0.00E+00	0.00E+00
FDD_11	7782492	Selenium	0.00E+00	0.00E+00
FDD_11	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_11	100425	Styrene	0.00E+00	0.00E+00
FDD_11	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_11	108883	Toluene	2.69E+00	0.00E+00
FDD_11	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_11	7440622	Vanadium	6.26E-04	0.00E+00
FDD_11	1330207	Xylenes	9.70E+02	0.00E+00
FDD_11	7440666	Zinc	2.95E-06	0.00E+00
FDD_11	1314132	Zinc Oxide	6.37E+02	0.00E+00
FDD_12	67641	[D] Acetone	6.38E-01	0.00E+00
FDD_12	95636	1,2,4TriMeBenze	4.20E+02	0.00E+00
FDD_12	106990	1,3-Butadiene	0.00E+00	0.00E+00
FDD_12	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
FDD_12	83329	Acenaphthene	0.00E+00	0.00E+00
FDD_12	208968	Acenaphthylene	0.00E+00	0.00E+00
FDD_12	75070	Acetaldehyde	0.00E+00	0.00E+00
FDD_12	107028	Acrolein	0.00E+00	0.00E+00
FDD_12	1344281	Alumin Oxide	1.26E+03	0.00E+00
FDD_12	7429905	Aluminum	3.14E-02	0.00E+00
FDD_12	120127	Anthracene	0.00E+00	0.00E+00
FDD_12	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_12	7440382	Arsenic	0.00E+00	0.00E+00
FDD_12	56553	B[a]anthracene	0.00E+00	0.00E+00
FDD_12	50328	B[a]P	0.00E+00	0.00E+00
FDD_12	205992	B[b]fluoranthen	0.00E+00	0.00E+00
FDD_12	207089	B[k]fluoranthen	0.00E+00	0.00E+00
FDD_12	71432	Benzene	0.00E+00	0.00E+00
FDD_12	7440417	Beryllium	2.95E-08	0.00E+00
FDD_12	7440439	Cadmium	9.14E-03	0.00E+00
FDD_12	108907	Chlorobenzn	0.00E+00	0.00E+00
FDD_12	7440473	Chromium	9.24E-02	0.00E+00
FDD_12	218019	Chrysene	0.00E+00	0.00E+00
FDD_12	7440484	Cobalt	5.86E-03	0.00E+00
FDD_12	7440508	Copper	2.55E+01	0.00E+00
FDD_12	18540299	Cr(VI)	3.32E-04	0.00E+00
FDD_12	98828	Cumene	6.78E+01	0.00E+00
FDD_12	110827	Cyclohexane	0.00E+00	0.00E+00
FDD_12	53703	D[a,h]anthracen	0.00E+00	0.00E+00
FDD_12	111773	DEGME	1.86E-01	0.00E+00
FDD_12	9901	DieselExhPM	0.00E+00	0.00E+00
FDD_12	100414	Ethyl Benzene	1.91E+02	0.00E+00
FDD_12	206440	Fluoranthene	0.00E+00	0.00E+00
FDD_12	86737	Fluorene	0.00E+00	0.00E+00
FDD_12	1101	Fluorides&cmpds	1.93E-04	0.00E+00
FDD_12	50000	Formaldehyde	7.98E-03	0.00E+00
FDD_12	7647010	HCl	0.00E+00	0.00E+00
FDD_12	822060	HexaMeDiisocyan	4.99E-02	0.00E+00
FDD_12	110543	Hexane	3.99E-01	0.00E+00
FDD_12	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
FDD_12	1125	Isocyanates	5.08E+00	0.00E+00
FDD_12	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
FDD_12	7439921	Lead	8.28E-03	0.00E+00
FDD_12	7439965	Manganese	1.50E-01	0.00E+00
FDD_12	101688	MeDiphenDiisocy	8.51E-08	0.00E+00
FDD_12	78933	MEK	4.41E+00	0.00E+00
FDD_12	7439976	Mercury	0.00E+00	0.00E+00
FDD_12	108101	MIBK	2.15E+01	0.00E+00
FDD_12	91203	Naphthalene	0.00E+00	0.00E+00
FDD_12	71363	n-Butyl Alcohol	1.42E+03	0.00E+00
FDD_12	7664417	NH3	0.00E+00	0.00E+00
FDD_12	7440020	Nickel	1.02E-01	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
FDD_12	97563	o-Aminoazotolue	1.85E+01	0.00E+00
FDD_12	95487	o-Cresol	7.98E-03	0.00E+00
FDD_12	95476	o-Xylene	0.00E+00	0.00E+00
FDD_12	1150	PAHs-w/	0.00E+00	0.00E+00
FDD_12	1336363	PCBs	0.00E+00	0.00E+00
FDD_12	98566	PCBTF	1.52E+02	0.00E+00
FDD_12	107982	PGME	1.39E+01	0.00E+00
FDD_12	108656	PGMEA	1.32E+01	0.00E+00
FDD_12	85018	Phenanthrene	0.00E+00	0.00E+00
FDD_12	108952	Phenol	8.86E-02	0.00E+00
FDD_12	7723140	Phosphorus	3.95E-04	0.00E+00
FDD_12	123386	Propionaldehyde	0.00E+00	0.00E+00
FDD_12	115071	Propylene	0.00E+00	0.00E+00
FDD_12	129000	Pyrene	0.00E+00	0.00E+00
FDD_12	7782492	Selenium	0.00E+00	0.00E+00
FDD_12	1175	Silica, Crystln	9.11E-01	0.00E+00
FDD_12	100425	Styrene	0.00E+00	0.00E+00
FDD_12	540885	t-Butyl acetate	3.76E+01	0.00E+00
FDD_12	108883	Toluene	2.69E+00	0.00E+00
FDD_12	25551137	TriMeBenzns	6.31E+02	0.00E+00
FDD_12	7440622	Vanadium	6.26E-04	0.00E+00
FDD_12	1330207	Xylenes	9.70E+02	0.00E+00
FDD_12	7440666	Zinc	2.95E-06	0.00E+00
FDD_12	1314132	Zinc Oxide	6.37E+02	0.00E+00
PIER_1	67641	[D] Acetone	6.38E-01	1.13E+00
PIER_1	95636	1,2,4TriMeBenze	3.65E+02	5.19E-01
PIER_1	106990	1,3-Butadiene	0.00E+00	0.00E+00
PIER_1	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
PIER_1	83329	Acenaphthene	0.00E+00	0.00E+00
PIER_1	208968	Acenaphthylene	0.00E+00	0.00E+00
PIER_1	75070	Acetaldehyde	0.00E+00	0.00E+00
PIER_1	107028	Acrolein	0.00E+00	0.00E+00
PIER_1	1344281	Alumin Oxide	9.40E+02	1.02E+00
PIER_1	7429905	Aluminum	2.10E-02	2.23E-03
PIER_1	120127	Anthracene	0.00E+00	0.00E+00
PIER_1	7440360	Antimony	0.00E+00	0.00E+00
PIER_1	7440382	Arsenic	0.00E+00	0.00E+00
PIER_1	56553	B[a]anthracene	0.00E+00	0.00E+00
PIER_1	50328	B[a]P	0.00E+00	0.00E+00
PIER_1	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_1	207089	B[k]fluoranthen	0.00E+00	0.00E+00
PIER_1	71432	Benzene	0.00E+00	0.00E+00
PIER_1	7440417	Beryllium	1.97E-08	2.36E-09
PIER_1	7440439	Cadmium	6.86E-03	1.09E-05
PIER_1	108907	Chlorobenzn	0.00E+00	0.00E+00
PIER_1	7440473	Chromium	6.94E-02	1.10E-04
PIER_1	218019	Chrysene	0.00E+00	0.00E+00
PIER_1	7440484	Cobalt	5.86E-03	3.19E-05
PIER_1	7440508	Copper	1.80E-02	8.97E-04
PIER_1	18540299	Cr(VI)	2.22E-04	1.26E-05
PIER_1	98828	Cumene	3.48E+01	4.32E-02
PIER_1	110827	Cyclohexane	0.00E+00	0.00E+00
PIER_1	53703	D[a,h]anthracen	0.00E+00	0.00E+00
PIER_1	111773	DEGME	1.86E-01	1.01E-03
PIER_1	9901	DieselExhPM	0.00E+00	0.00E+00
PIER_1	100414	Ethyl Benzene	5.07E+01	2.06E-01
PIER_1	206440	Fluoranthene	0.00E+00	0.00E+00
PIER_1	86737	Fluorene	0.00E+00	0.00E+00
PIER_1	1101	Fluorides&cmpds	1.29E-04	1.61E-07
PIER_1	50000	Formaldehyde	7.98E-03	1.41E-02
PIER_1	7647010	HCl	0.00E+00	0.00E+00
PIER_1	822060	HexaMeDiisocyan	4.99E-02	1.59E-04
PIER_1	110543	Hexane	3.99E-01	7.07E-01
PIER_1	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
PIER_1	1125	Isocyanates	5.08E+00	1.74E-01
PIER_1	67630	Isopropyl Alcoh	7.50E+02	3.27E-02
PIER_1	7439921	Lead	6.21E-03	9.88E-06
PIER_1	7439965	Manganese	1.08E-01	2.03E-04
PIER_1	101688	MeDiphenDiisocy	8.51E-08	1.51E-07
PIER_1	78933	MEK	3.53E+00	1.92E-02
PIER_1	7439976	Mercury	0.00E+00	0.00E+00
PIER_1	108101	MIBK	0.00E+00	0.00E+00
PIER_1	91203	Naphthalene	0.00E+00	0.00E+00
PIER_1	71363	n-Butyl Alcohol	1.23E+03	1.13E+00
PIER_1	7664417	NH3	0.00E+00	0.00E+00
PIER_1	7440020	Nickel	7.57E-02	6.73E-04
PIER_1	97563	o-Aminoazotolue	1.39E+01	2.19E-02
PIER_1	95487	o-Cresol	7.98E-03	1.41E-02
PIER_1	95476	o-Xylene	0.00E+00	0.00E+00
PIER_1	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_1	1336363	PCBs	0.00E+00	0.00E+00
PIER_1	98566	PCBTF	1.52E+02	3.47E-01
PIER_1	107982	PGME	1.39E+01	1.51E-02
PIER_1	108656	PGMEA	1.32E+01	5.49E-02
PIER_1	85018	Phenanthrene	0.00E+00	0.00E+00
PIER_1	108952	Phenol	8.86E-02	1.57E-01
PIER_1	7723140	Phosphorus	2.63E-04	6.27E-07
PIER_1	123386	Propionaldehyde	0.00E+00	0.00E+00
PIER_1	115071	Propylene	0.00E+00	0.00E+00
PIER_1	129000	Pyrene	0.00E+00	0.00E+00
PIER_1	7782492	Selenium	0.00E+00	0.00E+00
PIER_1	1175	Silica, Crystln	3.06E-01	7.68E-04
PIER_1	100425	Styrene	0.00E+00	0.00E+00
PIER_1	540885	t-Butyl acetate	0.00E+00	0.00E+00
PIER_1	108883	Toluene	2.69E+00	2.70E+00
PIER_1	25551137	TriMeBenzns	4.75E+02	5.10E-01
PIER_1	7440622	Vanadium	4.18E-04	5.22E-07
PIER_1	1330207	Xylenes	2.51E+02	1.02E+00
PIER_1	7440666	Zinc	1.97E-06	2.36E-07
PIER_1	1314132	Zinc Oxide	0.00E+00	0.00E+00
PIER_2	67641	[D] Acetone	6.38E-01	1.13E+00
PIER_2	95636	1,2,4TriMeBenze	3.65E+02	5.19E-01
PIER_2	106990	1,3-Butadiene	0.00E+00	0.00E+00
PIER_2	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
PIER_2	83329	Acenaphthene	0.00E+00	0.00E+00
PIER_2	208968	Acenaphthylene	0.00E+00	0.00E+00
PIER_2	75070	Acetaldehyde	0.00E+00	0.00E+00
PIER_2	107028	Acrolein	0.00E+00	0.00E+00
PIER_2	1344281	Alumin Oxide	9.40E+02	1.02E+00
PIER_2	7429905	Aluminum	2.10E-02	2.23E-03
PIER_2	120127	Anthracene	0.00E+00	0.00E+00
PIER_2	7440360	Antimony	0.00E+00	0.00E+00
PIER_2	7440382	Arsenic	0.00E+00	0.00E+00
PIER_2	56553	B[a]anthracene	0.00E+00	0.00E+00
PIER_2	50328	B[a]P	0.00E+00	0.00E+00
PIER_2	205992	B[b]fluoranthen	0.00E+00	0.00E+00
PIER_2	207089	B[k]fluoranthen	0.00E+00	0.00E+00
PIER_2	71432	Benzene	0.00E+00	0.00E+00
PIER_2	7440417	Beryllium	1.97E-08	2.36E-09
PIER_2	7440439	Cadmium	6.86E-03	1.09E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_2	108907	Chlorobenzn	0.00E+00	0.00E+00
PIER_2	7440473	Chromium	6.94E-02	1.10E-04
PIER_2	218019	Chrysene	0.00E+00	0.00E+00
PIER_2	7440484	Cobalt	5.86E-03	3.19E-05
PIER_2	7440508	Copper	1.80E-02	8.97E-04
PIER_2	18540299	Cr(VI)	2.22E-04	1.26E-05
PIER_2	98828	Cumene	3.48E+01	4.32E-02
PIER_2	110827	Cyclohexane	0.00E+00	0.00E+00
PIER_2	53703	D[a,h]anthracen	0.00E+00	0.00E+00
PIER_2	111773	DEGME	1.86E-01	1.01E-03
PIER_2	9901	DieselExhPM	0.00E+00	0.00E+00
PIER_2	100414	Ethyl Benzene	5.07E+01	2.06E-01
PIER_2	206440	Fluoranthene	0.00E+00	0.00E+00
PIER_2	86737	Fluorene	0.00E+00	0.00E+00
PIER_2	1101	Fluorides&cmpds	1.29E-04	1.61E-07
PIER_2	50000	Formaldehyde	7.98E-03	1.41E-02
PIER_2	7647010	HCl	0.00E+00	0.00E+00
PIER_2	822060	HexaMeDiisocyan	4.99E-02	1.59E-04
PIER_2	110543	Hexane	3.99E-01	7.07E-01
PIER_2	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
PIER_2	1125	Isocyanates	5.08E+00	1.74E-01
PIER_2	67630	Isopropyl Alcoh	7.50E+02	3.27E-02
PIER_2	7439921	Lead	6.21E-03	9.88E-06
PIER_2	7439965	Manganese	1.08E-01	2.03E-04
PIER_2	101688	MeDiphenDiisocy	8.51E-08	1.51E-07
PIER_2	78933	MEK	3.53E+00	1.92E-02
PIER_2	7439976	Mercury	0.00E+00	0.00E+00
PIER_2	108101	MIBK	0.00E+00	0.00E+00
PIER_2	91203	Naphthalene	0.00E+00	0.00E+00
PIER_2	71363	n-Butyl Alcohol	1.23E+03	1.13E+00
PIER_2	7664417	NH3	0.00E+00	0.00E+00
PIER_2	7440020	Nickel	7.57E-02	6.73E-04
PIER_2	97563	o-Aminoazotolue	1.39E+01	2.19E-02
PIER_2	95487	o-Cresol	7.98E-03	1.41E-02
PIER_2	95476	o-Xylene	0.00E+00	0.00E+00
PIER_2	1150	PAHs-w/	0.00E+00	0.00E+00
PIER_2	1336363	PCBs	0.00E+00	0.00E+00
PIER_2	98566	PCBTF	1.52E+02	3.47E-01
PIER_2	107982	PGME	1.39E+01	1.51E-02
PIER_2	108656	PGMEA	1.32E+01	5.49E-02

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_2	85018	Phenanthrene	0.00E+00	0.00E+00
PIER_2	108952	Phenol	8.86E-02	1.57E-01
PIER_2	7723140	Phosphorus	2.63E-04	6.27E-07
PIER_2	123386	Propionaldehyde	0.00E+00	0.00E+00
PIER_2	115071	Propylene	0.00E+00	0.00E+00
PIER_2	129000	Pyrene	0.00E+00	0.00E+00
PIER_2	7782492	Selenium	0.00E+00	0.00E+00
PIER_2	1175	Silica, Crystln	3.06E-01	7.68E-04
PIER_2	100425	Styrene	0.00E+00	0.00E+00
PIER_2	540885	t-Butyl acetate	0.00E+00	0.00E+00
PIER_2	108883	Toluene	2.69E+00	2.70E+00
PIER_2	25551137	TriMeBenzns	4.75E+02	5.10E-01
PIER_2	7440622	Vanadium	4.18E-04	5.22E-07
PIER_2	1330207	Xylenes	2.51E+02	1.02E+00
PIER_2	7440666	Zinc	1.97E-06	2.36E-07
PIER_2	1314132	Zinc Oxide	0.00E+00	0.00E+00
PIER_3	67641	[D] Acetone	6.38E-01	1.13E+00
PIER_3	95636	1,2,4TriMeBenze	3.65E+02	5.19E-01
PIER_3	106990	1,3-Butadiene	0.00E+00	0.00E+00
PIER_3	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
PIER_3	83329	Acenaphthene	0.00E+00	0.00E+00
PIER_3	208968	Acenaphthylene	0.00E+00	0.00E+00
PIER_3	75070	Acetaldehyde	0.00E+00	0.00E+00
PIER_3	107028	Acrolein	0.00E+00	0.00E+00
PIER_3	1344281	Alumin Oxide	9.40E+02	1.02E+00
PIER_3	7429905	Aluminum	2.10E-02	2.23E-03
PIER_3	120127	Anthracene	0.00E+00	0.00E+00
PIER_3	7440360	Antimony	0.00E+00	0.00E+00
PIER_3	7440382	Arsenic	0.00E+00	0.00E+00
PIER_3	56553	B[a]anthracene	0.00E+00	0.00E+00
PIER_3	50328	B[a]P	0.00E+00	0.00E+00
PIER_3	205992	B[b]fluoranthen	0.00E+00	0.00E+00
PIER_3	207089	B[k]fluoranthen	0.00E+00	0.00E+00
PIER_3	71432	Benzene	0.00E+00	0.00E+00
PIER_3	7440417	Beryllium	1.97E-08	2.36E-09
PIER_3	7440439	Cadmium	6.86E-03	1.09E-05
PIER_3	108907	Chlorobenzn	0.00E+00	0.00E+00
PIER_3	7440473	Chromium	6.94E-02	1.10E-04
PIER_3	218019	Chrysene	0.00E+00	0.00E+00
PIER_3	7440484	Cobalt	5.86E-03	3.19E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_3	7440508	Copper	1.80E-02	8.97E-04
PIER_3	18540299	Cr(VI)	2.22E-04	1.26E-05
PIER_3	98828	Cumene	3.48E+01	4.32E-02
PIER_3	110827	Cyclohexane	0.00E+00	0.00E+00
PIER_3	53703	D[a,h]anthracen	0.00E+00	0.00E+00
PIER_3	111773	DEGME	1.86E-01	1.01E-03
PIER_3	9901	DieselExhPM	0.00E+00	0.00E+00
PIER_3	100414	Ethyl Benzene	5.07E+01	2.06E-01
PIER_3	206440	Fluoranthene	0.00E+00	0.00E+00
PIER_3	86737	Fluorene	0.00E+00	0.00E+00
PIER_3	1101	Fluorides&cmpds	1.29E-04	1.61E-07
PIER_3	50000	Formaldehyde	7.98E-03	1.41E-02
PIER_3	7647010	HCl	0.00E+00	0.00E+00
PIER_3	822060	HexaMeDiisocyan	4.99E-02	1.59E-04
PIER_3	110543	Hexane	3.99E-01	7.07E-01
PIER_3	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
PIER_3	1125	Isocyanates	5.08E+00	1.74E-01
PIER_3	67630	Isopropyl Alcoh	7.50E+02	3.27E-02
PIER_3	7439921	Lead	6.21E-03	9.88E-06
PIER_3	7439965	Manganese	1.08E-01	2.03E-04
PIER_3	101688	MeDiphenDiisocy	8.51E-08	1.51E-07
PIER_3	78933	MEK	3.53E+00	1.92E-02
PIER_3	7439976	Mercury	0.00E+00	0.00E+00
PIER_3	108101	MIBK	0.00E+00	0.00E+00
PIER_3	91203	Naphthalene	0.00E+00	0.00E+00
PIER_3	71363	n-Butyl Alcohol	1.23E+03	1.13E+00
PIER_3	7664417	NH3	0.00E+00	0.00E+00
PIER_3	7440020	Nickel	7.57E-02	6.73E-04
PIER_3	97563	o-Aminoazotolue	1.39E+01	2.19E-02
PIER_3	95487	o-Cresol	7.98E-03	1.41E-02
PIER_3	95476	o-Xylene	0.00E+00	0.00E+00
PIER_3	1150	PAHs-w/	0.00E+00	0.00E+00
PIER_3	1336363	PCBs	0.00E+00	0.00E+00
PIER_3	98566	PCBTF	1.52E+02	3.47E-01
PIER_3	107982	PGME	1.39E+01	1.51E-02
PIER_3	108656	PGMEA	1.32E+01	5.49E-02
PIER_3	85018	Phenanthrene	0.00E+00	0.00E+00
PIER_3	108952	Phenol	8.86E-02	1.57E-01
PIER_3	7723140	Phosphorus	2.63E-04	6.27E-07
PIER_3	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_3	115071	Propylene	0.00E+00	0.00E+00
PIER_3	129000	Pyrene	0.00E+00	0.00E+00
PIER_3	7782492	Selenium	0.00E+00	0.00E+00
PIER_3	1175	Silica, Crystln	3.06E-01	7.68E-04
PIER_3	100425	Styrene	0.00E+00	0.00E+00
PIER_3	540885	t-Butyl acetate	0.00E+00	0.00E+00
PIER_3	108883	Toluene	2.69E+00	2.70E+00
PIER_3	25551137	TriMeBenzns	4.75E+02	5.10E-01
PIER_3	7440622	Vanadium	4.18E-04	5.22E-07
PIER_3	1330207	Xylenes	2.51E+02	1.02E+00
PIER_3	7440666	Zinc	1.97E-06	2.36E-07
PIER_3	1314132	Zinc Oxide	0.00E+00	0.00E+00
PIER_4	67641	[D] Acetone	6.38E-01	1.13E+00
PIER_4	95636	1,2,4TriMeBenze	3.65E+02	5.19E-01
PIER_4	106990	1,3-Butadiene	0.00E+00	0.00E+00
PIER_4	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
PIER_4	83329	Acenaphthene	0.00E+00	0.00E+00
PIER_4	208968	Acenaphthylene	0.00E+00	0.00E+00
PIER_4	75070	Acetaldehyde	0.00E+00	0.00E+00
PIER_4	107028	Acrolein	0.00E+00	0.00E+00
PIER_4	1344281	Alumin Oxide	9.40E+02	1.02E+00
PIER_4	7429905	Aluminum	2.10E-02	2.23E-03
PIER_4	120127	Anthracene	0.00E+00	0.00E+00
PIER_4	7440360	Antimony	0.00E+00	0.00E+00
PIER_4	7440382	Arsenic	0.00E+00	0.00E+00
PIER_4	56553	B[a]anthracene	0.00E+00	0.00E+00
PIER_4	50328	B[a]P	0.00E+00	0.00E+00
PIER_4	205992	B[b]fluoranthen	0.00E+00	0.00E+00
PIER_4	207089	B[k]fluoranthen	0.00E+00	0.00E+00
PIER_4	71432	Benzene	0.00E+00	0.00E+00
PIER_4	7440417	Beryllium	1.97E-08	2.36E-09
PIER_4	7440439	Cadmium	6.86E-03	1.09E-05
PIER_4	108907	Chlorobenzn	0.00E+00	0.00E+00
PIER_4	7440473	Chromium	6.94E-02	1.10E-04
PIER_4	218019	Chrysene	0.00E+00	0.00E+00
PIER_4	7440484	Cobalt	5.86E-03	3.19E-05
PIER_4	7440508	Copper	1.80E-02	8.97E-04
PIER_4	18540299	Cr(VI)	2.22E-04	1.26E-05
PIER_4	98828	Cumene	3.48E+01	4.32E-02
PIER_4	110827	Cyclohexane	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_4	53703	D[a,h]anthracen	0.00E+00	0.00E+00
PIER_4	111773	DEGME	1.86E-01	1.01E-03
PIER_4	9901	DieselExhPM	0.00E+00	0.00E+00
PIER_4	100414	Ethyl Benzene	5.07E+01	2.06E-01
PIER_4	206440	Fluoranthene	0.00E+00	0.00E+00
PIER_4	86737	Fluorene	0.00E+00	0.00E+00
PIER_4	1101	Fluorides&cmpds	1.29E-04	1.61E-07
PIER_4	50000	Formaldehyde	7.98E-03	1.41E-02
PIER_4	7647010	HCl	0.00E+00	0.00E+00
PIER_4	822060	HexaMeDiisocyan	4.99E-02	1.59E-04
PIER_4	110543	Hexane	3.99E-01	7.07E-01
PIER_4	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
PIER_4	1125	Isocyanates	5.08E+00	1.74E-01
PIER_4	67630	Isopropyl Alcoh	7.50E+02	3.27E-02
PIER_4	7439921	Lead	6.21E-03	9.88E-06
PIER_4	7439965	Manganese	1.08E-01	2.03E-04
PIER_4	101688	MeDiphenDiisocy	8.51E-08	1.51E-07
PIER_4	78933	MEK	3.53E+00	1.92E-02
PIER_4	7439976	Mercury	0.00E+00	0.00E+00
PIER_4	108101	MIBK	0.00E+00	0.00E+00
PIER_4	91203	Naphthalene	0.00E+00	0.00E+00
PIER_4	71363	n-Butyl Alcohol	1.23E+03	1.13E+00
PIER_4	7664417	NH3	0.00E+00	0.00E+00
PIER_4	7440020	Nickel	7.57E-02	6.73E-04
PIER_4	97563	o-Aminoazotolue	1.39E+01	2.19E-02
PIER_4	95487	o-Cresol	7.98E-03	1.41E-02
PIER_4	95476	o-Xylene	0.00E+00	0.00E+00
PIER_4	1150	PAHs-w/	0.00E+00	0.00E+00
PIER_4	1336363	PCBs	0.00E+00	0.00E+00
PIER_4	98566	PCBTF	1.52E+02	3.47E-01
PIER_4	107982	PGME	1.39E+01	1.51E-02
PIER_4	108656	PGMEA	1.32E+01	5.49E-02
PIER_4	85018	Phenanthrene	0.00E+00	0.00E+00
PIER_4	108952	Phenol	8.86E-02	1.57E-01
PIER_4	7723140	Phosphorus	2.63E-04	6.27E-07
PIER_4	123386	Propionaldehyde	0.00E+00	0.00E+00
PIER_4	115071	Propylene	0.00E+00	0.00E+00
PIER_4	129000	Pyrene	0.00E+00	0.00E+00
PIER_4	7782492	Selenium	0.00E+00	0.00E+00
PIER_4	1175	Silica, Crystln	3.06E-01	7.68E-04

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
PIER_4	100425	Styrene	0.00E+00	0.00E+00
PIER_4	540885	t-Butyl acetate	0.00E+00	0.00E+00
PIER_4	108883	Toluene	2.69E+00	2.70E+00
PIER_4	25551137	TriMeBenzns	4.75E+02	5.10E-01
PIER_4	7440622	Vanadium	4.18E-04	5.22E-07
PIER_4	1330207	Xylenes	2.51E+02	1.02E+00
PIER_4	7440666	Zinc	1.97E-06	2.36E-07
PIER_4	1314132	Zinc Oxide	0.00E+00	0.00E+00
MAR_1	67641	[D] Acetone	0.00E+00	0.00E+00
MAR_1	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
MAR_1	106990	1,3-Butadiene	0.00E+00	8.73E-04
MAR_1	540841	2,2,4TriMePentn	0.00E+00	6.13E-03
MAR_1	83329	Acenaphthene	0.00E+00	4.39E-05
MAR_1	208968	Acenaphthylene	0.00E+00	1.02E-04
MAR_1	75070	Acetaldehyde	0.00E+00	8.43E-03
MAR_1	107028	Acrolein	0.00E+00	1.59E-03
MAR_1	1344281	Alumin Oxide	0.00E+00	0.00E+00
MAR_1	7429905	Aluminum	0.00E+00	0.00E+00
MAR_1	120127	Anthracene	0.00E+00	2.96E-04
MAR_1	7440360	Antimony	0.00E+00	2.57E-04
MAR_1	7440382	Arsenic	0.00E+00	1.08E-05
MAR_1	56553	B[a]anthracene	0.00E+00	3.69E-06
MAR_1	50328	B[a]P	0.00E+00	1.75E-06
MAR_1	205992	B[b]fluoranthen	0.00E+00	3.49E-06
MAR_1	207089	B[k]fluoranthen	0.00E+00	1.75E-06
MAR_1	71432	Benzene	0.00E+00	4.08E-03
MAR_1	7440417	Beryllium	0.00E+00	0.00E+00
MAR_1	7440439	Cadmium	0.00E+00	9.88E-05
MAR_1	108907	Chlorobenzn	0.00E+00	0.00E+00
MAR_1	7440473	Chromium	0.00E+00	0.00E+00
MAR_1	218019	Chrysene	0.00E+00	6.82E-06
MAR_1	7440484	Cobalt	0.00E+00	0.00E+00
MAR_1	7440508	Copper	0.00E+00	0.00E+00
MAR_1	18540299	Cr(VI)	0.00E+00	3.03E-09
MAR_1	98828	Cumene	0.00E+00	0.00E+00
MAR_1	110827	Cyclohexane	0.00E+00	0.00E+00
MAR_1	53703	D[a,h]anthracen	0.00E+00	3.62E-06
MAR_1	111773	DEGME	0.00E+00	0.00E+00
MAR_1	9901	DieselExhPM	1.73E+00	0.00E+00
MAR_1	100414	Ethyl Benzene	0.00E+00	3.78E-04

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_1	206440	Fluoranthene	0.00E+00	3.75E-05
MAR_1	86737	Fluorene	0.00E+00	1.41E-04
MAR_1	1101	Fluorides&cmpds	0.00E+00	0.00E+00
MAR_1	50000	Formaldehyde	0.00E+00	3.68E-02
MAR_1	7647010	HCl	0.00E+00	0.00E+00
MAR_1	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
MAR_1	110543	Hexane	0.00E+00	2.40E-03
MAR_1	193395	In[1,2,3-cd]pyr	0.00E+00	3.49E-06
MAR_1	1125	Isocyanates	0.00E+00	0.00E+00
MAR_1	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
MAR_1	7439921	Lead	0.00E+00	5.23E-05
MAR_1	7439965	Manganese	0.00E+00	1.35E-06
MAR_1	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
MAR_1	78933	MEK	0.00E+00	0.00E+00
MAR_1	7439976	Mercury	0.00E+00	1.75E-08
MAR_1	108101	MIBK	0.00E+00	0.00E+00
MAR_1	91203	Naphthalene	0.00E+00	2.70E-02
MAR_1	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
MAR_1	7664417	NH3	0.00E+00	8.06E-03
MAR_1	7440020	Nickel	0.00E+00	2.88E-04
MAR_1	97563	o-Aminoazotolue	0.00E+00	0.00E+00
MAR_1	95487	o-Cresol	0.00E+00	0.00E+00
MAR_1	95476	o-Xylene	0.00E+00	4.42E-04
MAR_1	1150	PAHs-w/	0.00E+00	0.00E+00
MAR_1	1336363	PCBs	0.00E+00	1.75E-07
MAR_1	98566	PCBTF	0.00E+00	0.00E+00
MAR_1	107982	PGME	0.00E+00	0.00E+00
MAR_1	108656	PGMEA	0.00E+00	0.00E+00
MAR_1	85018	Phenanthrene	0.00E+00	1.17E-03
MAR_1	108952	Phenol	0.00E+00	0.00E+00
MAR_1	7723140	Phosphorus	0.00E+00	0.00E+00
MAR_1	123386	Propionaldehyde	0.00E+00	1.31E-03
MAR_1	115071	Propylene	0.00E+00	0.00E+00
MAR_1	129000	Pyrene	0.00E+00	1.41E-05
MAR_1	7782492	Selenium	0.00E+00	1.83E-08
MAR_1	1175	Silica, Crystln	0.00E+00	0.00E+00
MAR_1	100425	Styrene	0.00E+00	0.00E+00
MAR_1	540885	t-Butyl acetate	0.00E+00	0.00E+00
MAR_1	108883	Toluene	0.00E+00	1.75E-03
MAR_1	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_1	7440622	Vanadium	0.00E+00	0.00E+00
MAR_1	1330207	Xylenes	0.00E+00	1.23E-03
MAR_1	7440666	Zinc	0.00E+00	0.00E+00
MAR_1	1314132	Zinc Oxide	0.00E+00	0.00E+00
MAR_2	67641	[D] Acetone	0.00E+00	0.00E+00
MAR_2	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
MAR_2	106990	1,3-Butadiene	0.00E+00	8.73E-04
MAR_2	540841	2,2,4TriMePentn	0.00E+00	6.13E-03
MAR_2	83329	Acenaphthene	0.00E+00	4.39E-05
MAR_2	208968	Acenaphthylene	0.00E+00	1.02E-04
MAR_2	75070	Acetaldehyde	0.00E+00	8.43E-03
MAR_2	107028	Acrolein	0.00E+00	1.59E-03
MAR_2	1344281	Alumin Oxide	0.00E+00	0.00E+00
MAR_2	7429905	Aluminum	0.00E+00	0.00E+00
MAR_2	120127	Anthracene	0.00E+00	2.96E-04
MAR_2	7440360	Antimony	0.00E+00	2.57E-04
MAR_2	7440382	Arsenic	0.00E+00	1.08E-05
MAR_2	56553	B[a]anthracene	0.00E+00	3.69E-06
MAR_2	50328	B[a]P	0.00E+00	1.75E-06
MAR_2	205992	B[b]fluoranthen	0.00E+00	3.49E-06
MAR_2	207089	B[k]fluoranthen	0.00E+00	1.75E-06
MAR_2	71432	Benzene	0.00E+00	4.08E-03
MAR_2	7440417	Beryllium	0.00E+00	0.00E+00
MAR_2	7440439	Cadmium	0.00E+00	9.88E-05
MAR_2	108907	Chlorobenzn	0.00E+00	0.00E+00
MAR_2	7440473	Chromium	0.00E+00	0.00E+00
MAR_2	218019	Chrysene	0.00E+00	6.82E-06
MAR_2	7440484	Cobalt	0.00E+00	0.00E+00
MAR_2	7440508	Copper	0.00E+00	0.00E+00
MAR_2	18540299	Cr(VI)	0.00E+00	3.03E-09
MAR_2	98828	Cumene	0.00E+00	0.00E+00
MAR_2	110827	Cyclohexane	0.00E+00	0.00E+00
MAR_2	53703	D[a,h]anthracen	0.00E+00	3.62E-06
MAR_2	111773	DEGME	0.00E+00	0.00E+00
MAR_2	9901	DieselExhPM	1.73E+00	0.00E+00
MAR_2	100414	Ethyl Benzene	0.00E+00	3.78E-04
MAR_2	206440	Fluoranthene	0.00E+00	3.75E-05
MAR_2	86737	Fluorene	0.00E+00	1.41E-04
MAR_2	1101	Fluorides&cmpds	0.00E+00	0.00E+00
MAR_2	50000	Formaldehyde	0.00E+00	3.68E-02

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_2	7647010	HCl	0.00E+00	0.00E+00
MAR_2	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
MAR_2	110543	Hexane	0.00E+00	2.40E-03
MAR_2	193395	In[1,2,3-cd]pyr	0.00E+00	3.49E-06
MAR_2	1125	Isocyanates	0.00E+00	0.00E+00
MAR_2	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
MAR_2	7439921	Lead	0.00E+00	5.23E-05
MAR_2	7439965	Manganese	0.00E+00	1.35E-06
MAR_2	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
MAR_2	78933	MEK	0.00E+00	0.00E+00
MAR_2	7439976	Mercury	0.00E+00	1.75E-08
MAR_2	108101	MIBK	0.00E+00	0.00E+00
MAR_2	91203	Naphthalene	0.00E+00	2.70E-02
MAR_2	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
MAR_2	7664417	NH3	0.00E+00	8.06E-03
MAR_2	7440020	Nickel	0.00E+00	2.88E-04
MAR_2	97563	o-Aminoazotolue	0.00E+00	0.00E+00
MAR_2	95487	o-Cresol	0.00E+00	0.00E+00
MAR_2	95476	o-Xylene	0.00E+00	4.42E-04
MAR_2	1150	PAHs-w/	0.00E+00	0.00E+00
MAR_2	1336363	PCBs	0.00E+00	1.75E-07
MAR_2	98566	PCBTF	0.00E+00	0.00E+00
MAR_2	107982	PGME	0.00E+00	0.00E+00
MAR_2	108656	PGMEA	0.00E+00	0.00E+00
MAR_2	85018	Phenanthrene	0.00E+00	1.17E-03
MAR_2	108952	Phenol	0.00E+00	0.00E+00
MAR_2	7723140	Phosphorus	0.00E+00	0.00E+00
MAR_2	123386	Propionaldehyde	0.00E+00	1.31E-03
MAR_2	115071	Propylene	0.00E+00	0.00E+00
MAR_2	129000	Pyrene	0.00E+00	1.41E-05
MAR_2	7782492	Selenium	0.00E+00	1.83E-08
MAR_2	1175	Silica, Crystln	0.00E+00	0.00E+00
MAR_2	100425	Styrene	0.00E+00	0.00E+00
MAR_2	540885	t-Butyl acetate	0.00E+00	0.00E+00
MAR_2	108883	Toluene	0.00E+00	1.75E-03
MAR_2	25551137	TriMeBenzns	0.00E+00	0.00E+00
MAR_2	7440622	Vanadium	0.00E+00	0.00E+00
MAR_2	1330207	Xylenes	0.00E+00	1.23E-03
MAR_2	7440666	Zinc	0.00E+00	0.00E+00
MAR_2	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_3	67641	[D] Acetone	0.00E+00	0.00E+00
MAR_3	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
MAR_3	106990	1,3-Butadiene	0.00E+00	8.73E-04
MAR_3	540841	2,2,4TriMePentn	0.00E+00	6.13E-03
MAR_3	83329	Acenaphthene	0.00E+00	4.39E-05
MAR_3	208968	Acenaphthylene	0.00E+00	1.02E-04
MAR_3	75070	Acetaldehyde	0.00E+00	8.43E-03
MAR_3	107028	Acrolein	0.00E+00	1.59E-03
MAR_3	1344281	Alumin Oxide	0.00E+00	0.00E+00
MAR_3	7429905	Aluminum	0.00E+00	0.00E+00
MAR_3	120127	Anthracene	0.00E+00	2.96E-04
MAR_3	7440360	Antimony	0.00E+00	2.57E-04
MAR_3	7440382	Arsenic	0.00E+00	1.08E-05
MAR_3	56553	B[a]anthracene	0.00E+00	3.69E-06
MAR_3	50328	B[a]P	0.00E+00	1.75E-06
MAR_3	205992	B[b]fluoranthen	0.00E+00	3.49E-06
MAR_3	207089	B[k]fluoranthen	0.00E+00	1.75E-06
MAR_3	71432	Benzene	0.00E+00	4.08E-03
MAR_3	7440417	Beryllium	0.00E+00	0.00E+00
MAR_3	7440439	Cadmium	0.00E+00	9.88E-05
MAR_3	108907	Chlorobenzn	0.00E+00	0.00E+00
MAR_3	7440473	Chromium	0.00E+00	0.00E+00
MAR_3	218019	Chrysene	0.00E+00	6.82E-06
MAR_3	7440484	Cobalt	0.00E+00	0.00E+00
MAR_3	7440508	Copper	0.00E+00	0.00E+00
MAR_3	18540299	Cr(VI)	0.00E+00	3.03E-09
MAR_3	98828	Cumene	0.00E+00	0.00E+00
MAR_3	110827	Cyclohexane	0.00E+00	0.00E+00
MAR_3	53703	D[a,h]anthracen	0.00E+00	3.62E-06
MAR_3	111773	DEGME	0.00E+00	0.00E+00
MAR_3	9901	DieselExhPM	1.73E+00	0.00E+00
MAR_3	100414	Ethyl Benzene	0.00E+00	3.78E-04
MAR_3	206440	Fluoranthene	0.00E+00	3.75E-05
MAR_3	86737	Fluorene	0.00E+00	1.41E-04
MAR_3	1101	Fluorides&cmpds	0.00E+00	0.00E+00
MAR_3	50000	Formaldehyde	0.00E+00	3.68E-02
MAR_3	7647010	HCl	0.00E+00	0.00E+00
MAR_3	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
MAR_3	110543	Hexane	0.00E+00	2.40E-03
MAR_3	193395	In[1,2,3-cd]pyr	0.00E+00	3.49E-06

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_3	1125	Isocyanates	0.00E+00	0.00E+00
MAR_3	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
MAR_3	7439921	Lead	0.00E+00	5.23E-05
MAR_3	7439965	Manganese	0.00E+00	1.35E-06
MAR_3	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
MAR_3	78933	MEK	0.00E+00	0.00E+00
MAR_3	7439976	Mercury	0.00E+00	1.75E-08
MAR_3	108101	MIBK	0.00E+00	0.00E+00
MAR_3	91203	Naphthalene	0.00E+00	2.70E-02
MAR_3	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
MAR_3	7664417	NH3	0.00E+00	8.06E-03
MAR_3	7440020	Nickel	0.00E+00	2.88E-04
MAR_3	97563	o-Aminoazotolue	0.00E+00	0.00E+00
MAR_3	95487	o-Cresol	0.00E+00	0.00E+00
MAR_3	95476	o-Xylene	0.00E+00	4.42E-04
MAR_3	1150	PAHs-w/	0.00E+00	0.00E+00
MAR_3	1336363	PCBs	0.00E+00	1.75E-07
MAR_3	98566	PCBTF	0.00E+00	0.00E+00
MAR_3	107982	PGME	0.00E+00	0.00E+00
MAR_3	108656	PGMEA	0.00E+00	0.00E+00
MAR_3	85018	Phenanthrene	0.00E+00	1.17E-03
MAR_3	108952	Phenol	0.00E+00	0.00E+00
MAR_3	7723140	Phosphorus	0.00E+00	0.00E+00
MAR_3	123386	Propionaldehyde	0.00E+00	1.31E-03
MAR_3	115071	Propylene	0.00E+00	0.00E+00
MAR_3	129000	Pyrene	0.00E+00	1.41E-05
MAR_3	7782492	Selenium	0.00E+00	1.83E-08
MAR_3	1175	Silica, Crystln	0.00E+00	0.00E+00
MAR_3	100425	Styrene	0.00E+00	0.00E+00
MAR_3	540885	t-Butyl acetate	0.00E+00	0.00E+00
MAR_3	108883	Toluene	0.00E+00	1.75E-03
MAR_3	25551137	TriMeBenzns	0.00E+00	0.00E+00
MAR_3	7440622	Vanadium	0.00E+00	0.00E+00
MAR_3	1330207	Xylenes	0.00E+00	1.23E-03
MAR_3	7440666	Zinc	0.00E+00	0.00E+00
MAR_3	1314132	Zinc Oxide	0.00E+00	0.00E+00
MAR_4	67641	[D] Acetone	0.00E+00	0.00E+00
MAR_4	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
MAR_4	106990	1,3-Butadiene	0.00E+00	8.73E-04
MAR_4	540841	2,2,4TriMePentn	0.00E+00	6.13E-03

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_4	83329	Acenaphthene	0.00E+00	4.39E-05
MAR_4	208968	Acenaphthylene	0.00E+00	1.02E-04
MAR_4	75070	Acetaldehyde	0.00E+00	8.43E-03
MAR_4	107028	Acrolein	0.00E+00	1.59E-03
MAR_4	1344281	Alumin Oxide	0.00E+00	0.00E+00
MAR_4	7429905	Aluminum	0.00E+00	0.00E+00
MAR_4	120127	Anthracene	0.00E+00	2.96E-04
MAR_4	7440360	Antimony	0.00E+00	2.57E-04
MAR_4	7440382	Arsenic	0.00E+00	1.08E-05
MAR_4	56553	B[a]anthracene	0.00E+00	3.69E-06
MAR_4	50328	B[a]P	0.00E+00	1.75E-06
MAR_4	205992	B[b]fluoranthen	0.00E+00	3.49E-06
MAR_4	207089	B[k]fluoranthen	0.00E+00	1.75E-06
MAR_4	71432	Benzene	0.00E+00	4.08E-03
MAR_4	7440417	Beryllium	0.00E+00	0.00E+00
MAR_4	7440439	Cadmium	0.00E+00	9.88E-05
MAR_4	108907	Chlorobenzn	0.00E+00	0.00E+00
MAR_4	7440473	Chromium	0.00E+00	0.00E+00
MAR_4	218019	Chrysene	0.00E+00	6.82E-06
MAR_4	7440484	Cobalt	0.00E+00	0.00E+00
MAR_4	7440508	Copper	0.00E+00	0.00E+00
MAR_4	18540299	Cr(VI)	0.00E+00	3.03E-09
MAR_4	98828	Cumene	0.00E+00	0.00E+00
MAR_4	110827	Cyclohexane	0.00E+00	0.00E+00
MAR_4	53703	D[a,h]anthracen	0.00E+00	3.62E-06
MAR_4	111773	DEGME	0.00E+00	0.00E+00
MAR_4	9901	DieselExhPM	1.73E+00	0.00E+00
MAR_4	100414	Ethyl Benzene	0.00E+00	3.78E-04
MAR_4	206440	Fluoranthene	0.00E+00	3.75E-05
MAR_4	86737	Fluorene	0.00E+00	1.41E-04
MAR_4	1101	Fluorides&cmpds	0.00E+00	0.00E+00
MAR_4	50000	Formaldehyde	0.00E+00	3.68E-02
MAR_4	7647010	HCl	0.00E+00	0.00E+00
MAR_4	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
MAR_4	110543	Hexane	0.00E+00	2.40E-03
MAR_4	193395	In[1,2,3-cd]pyr	0.00E+00	3.49E-06
MAR_4	1125	Isocyanates	0.00E+00	0.00E+00
MAR_4	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
MAR_4	7439921	Lead	0.00E+00	5.23E-05
MAR_4	7439965	Manganese	0.00E+00	1.35E-06

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_4	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
MAR_4	78933	MEK	0.00E+00	0.00E+00
MAR_4	7439976	Mercury	0.00E+00	1.75E-08
MAR_4	108101	MIBK	0.00E+00	0.00E+00
MAR_4	91203	Naphthalene	0.00E+00	2.70E-02
MAR_4	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
MAR_4	7664417	NH3	0.00E+00	8.06E-03
MAR_4	7440020	Nickel	0.00E+00	2.88E-04
MAR_4	97563	o-Aminoazotolue	0.00E+00	0.00E+00
MAR_4	95487	o-Cresol	0.00E+00	0.00E+00
MAR_4	95476	o-Xylene	0.00E+00	4.42E-04
MAR_4	1150	PAHs-w/	0.00E+00	0.00E+00
MAR_4	1336363	PCBs	0.00E+00	1.75E-07
MAR_4	98566	PCBTF	0.00E+00	0.00E+00
MAR_4	107982	PGME	0.00E+00	0.00E+00
MAR_4	108656	PGMEA	0.00E+00	0.00E+00
MAR_4	85018	Phenanthrene	0.00E+00	1.17E-03
MAR_4	108952	Phenol	0.00E+00	0.00E+00
MAR_4	7723140	Phosphorus	0.00E+00	0.00E+00
MAR_4	123386	Propionaldehyde	0.00E+00	1.31E-03
MAR_4	115071	Propylene	0.00E+00	0.00E+00
MAR_4	129000	Pyrene	0.00E+00	1.41E-05
MAR_4	7782492	Selenium	0.00E+00	1.83E-08
MAR_4	1175	Silica, Crystln	0.00E+00	0.00E+00
MAR_4	100425	Styrene	0.00E+00	0.00E+00
MAR_4	540885	t-Butyl acetate	0.00E+00	0.00E+00
MAR_4	108883	Toluene	0.00E+00	1.75E-03
MAR_4	25551137	TriMeBenzns	0.00E+00	0.00E+00
MAR_4	7440622	Vanadium	0.00E+00	0.00E+00
MAR_4	1330207	Xylenes	0.00E+00	1.23E-03
MAR_4	7440666	Zinc	0.00E+00	0.00E+00
MAR_4	1314132	Zinc Oxide	0.00E+00	0.00E+00
MAR_5	67641	[D] Acetone	0.00E+00	0.00E+00
MAR_5	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
MAR_5	106990	1,3-Butadiene	0.00E+00	8.73E-04
MAR_5	540841	2,2,4TriMePentn	0.00E+00	6.13E-03
MAR_5	83329	Acenaphthene	0.00E+00	4.39E-05
MAR_5	208968	Acenaphthylene	0.00E+00	1.02E-04
MAR_5	75070	Acetaldehyde	0.00E+00	8.43E-03
MAR_5	107028	Acrolein	0.00E+00	1.59E-03

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_5	1344281	Alumin Oxide	0.00E+00	0.00E+00
MAR_5	7429905	Aluminum	0.00E+00	0.00E+00
MAR_5	120127	Anthracene	0.00E+00	2.96E-04
MAR_5	7440360	Antimony	0.00E+00	2.57E-04
MAR_5	7440382	Arsenic	0.00E+00	1.08E-05
MAR_5	56553	B[a]anthracene	0.00E+00	3.69E-06
MAR_5	50328	B[a]P	0.00E+00	1.75E-06
MAR_5	205992	B[b]fluoranthen	0.00E+00	3.49E-06
MAR_5	207089	B[k]fluoranthen	0.00E+00	1.75E-06
MAR_5	71432	Benzene	0.00E+00	4.08E-03
MAR_5	7440417	Beryllium	0.00E+00	0.00E+00
MAR_5	7440439	Cadmium	0.00E+00	9.88E-05
MAR_5	108907	Chlorobenzn	0.00E+00	0.00E+00
MAR_5	7440473	Chromium	0.00E+00	0.00E+00
MAR_5	218019	Chrysene	0.00E+00	6.82E-06
MAR_5	7440484	Cobalt	0.00E+00	0.00E+00
MAR_5	7440508	Copper	0.00E+00	0.00E+00
MAR_5	18540299	Cr(VI)	0.00E+00	3.03E-09
MAR_5	98828	Cumene	0.00E+00	0.00E+00
MAR_5	110827	Cyclohexane	0.00E+00	0.00E+00
MAR_5	53703	D[a,h]anthracen	0.00E+00	3.62E-06
MAR_5	111773	DEGME	0.00E+00	0.00E+00
MAR_5	9901	DieselExhPM	1.73E+00	0.00E+00
MAR_5	100414	Ethyl Benzene	0.00E+00	3.78E-04
MAR_5	206440	Fluoranthene	0.00E+00	3.75E-05
MAR_5	86737	Fluorene	0.00E+00	1.41E-04
MAR_5	1101	Fluorides&cmpds	0.00E+00	0.00E+00
MAR_5	50000	Formaldehyde	0.00E+00	3.68E-02
MAR_5	7647010	HCl	0.00E+00	0.00E+00
MAR_5	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
MAR_5	110543	Hexane	0.00E+00	2.40E-03
MAR_5	193395	In[1,2,3-cd]pyr	0.00E+00	3.49E-06
MAR_5	1125	Isocyanates	0.00E+00	0.00E+00
MAR_5	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
MAR_5	7439921	Lead	0.00E+00	5.23E-05
MAR_5	7439965	Manganese	0.00E+00	1.35E-06
MAR_5	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
MAR_5	78933	MEK	0.00E+00	0.00E+00
MAR_5	7439976	Mercury	0.00E+00	1.75E-08
MAR_5	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_5	91203	Naphthalene	0.00E+00	2.70E-02
MAR_5	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
MAR_5	7664417	NH3	0.00E+00	8.06E-03
MAR_5	7440020	Nickel	0.00E+00	2.88E-04
MAR_5	97563	o-Aminoazotolue	0.00E+00	0.00E+00
MAR_5	95487	o-Cresol	0.00E+00	0.00E+00
MAR_5	95476	o-Xylene	0.00E+00	4.42E-04
MAR_5	1150	PAHs-w/	0.00E+00	0.00E+00
MAR_5	1336363	PCBs	0.00E+00	1.75E-07
MAR_5	98566	PCBTF	0.00E+00	0.00E+00
MAR_5	107982	PGME	0.00E+00	0.00E+00
MAR_5	108656	PGMEA	0.00E+00	0.00E+00
MAR_5	85018	Phenanthrene	0.00E+00	1.17E-03
MAR_5	108952	Phenol	0.00E+00	0.00E+00
MAR_5	7723140	Phosphorus	0.00E+00	0.00E+00
MAR_5	123386	Propionaldehyde	0.00E+00	1.31E-03
MAR_5	115071	Propylene	0.00E+00	0.00E+00
MAR_5	129000	Pyrene	0.00E+00	1.41E-05
MAR_5	7782492	Selenium	0.00E+00	1.83E-08
MAR_5	1175	Silica, Crystln	0.00E+00	0.00E+00
MAR_5	100425	Styrene	0.00E+00	0.00E+00
MAR_5	540885	t-Butyl acetate	0.00E+00	0.00E+00
MAR_5	108883	Toluene	0.00E+00	1.75E-03
MAR_5	25551137	TriMeBenzns	0.00E+00	0.00E+00
MAR_5	7440622	Vanadium	0.00E+00	0.00E+00
MAR_5	1330207	Xylenes	0.00E+00	1.23E-03
MAR_5	7440666	Zinc	0.00E+00	0.00E+00
MAR_5	1314132	Zinc Oxide	0.00E+00	0.00E+00
MAR_6	67641	[D] Acetone	0.00E+00	0.00E+00
MAR_6	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
MAR_6	106990	1,3-Butadiene	0.00E+00	8.73E-04
MAR_6	540841	2,2,4TriMePentn	0.00E+00	6.13E-03
MAR_6	83329	Acenaphthene	0.00E+00	4.39E-05
MAR_6	208968	Acenaphthylene	0.00E+00	1.02E-04
MAR_6	75070	Acetaldehyde	0.00E+00	8.43E-03
MAR_6	107028	Acrolein	0.00E+00	1.59E-03
MAR_6	1344281	Alumin Oxide	0.00E+00	0.00E+00
MAR_6	7429905	Aluminum	0.00E+00	0.00E+00
MAR_6	120127	Anthracene	0.00E+00	2.96E-04
MAR_6	7440360	Antimony	0.00E+00	2.57E-04

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_6	7440382	Arsenic	0.00E+00	1.08E-05
MAR_6	56553	B[a]anthracene	0.00E+00	3.69E-06
MAR_6	50328	B[a]P	0.00E+00	1.75E-06
MAR_6	205992	B[b]fluoranthen	0.00E+00	3.49E-06
MAR_6	207089	B[k]fluoranthen	0.00E+00	1.75E-06
MAR_6	71432	Benzene	0.00E+00	4.08E-03
MAR_6	7440417	Beryllium	0.00E+00	0.00E+00
MAR_6	7440439	Cadmium	0.00E+00	9.88E-05
MAR_6	108907	Chlorobenzn	0.00E+00	0.00E+00
MAR_6	7440473	Chromium	0.00E+00	0.00E+00
MAR_6	218019	Chrysene	0.00E+00	6.82E-06
MAR_6	7440484	Cobalt	0.00E+00	0.00E+00
MAR_6	7440508	Copper	0.00E+00	0.00E+00
MAR_6	18540299	Cr(VI)	0.00E+00	3.03E-09
MAR_6	98828	Cumene	0.00E+00	0.00E+00
MAR_6	110827	Cyclohexane	0.00E+00	0.00E+00
MAR_6	53703	D[a,h]anthracen	0.00E+00	3.62E-06
MAR_6	111773	DEGME	0.00E+00	0.00E+00
MAR_6	9901	DieselExhPM	1.73E+00	0.00E+00
MAR_6	100414	Ethyl Benzene	0.00E+00	3.78E-04
MAR_6	206440	Fluoranthene	0.00E+00	3.75E-05
MAR_6	86737	Fluorene	0.00E+00	1.41E-04
MAR_6	1101	Fluorides&cmpds	0.00E+00	0.00E+00
MAR_6	50000	Formaldehyde	0.00E+00	3.68E-02
MAR_6	7647010	HCl	0.00E+00	0.00E+00
MAR_6	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
MAR_6	110543	Hexane	0.00E+00	2.40E-03
MAR_6	193395	In[1,2,3-cd]pyr	0.00E+00	3.49E-06
MAR_6	1125	Isocyanates	0.00E+00	0.00E+00
MAR_6	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
MAR_6	7439921	Lead	0.00E+00	5.23E-05
MAR_6	7439965	Manganese	0.00E+00	1.35E-06
MAR_6	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
MAR_6	78933	MEK	0.00E+00	0.00E+00
MAR_6	7439976	Mercury	0.00E+00	1.75E-08
MAR_6	108101	MIBK	0.00E+00	0.00E+00
MAR_6	91203	Naphthalene	0.00E+00	2.70E-02
MAR_6	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
MAR_6	7664417	NH3	0.00E+00	8.06E-03
MAR_6	7440020	Nickel	0.00E+00	2.88E-04

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
MAR_6	97563	o-Aminoazotolue	0.00E+00	0.00E+00
MAR_6	95487	o-Cresol	0.00E+00	0.00E+00
MAR_6	95476	o-Xylene	0.00E+00	4.42E-04
MAR_6	1150	PAHs-w/	0.00E+00	0.00E+00
MAR_6	1336363	PCBs	0.00E+00	1.75E-07
MAR_6	98566	PCBTF	0.00E+00	0.00E+00
MAR_6	107982	PGME	0.00E+00	0.00E+00
MAR_6	108656	PGMEA	0.00E+00	0.00E+00
MAR_6	85018	Phenanthrene	0.00E+00	1.17E-03
MAR_6	108952	Phenol	0.00E+00	0.00E+00
MAR_6	7723140	Phosphorus	0.00E+00	0.00E+00
MAR_6	123386	Propionaldehyde	0.00E+00	1.31E-03
MAR_6	115071	Propylene	0.00E+00	0.00E+00
MAR_6	129000	Pyrene	0.00E+00	1.41E-05
MAR_6	7782492	Selenium	0.00E+00	1.83E-08
MAR_6	1175	Silica, Crystln	0.00E+00	0.00E+00
MAR_6	100425	Styrene	0.00E+00	0.00E+00
MAR_6	540885	t-Butyl acetate	0.00E+00	0.00E+00
MAR_6	108883	Toluene	0.00E+00	1.75E-03
MAR_6	25551137	TriMeBenzns	0.00E+00	0.00E+00
MAR_6	7440622	Vanadium	0.00E+00	0.00E+00
MAR_6	1330207	Xylenes	0.00E+00	1.23E-03
MAR_6	7440666	Zinc	0.00E+00	0.00E+00
MAR_6	1314132	Zinc Oxide	0.00E+00	0.00E+00
GEN_1	67641	[D] Acetone	0.00E+00	0.00E+00
GEN_1	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
GEN_1	106990	1,3-Butadiene	0.00E+00	9.07E-03
GEN_1	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
GEN_1	83329	Acenaphthene	0.00E+00	0.00E+00
GEN_1	208968	Acenaphthylene	0.00E+00	0.00E+00
GEN_1	75070	Acetaldehyde	0.00E+00	3.27E-02
GEN_1	107028	Acrolein	0.00E+00	1.42E-03
GEN_1	1344281	Alumin Oxide	0.00E+00	0.00E+00
GEN_1	7429905	Aluminum	0.00E+00	0.00E+00
GEN_1	120127	Anthracene	0.00E+00	0.00E+00
GEN_1	7440360	Antimony	0.00E+00	0.00E+00
GEN_1	7440382	Arsenic	0.00E+00	6.69E-05
GEN_1	56553	B[a]anthracene	0.00E+00	0.00E+00
GEN_1	50328	B[a]P	0.00E+00	0.00E+00
GEN_1	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
GEN_1	207089	B[k]fluoranthen	0.00E+00	0.00E+00
GEN_1	71432	Benzene	0.00E+00	7.77E-03
GEN_1	7440417	Beryllium	0.00E+00	0.00E+00
GEN_1	7440439	Cadmium	0.00E+00	6.27E-05
GEN_1	108907	Chlorobenzn	0.00E+00	8.36E-06
GEN_1	7440473	Chromium	0.00E+00	2.09E-05
GEN_1	218019	Chrysene	0.00E+00	0.00E+00
GEN_1	7440484	Cobalt	0.00E+00	0.00E+00
GEN_1	7440508	Copper	0.00E+00	1.71E-04
GEN_1	18540299	Cr(VI)	0.00E+00	4.18E-06
GEN_1	98828	Cumene	0.00E+00	0.00E+00
GEN_1	110827	Cyclohexane	0.00E+00	0.00E+00
GEN_1	53703	D[a,h]anthracen	0.00E+00	0.00E+00
GEN_1	111773	DEGME	0.00E+00	0.00E+00
GEN_1	9901	DieselExhPM	6.15E+00	0.00E+00
GEN_1	100414	Ethyl Benzene	0.00E+00	4.56E-04
GEN_1	206440	Fluoranthene	0.00E+00	0.00E+00
GEN_1	86737	Fluorene	0.00E+00	0.00E+00
GEN_1	1101	Fluorides&cmpds	0.00E+00	0.00E+00
GEN_1	50000	Formaldehyde	0.00E+00	7.23E-02
GEN_1	7647010	HCl	0.00E+00	7.77E-03
GEN_1	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
GEN_1	110543	Hexane	0.00E+00	1.12E-03
GEN_1	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
GEN_1	1125	Isocyanates	0.00E+00	0.00E+00
GEN_1	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
GEN_1	7439921	Lead	0.00E+00	3.47E-04
GEN_1	7439965	Manganese	0.00E+00	1.30E-04
GEN_1	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
GEN_1	78933	MEK	0.00E+00	0.00E+00
GEN_1	7439976	Mercury	0.00E+00	8.36E-05
GEN_1	108101	MIBK	0.00E+00	0.00E+00
GEN_1	91203	Naphthalene	0.00E+00	8.23E-04
GEN_1	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
GEN_1	7664417	NH3	0.00E+00	0.00E+00
GEN_1	7440020	Nickel	0.00E+00	1.63E-04
GEN_1	97563	o-Aminoazotolue	0.00E+00	0.00E+00
GEN_1	95487	o-Cresol	0.00E+00	0.00E+00
GEN_1	95476	o-Xylene	0.00E+00	0.00E+00
GEN_1	1150	PAHs-w/	0.00E+00	1.51E-03

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
GEN_1	1336363	PCBs	0.00E+00	0.00E+00
GEN_1	98566	PCBTF	0.00E+00	0.00E+00
GEN_1	107982	PGME	0.00E+00	0.00E+00
GEN_1	108656	PGMEA	0.00E+00	0.00E+00
GEN_1	85018	Phenanthrene	0.00E+00	0.00E+00
GEN_1	108952	Phenol	0.00E+00	0.00E+00
GEN_1	7723140	Phosphorus	0.00E+00	0.00E+00
GEN_1	123386	Propionaldehyde	0.00E+00	0.00E+00
GEN_1	115071	Propylene	0.00E+00	1.95E-02
GEN_1	129000	Pyrene	0.00E+00	0.00E+00
GEN_1	7782492	Selenium	0.00E+00	9.20E-05
GEN_1	1175	Silica, Crystln	0.00E+00	0.00E+00
GEN_1	100425	Styrene	0.00E+00	0.00E+00
GEN_1	540885	t-Butyl acetate	0.00E+00	0.00E+00
GEN_1	108883	Toluene	0.00E+00	4.39E-03
GEN_1	25551137	TriMeBenzns	0.00E+00	0.00E+00
GEN_1	7440622	Vanadium	0.00E+00	0.00E+00
GEN_1	1330207	Xylenes	0.00E+00	1.77E-03
GEN_1	7440666	Zinc	1.00E+00	9.36E-04
GEN_1	1314132	Zinc Oxide	2.00E+00	0.00E+00
GEN_2	67641	[D] Acetone	0.00E+00	0.00E+00
GEN_2	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
GEN_2	106990	1,3-Butadiene	0.00E+00	9.07E-03
GEN_2	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
GEN_2	83329	Acenaphthene	0.00E+00	0.00E+00
GEN_2	208968	Acenaphthylene	0.00E+00	0.00E+00
GEN_2	75070	Acetaldehyde	0.00E+00	3.27E-02
GEN_2	107028	Acrolein	0.00E+00	1.42E-03
GEN_2	1344281	Alumin Oxide	0.00E+00	0.00E+00
GEN_2	7429905	Aluminum	0.00E+00	0.00E+00
GEN_2	120127	Anthracene	0.00E+00	0.00E+00
GEN_2	7440360	Antimony	0.00E+00	0.00E+00
GEN_2	7440382	Arsenic	0.00E+00	6.69E-05
GEN_2	56553	B[a]anthracene	0.00E+00	0.00E+00
GEN_2	50328	B[a]P	0.00E+00	0.00E+00
GEN_2	205992	B[b]fluoranthen	0.00E+00	0.00E+00
GEN_2	207089	B[k]fluoranthen	0.00E+00	0.00E+00
GEN_2	71432	Benzene	0.00E+00	7.77E-03
GEN_2	7440417	Beryllium	0.00E+00	0.00E+00
GEN_2	7440439	Cadmium	0.00E+00	6.27E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
GEN_2	108907	Chlorobenzn	0.00E+00	8.36E-06
GEN_2	7440473	Chromium	0.00E+00	2.09E-05
GEN_2	218019	Chrysene	0.00E+00	0.00E+00
GEN_2	7440484	Cobalt	0.00E+00	0.00E+00
GEN_2	7440508	Copper	0.00E+00	1.71E-04
GEN_2	18540299	Cr(VI)	0.00E+00	4.18E-06
GEN_2	98828	Cumene	0.00E+00	0.00E+00
GEN_2	110827	Cyclohexane	0.00E+00	0.00E+00
GEN_2	53703	D[a,h]anthracen	0.00E+00	0.00E+00
GEN_2	111773	DEGME	0.00E+00	0.00E+00
GEN_2	9901	DieselExhPM	6.15E+00	0.00E+00
GEN_2	100414	Ethyl Benzene	0.00E+00	4.56E-04
GEN_2	206440	Fluoranthene	0.00E+00	0.00E+00
GEN_2	86737	Fluorene	0.00E+00	0.00E+00
GEN_2	1101	Fluorides&cmpds	0.00E+00	0.00E+00
GEN_2	50000	Formaldehyde	0.00E+00	7.23E-02
GEN_2	7647010	HCl	0.00E+00	7.77E-03
GEN_2	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
GEN_2	110543	Hexane	0.00E+00	1.12E-03
GEN_2	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
GEN_2	1125	Isocyanates	0.00E+00	0.00E+00
GEN_2	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
GEN_2	7439921	Lead	0.00E+00	3.47E-04
GEN_2	7439965	Manganese	0.00E+00	1.30E-04
GEN_2	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
GEN_2	78933	MEK	0.00E+00	0.00E+00
GEN_2	7439976	Mercury	0.00E+00	8.36E-05
GEN_2	108101	MIBK	0.00E+00	0.00E+00
GEN_2	91203	Naphthalene	0.00E+00	8.23E-04
GEN_2	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
GEN_2	7664417	NH3	0.00E+00	0.00E+00
GEN_2	7440020	Nickel	0.00E+00	1.63E-04
GEN_2	97563	o-Aminoazotolue	0.00E+00	0.00E+00
GEN_2	95487	o-Cresol	0.00E+00	0.00E+00
GEN_2	95476	o-Xylene	0.00E+00	0.00E+00
GEN_2	1150	PAHs-w/	0.00E+00	1.51E-03
GEN_2	1336363	PCBs	0.00E+00	0.00E+00
GEN_2	98566	PCBTF	0.00E+00	0.00E+00
GEN_2	107982	PGME	0.00E+00	0.00E+00
GEN_2	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
GEN_2	85018	Phenanthrene	0.00E+00	0.00E+00
GEN_2	108952	Phenol	0.00E+00	0.00E+00
GEN_2	7723140	Phosphorus	0.00E+00	0.00E+00
GEN_2	123386	Propionaldehyde	0.00E+00	0.00E+00
GEN_2	115071	Propylene	0.00E+00	1.95E-02
GEN_2	129000	Pyrene	0.00E+00	0.00E+00
GEN_2	7782492	Selenium	0.00E+00	9.20E-05
GEN_2	1175	Silica, Crystln	0.00E+00	0.00E+00
GEN_2	100425	Styrene	0.00E+00	0.00E+00
GEN_2	540885	t-Butyl acetate	0.00E+00	0.00E+00
GEN_2	108883	Toluene	0.00E+00	4.39E-03
GEN_2	25551137	TriMeBenzns	0.00E+00	0.00E+00
GEN_2	7440622	Vanadium	0.00E+00	0.00E+00
GEN_2	1330207	Xylenes	0.00E+00	1.77E-03
GEN_2	7440666	Zinc	1.00E+00	9.36E-04
GEN_2	1314132	Zinc Oxide	2.00E+00	0.00E+00
GEN_FW	67641	[D] Acetone	0.00E+00	0.00E+00
GEN_FW	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
GEN_FW	106990	1,3-Butadiene	0.00E+00	9.43E-03
GEN_FW	540841	2,2,4TriMePentn	0.00E+00	0.00E+00
GEN_FW	83329	Acenaphthene	0.00E+00	0.00E+00
GEN_FW	208968	Acenaphthylene	0.00E+00	0.00E+00
GEN_FW	75070	Acetaldehyde	0.00E+00	3.40E-02
GEN_FW	107028	Acrolein	0.00E+00	1.47E-03
GEN_FW	1344281	Alumin Oxide	0.00E+00	0.00E+00
GEN_FW	7429905	Aluminum	0.00E+00	0.00E+00
GEN_FW	120127	Anthracene	0.00E+00	0.00E+00
GEN_FW	7440360	Antimony	0.00E+00	0.00E+00
GEN_FW	7440382	Arsenic	0.00E+00	6.95E-05
GEN_FW	56553	B[a]anthracene	0.00E+00	0.00E+00
GEN_FW	50328	B[a]P	0.00E+00	0.00E+00
GEN_FW	205992	B[b]fluoranthen	0.00E+00	0.00E+00
GEN_FW	207089	B[k]fluoranthen	0.00E+00	0.00E+00
GEN_FW	71432	Benzene	0.00E+00	8.08E-03
GEN_FW	7440417	Beryllium	0.00E+00	0.00E+00
GEN_FW	7440439	Cadmium	0.00E+00	6.52E-05
GEN_FW	108907	Chlorobenzn	0.00E+00	8.69E-06
GEN_FW	7440473	Chromium	0.00E+00	2.17E-05
GEN_FW	218019	Chrysene	0.00E+00	0.00E+00
GEN_FW	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
GEN_FW	7440508	Copper	0.00E+00	1.78E-04
GEN_FW	18540299	Cr(VI)	0.00E+00	4.34E-06
GEN_FW	98828	Cumene	0.00E+00	0.00E+00
GEN_FW	110827	Cyclohexane	0.00E+00	0.00E+00
GEN_FW	53703	D[a,h]anthracen	0.00E+00	0.00E+00
GEN_FW	111773	DEGME	0.00E+00	0.00E+00
GEN_FW	9901	DieselExhPM	2.07E+00	0.00E+00
GEN_FW	100414	Ethyl Benzene	0.00E+00	4.73E-04
GEN_FW	206440	Fluoranthene	0.00E+00	0.00E+00
GEN_FW	86737	Fluorene	0.00E+00	0.00E+00
GEN_FW	1101	Fluorides&cmpds	0.00E+00	0.00E+00
GEN_FW	50000	Formaldehyde	0.00E+00	7.51E-02
GEN_FW	7647010	HCl	0.00E+00	8.08E-03
GEN_FW	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
GEN_FW	110543	Hexane	0.00E+00	1.17E-03
GEN_FW	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
GEN_FW	1125	Isocyanates	0.00E+00	0.00E+00
GEN_FW	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
GEN_FW	7439921	Lead	0.00E+00	3.61E-04
GEN_FW	7439965	Manganese	0.00E+00	1.35E-04
GEN_FW	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
GEN_FW	78933	MEK	0.00E+00	0.00E+00
GEN_FW	7439976	Mercury	0.00E+00	8.69E-05
GEN_FW	108101	MIBK	0.00E+00	0.00E+00
GEN_FW	91203	Naphthalene	0.00E+00	8.56E-04
GEN_FW	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
GEN_FW	7664417	NH3	0.00E+00	0.00E+00
GEN_FW	7440020	Nickel	0.00E+00	1.69E-04
GEN_FW	97563	o-Aminoazotolue	0.00E+00	0.00E+00
GEN_FW	95487	o-Cresol	0.00E+00	0.00E+00
GEN_FW	95476	o-Xylene	0.00E+00	0.00E+00
GEN_FW	1150	PAHs-w/	0.00E+00	1.57E-03
GEN_FW	1336363	PCBs	0.00E+00	0.00E+00
GEN_FW	98566	PCBTF	0.00E+00	0.00E+00
GEN_FW	107982	PGME	0.00E+00	0.00E+00
GEN_FW	108656	PGMEA	0.00E+00	0.00E+00
GEN_FW	85018	Phenanthrene	0.00E+00	0.00E+00
GEN_FW	108952	Phenol	0.00E+00	0.00E+00
GEN_FW	7723140	Phosphorus	0.00E+00	0.00E+00
GEN_FW	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
GEN_FW	115071	Propylene	0.00E+00	2.03E-02
GEN_FW	129000	Pyrene	0.00E+00	0.00E+00
GEN_FW	7782492	Selenium	0.00E+00	9.56E-05
GEN_FW	1175	Silica, Crystln	0.00E+00	0.00E+00
GEN_FW	100425	Styrene	0.00E+00	0.00E+00
GEN_FW	540885	t-Butyl acetate	0.00E+00	0.00E+00
GEN_FW	108883	Toluene	0.00E+00	4.56E-03
GEN_FW	25551137	TriMeBenzns	0.00E+00	0.00E+00
GEN_FW	7440622	Vanadium	0.00E+00	0.00E+00
GEN_FW	1330207	Xylenes	0.00E+00	1.84E-03
GEN_FW	7440666	Zinc	0.00E+00	9.73E-04
GEN_FW	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_1	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_1	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_1	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_1	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_1	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_1	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_1	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_1	107028	Acrolein	0.00E+00	0.00E+00
ROAD_1	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_1	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_1	120127	Anthracene	0.00E+00	0.00E+00
ROAD_1	7440360	Antimony	0.00E+00	0.00E+00
ROAD_1	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_1	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_1	50328	B[a]P	0.00E+00	0.00E+00
ROAD_1	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_1	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_1	71432	Benzene	0.00E+00	0.00E+00
ROAD_1	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_1	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_1	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_1	7440473	Chromium	0.00E+00	0.00E+00
ROAD_1	218019	Chrysene	0.00E+00	0.00E+00
ROAD_1	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_1	7440508	Copper	0.00E+00	0.00E+00
ROAD_1	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_1	98828	Cumene	0.00E+00	0.00E+00
ROAD_1	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_1	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_1	111773	DEGME	0.00E+00	0.00E+00
ROAD_1	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_1	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_1	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_1	86737	Fluorene	0.00E+00	0.00E+00
ROAD_1	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_1	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_1	7647010	HCl	0.00E+00	0.00E+00
ROAD_1	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_1	110543	Hexane	0.00E+00	1.07E-04
ROAD_1	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_1	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_1	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_1	7439921	Lead	0.00E+00	0.00E+00
ROAD_1	7439965	Manganese	0.00E+00	0.00E+00
ROAD_1	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_1	78933	MEK	0.00E+00	0.00E+00
ROAD_1	7439976	Mercury	0.00E+00	0.00E+00
ROAD_1	108101	MIBK	0.00E+00	0.00E+00
ROAD_1	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_1	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_1	7664417	NH3	0.00E+00	0.00E+00
ROAD_1	7440020	Nickel	0.00E+00	0.00E+00
ROAD_1	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_1	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_1	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_1	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_1	1336363	PCBs	0.00E+00	0.00E+00
ROAD_1	98566	PCBTF	0.00E+00	0.00E+00
ROAD_1	107982	PGME	0.00E+00	0.00E+00
ROAD_1	108656	PGMEA	0.00E+00	0.00E+00
ROAD_1	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_1	108952	Phenol	0.00E+00	0.00E+00
ROAD_1	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_1	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_1	115071	Propylene	0.00E+00	0.00E+00
ROAD_1	129000	Pyrene	0.00E+00	0.00E+00
ROAD_1	7782492	Selenium	0.00E+00	0.00E+00
ROAD_1	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_1	100425	Styrene	0.00E+00	9.11E-05
ROAD_1	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_1	108883	Toluene	0.00E+00	0.00E+00
ROAD_1	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_1	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_1	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_1	7440666	Zinc	0.00E+00	0.00E+00
ROAD_1	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_2	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_2	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_2	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_2	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_2	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_2	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_2	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_2	107028	Acrolein	0.00E+00	0.00E+00
ROAD_2	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_2	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_2	120127	Anthracene	0.00E+00	0.00E+00
ROAD_2	7440360	Antimony	0.00E+00	0.00E+00
ROAD_2	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_2	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_2	50328	B[a]P	0.00E+00	0.00E+00
ROAD_2	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_2	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_2	71432	Benzene	0.00E+00	0.00E+00
ROAD_2	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_2	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_2	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_2	7440473	Chromium	0.00E+00	0.00E+00
ROAD_2	218019	Chrysene	0.00E+00	0.00E+00
ROAD_2	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_2	7440508	Copper	0.00E+00	0.00E+00
ROAD_2	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_2	98828	Cumene	0.00E+00	0.00E+00
ROAD_2	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_2	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_2	111773	DEGME	0.00E+00	0.00E+00
ROAD_2	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_2	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_2	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_2	86737	Fluorene	0.00E+00	0.00E+00
ROAD_2	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_2	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_2	7647010	HCl	0.00E+00	0.00E+00
ROAD_2	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_2	110543	Hexane	0.00E+00	1.07E-04
ROAD_2	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_2	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_2	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_2	7439921	Lead	0.00E+00	0.00E+00
ROAD_2	7439965	Manganese	0.00E+00	0.00E+00
ROAD_2	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_2	78933	MEK	0.00E+00	0.00E+00
ROAD_2	7439976	Mercury	0.00E+00	0.00E+00
ROAD_2	108101	MIBK	0.00E+00	0.00E+00
ROAD_2	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_2	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_2	7664417	NH3	0.00E+00	0.00E+00
ROAD_2	7440020	Nickel	0.00E+00	0.00E+00
ROAD_2	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_2	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_2	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_2	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_2	1336363	PCBs	0.00E+00	0.00E+00
ROAD_2	98566	PCBTF	0.00E+00	0.00E+00
ROAD_2	107982	PGME	0.00E+00	0.00E+00
ROAD_2	108656	PGMEA	0.00E+00	0.00E+00
ROAD_2	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_2	108952	Phenol	0.00E+00	0.00E+00
ROAD_2	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_2	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_2	115071	Propylene	0.00E+00	0.00E+00
ROAD_2	129000	Pyrene	0.00E+00	0.00E+00
ROAD_2	7782492	Selenium	0.00E+00	0.00E+00
ROAD_2	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_2	100425	Styrene	0.00E+00	9.11E-05
ROAD_2	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_2	108883	Toluene	0.00E+00	0.00E+00
ROAD_2	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_2	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_2	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_2	7440666	Zinc	0.00E+00	0.00E+00
ROAD_2	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_3	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_3	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_3	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_3	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_3	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_3	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_3	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_3	107028	Acrolein	0.00E+00	0.00E+00
ROAD_3	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_3	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_3	120127	Anthracene	0.00E+00	0.00E+00
ROAD_3	7440360	Antimony	0.00E+00	0.00E+00
ROAD_3	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_3	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_3	50328	B[a]P	0.00E+00	0.00E+00
ROAD_3	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_3	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_3	71432	Benzene	0.00E+00	0.00E+00
ROAD_3	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_3	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_3	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_3	7440473	Chromium	0.00E+00	0.00E+00
ROAD_3	218019	Chrysene	0.00E+00	0.00E+00
ROAD_3	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_3	7440508	Copper	0.00E+00	0.00E+00
ROAD_3	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_3	98828	Cumene	0.00E+00	0.00E+00
ROAD_3	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_3	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_3	111773	DEGME	0.00E+00	0.00E+00
ROAD_3	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_3	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_3	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_3	86737	Fluorene	0.00E+00	0.00E+00
ROAD_3	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_3	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_3	7647010	HCl	0.00E+00	0.00E+00
ROAD_3	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_3	110543	Hexane	0.00E+00	1.07E-04
ROAD_3	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_3	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_3	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_3	7439921	Lead	0.00E+00	0.00E+00
ROAD_3	7439965	Manganese	0.00E+00	0.00E+00
ROAD_3	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_3	78933	MEK	0.00E+00	0.00E+00
ROAD_3	7439976	Mercury	0.00E+00	0.00E+00
ROAD_3	108101	MIBK	0.00E+00	0.00E+00
ROAD_3	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_3	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_3	7664417	NH3	0.00E+00	0.00E+00
ROAD_3	7440020	Nickel	0.00E+00	0.00E+00
ROAD_3	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_3	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_3	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_3	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_3	1336363	PCBs	0.00E+00	0.00E+00
ROAD_3	98566	PCBTF	0.00E+00	0.00E+00
ROAD_3	107982	PGME	0.00E+00	0.00E+00
ROAD_3	108656	PGMEA	0.00E+00	0.00E+00
ROAD_3	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_3	108952	Phenol	0.00E+00	0.00E+00
ROAD_3	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_3	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_3	115071	Propylene	0.00E+00	0.00E+00
ROAD_3	129000	Pyrene	0.00E+00	0.00E+00
ROAD_3	7782492	Selenium	0.00E+00	0.00E+00
ROAD_3	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_3	100425	Styrene	0.00E+00	9.11E-05
ROAD_3	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_3	108883	Toluene	0.00E+00	0.00E+00
ROAD_3	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_3	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_3	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_3	7440666	Zinc	0.00E+00	0.00E+00
ROAD_3	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_4	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_4	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_4	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_4	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_4	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_4	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_4	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_4	107028	Acrolein	0.00E+00	0.00E+00
ROAD_4	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_4	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_4	120127	Anthracene	0.00E+00	0.00E+00
ROAD_4	7440360	Antimony	0.00E+00	0.00E+00
ROAD_4	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_4	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_4	50328	B[a]P	0.00E+00	0.00E+00
ROAD_4	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_4	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_4	71432	Benzene	0.00E+00	0.00E+00
ROAD_4	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_4	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_4	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_4	7440473	Chromium	0.00E+00	0.00E+00
ROAD_4	218019	Chrysene	0.00E+00	0.00E+00
ROAD_4	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_4	7440508	Copper	0.00E+00	0.00E+00
ROAD_4	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_4	98828	Cumene	0.00E+00	0.00E+00
ROAD_4	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_4	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_4	111773	DEGME	0.00E+00	0.00E+00
ROAD_4	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_4	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_4	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_4	86737	Fluorene	0.00E+00	0.00E+00
ROAD_4	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_4	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_4	7647010	HCl	0.00E+00	0.00E+00
ROAD_4	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_4	110543	Hexane	0.00E+00	1.07E-04
ROAD_4	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_4	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_4	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_4	7439921	Lead	0.00E+00	0.00E+00
ROAD_4	7439965	Manganese	0.00E+00	0.00E+00
ROAD_4	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_4	78933	MEK	0.00E+00	0.00E+00
ROAD_4	7439976	Mercury	0.00E+00	0.00E+00
ROAD_4	108101	MIBK	0.00E+00	0.00E+00
ROAD_4	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_4	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_4	7664417	NH3	0.00E+00	0.00E+00
ROAD_4	7440020	Nickel	0.00E+00	0.00E+00
ROAD_4	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_4	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_4	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_4	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_4	1336363	PCBs	0.00E+00	0.00E+00
ROAD_4	98566	PCBTF	0.00E+00	0.00E+00
ROAD_4	107982	PGME	0.00E+00	0.00E+00
ROAD_4	108656	PGMEA	0.00E+00	0.00E+00
ROAD_4	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_4	108952	Phenol	0.00E+00	0.00E+00
ROAD_4	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_4	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_4	115071	Propylene	0.00E+00	0.00E+00
ROAD_4	129000	Pyrene	0.00E+00	0.00E+00
ROAD_4	7782492	Selenium	0.00E+00	0.00E+00
ROAD_4	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_4	100425	Styrene	0.00E+00	9.11E-05
ROAD_4	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_4	108883	Toluene	0.00E+00	0.00E+00
ROAD_4	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_4	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_4	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_4	7440666	Zinc	0.00E+00	0.00E+00
ROAD_4	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_5	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_5	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_5	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_5	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_5	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_5	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_5	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_5	107028	Acrolein	0.00E+00	0.00E+00
ROAD_5	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_5	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_5	120127	Anthracene	0.00E+00	0.00E+00
ROAD_5	7440360	Antimony	0.00E+00	0.00E+00
ROAD_5	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_5	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_5	50328	B[a]P	0.00E+00	0.00E+00
ROAD_5	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_5	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_5	71432	Benzene	0.00E+00	0.00E+00
ROAD_5	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_5	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_5	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_5	7440473	Chromium	0.00E+00	0.00E+00
ROAD_5	218019	Chrysene	0.00E+00	0.00E+00
ROAD_5	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_5	7440508	Copper	0.00E+00	0.00E+00
ROAD_5	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_5	98828	Cumene	0.00E+00	0.00E+00
ROAD_5	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_5	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_5	111773	DEGME	0.00E+00	0.00E+00
ROAD_5	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_5	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_5	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_5	86737	Fluorene	0.00E+00	0.00E+00
ROAD_5	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_5	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_5	7647010	HCl	0.00E+00	0.00E+00
ROAD_5	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_5	110543	Hexane	0.00E+00	1.07E-04
ROAD_5	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_5	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_5	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_5	7439921	Lead	0.00E+00	0.00E+00
ROAD_5	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_5	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_5	78933	MEK	0.00E+00	0.00E+00
ROAD_5	7439976	Mercury	0.00E+00	0.00E+00
ROAD_5	108101	MIBK	0.00E+00	0.00E+00
ROAD_5	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_5	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_5	7664417	NH3	0.00E+00	0.00E+00
ROAD_5	7440020	Nickel	0.00E+00	0.00E+00
ROAD_5	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_5	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_5	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_5	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_5	1336363	PCBs	0.00E+00	0.00E+00
ROAD_5	98566	PCBTF	0.00E+00	0.00E+00
ROAD_5	107982	PGME	0.00E+00	0.00E+00
ROAD_5	108656	PGMEA	0.00E+00	0.00E+00
ROAD_5	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_5	108952	Phenol	0.00E+00	0.00E+00
ROAD_5	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_5	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_5	115071	Propylene	0.00E+00	0.00E+00
ROAD_5	129000	Pyrene	0.00E+00	0.00E+00
ROAD_5	7782492	Selenium	0.00E+00	0.00E+00
ROAD_5	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_5	100425	Styrene	0.00E+00	9.11E-05
ROAD_5	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_5	108883	Toluene	0.00E+00	0.00E+00
ROAD_5	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_5	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_5	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_5	7440666	Zinc	0.00E+00	0.00E+00
ROAD_5	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_6	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_6	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_6	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_6	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_6	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_6	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_6	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_6	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_6	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_6	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_6	120127	Anthracene	0.00E+00	0.00E+00
ROAD_6	7440360	Antimony	0.00E+00	0.00E+00
ROAD_6	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_6	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_6	50328	B[a]P	0.00E+00	0.00E+00
ROAD_6	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_6	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_6	71432	Benzene	0.00E+00	0.00E+00
ROAD_6	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_6	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_6	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_6	7440473	Chromium	0.00E+00	0.00E+00
ROAD_6	218019	Chrysene	0.00E+00	0.00E+00
ROAD_6	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_6	7440508	Copper	0.00E+00	0.00E+00
ROAD_6	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_6	98828	Cumene	0.00E+00	0.00E+00
ROAD_6	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_6	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_6	111773	DEGME	0.00E+00	0.00E+00
ROAD_6	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_6	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_6	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_6	86737	Fluorene	0.00E+00	0.00E+00
ROAD_6	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_6	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_6	7647010	HCl	0.00E+00	0.00E+00
ROAD_6	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_6	110543	Hexane	0.00E+00	1.07E-04
ROAD_6	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_6	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_6	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_6	7439921	Lead	0.00E+00	0.00E+00
ROAD_6	7439965	Manganese	0.00E+00	0.00E+00
ROAD_6	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_6	78933	MEK	0.00E+00	0.00E+00
ROAD_6	7439976	Mercury	0.00E+00	0.00E+00
ROAD_6	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_6	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_6	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_6	7664417	NH3	0.00E+00	0.00E+00
ROAD_6	7440020	Nickel	0.00E+00	0.00E+00
ROAD_6	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_6	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_6	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_6	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_6	1336363	PCBs	0.00E+00	0.00E+00
ROAD_6	98566	PCBTF	0.00E+00	0.00E+00
ROAD_6	107982	PGME	0.00E+00	0.00E+00
ROAD_6	108656	PGMEA	0.00E+00	0.00E+00
ROAD_6	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_6	108952	Phenol	0.00E+00	0.00E+00
ROAD_6	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_6	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_6	115071	Propylene	0.00E+00	0.00E+00
ROAD_6	129000	Pyrene	0.00E+00	0.00E+00
ROAD_6	7782492	Selenium	0.00E+00	0.00E+00
ROAD_6	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_6	100425	Styrene	0.00E+00	9.11E-05
ROAD_6	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_6	108883	Toluene	0.00E+00	0.00E+00
ROAD_6	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_6	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_6	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_6	7440666	Zinc	0.00E+00	0.00E+00
ROAD_6	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_7	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_7	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_7	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_7	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_7	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_7	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_7	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_7	107028	Acrolein	0.00E+00	0.00E+00
ROAD_7	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_7	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_7	120127	Anthracene	0.00E+00	0.00E+00
ROAD_7	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_7	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_7	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_7	50328	B[a]P	0.00E+00	0.00E+00
ROAD_7	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_7	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_7	71432	Benzene	0.00E+00	0.00E+00
ROAD_7	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_7	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_7	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_7	7440473	Chromium	0.00E+00	0.00E+00
ROAD_7	218019	Chrysene	0.00E+00	0.00E+00
ROAD_7	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_7	7440508	Copper	0.00E+00	0.00E+00
ROAD_7	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_7	98828	Cumene	0.00E+00	0.00E+00
ROAD_7	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_7	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_7	111773	DEGME	0.00E+00	0.00E+00
ROAD_7	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_7	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_7	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_7	86737	Fluorene	0.00E+00	0.00E+00
ROAD_7	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_7	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_7	7647010	HCl	0.00E+00	0.00E+00
ROAD_7	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_7	110543	Hexane	0.00E+00	1.07E-04
ROAD_7	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_7	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_7	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_7	7439921	Lead	0.00E+00	0.00E+00
ROAD_7	7439965	Manganese	0.00E+00	0.00E+00
ROAD_7	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_7	78933	MEK	0.00E+00	0.00E+00
ROAD_7	7439976	Mercury	0.00E+00	0.00E+00
ROAD_7	108101	MIBK	0.00E+00	0.00E+00
ROAD_7	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_7	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_7	7664417	NH3	0.00E+00	0.00E+00
ROAD_7	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_7	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_7	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_7	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_7	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_7	1336363	PCBs	0.00E+00	0.00E+00
ROAD_7	98566	PCBTF	0.00E+00	0.00E+00
ROAD_7	107982	PGME	0.00E+00	0.00E+00
ROAD_7	108656	PGMEA	0.00E+00	0.00E+00
ROAD_7	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_7	108952	Phenol	0.00E+00	0.00E+00
ROAD_7	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_7	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_7	115071	Propylene	0.00E+00	0.00E+00
ROAD_7	129000	Pyrene	0.00E+00	0.00E+00
ROAD_7	7782492	Selenium	0.00E+00	0.00E+00
ROAD_7	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_7	100425	Styrene	0.00E+00	9.11E-05
ROAD_7	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_7	108883	Toluene	0.00E+00	0.00E+00
ROAD_7	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_7	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_7	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_7	7440666	Zinc	0.00E+00	0.00E+00
ROAD_7	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_8	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_8	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_8	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_8	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_8	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_8	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_8	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_8	107028	Acrolein	0.00E+00	0.00E+00
ROAD_8	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_8	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_8	120127	Anthracene	0.00E+00	0.00E+00
ROAD_8	7440360	Antimony	0.00E+00	0.00E+00
ROAD_8	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_8	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_8	50328	B[a]P	0.00E+00	0.00E+00
ROAD_8	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_8	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_8	71432	Benzene	0.00E+00	0.00E+00
ROAD_8	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_8	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_8	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_8	7440473	Chromium	0.00E+00	0.00E+00
ROAD_8	218019	Chrysene	0.00E+00	0.00E+00
ROAD_8	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_8	7440508	Copper	0.00E+00	0.00E+00
ROAD_8	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_8	98828	Cumene	0.00E+00	0.00E+00
ROAD_8	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_8	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_8	111773	DEGME	0.00E+00	0.00E+00
ROAD_8	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_8	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_8	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_8	86737	Fluorene	0.00E+00	0.00E+00
ROAD_8	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_8	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_8	7647010	HCl	0.00E+00	0.00E+00
ROAD_8	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_8	110543	Hexane	0.00E+00	1.07E-04
ROAD_8	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_8	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_8	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_8	7439921	Lead	0.00E+00	0.00E+00
ROAD_8	7439965	Manganese	0.00E+00	0.00E+00
ROAD_8	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_8	78933	MEK	0.00E+00	0.00E+00
ROAD_8	7439976	Mercury	0.00E+00	0.00E+00
ROAD_8	108101	MIBK	0.00E+00	0.00E+00
ROAD_8	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_8	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_8	7664417	NH3	0.00E+00	0.00E+00
ROAD_8	7440020	Nickel	0.00E+00	0.00E+00
ROAD_8	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_8	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_8	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_8	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_8	1336363	PCBs	0.00E+00	0.00E+00
ROAD_8	98566	PCBTF	0.00E+00	0.00E+00
ROAD_8	107982	PGME	0.00E+00	0.00E+00
ROAD_8	108656	PGMEA	0.00E+00	0.00E+00
ROAD_8	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_8	108952	Phenol	0.00E+00	0.00E+00
ROAD_8	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_8	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_8	115071	Propylene	0.00E+00	0.00E+00
ROAD_8	129000	Pyrene	0.00E+00	0.00E+00
ROAD_8	7782492	Selenium	0.00E+00	0.00E+00
ROAD_8	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_8	100425	Styrene	0.00E+00	9.11E-05
ROAD_8	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_8	108883	Toluene	0.00E+00	0.00E+00
ROAD_8	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_8	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_8	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_8	7440666	Zinc	0.00E+00	0.00E+00
ROAD_8	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_9	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_9	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_9	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_9	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_9	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_9	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_9	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_9	107028	Acrolein	0.00E+00	0.00E+00
ROAD_9	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_9	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_9	120127	Anthracene	0.00E+00	0.00E+00
ROAD_9	7440360	Antimony	0.00E+00	0.00E+00
ROAD_9	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_9	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_9	50328	B[a]P	0.00E+00	0.00E+00
ROAD_9	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_9	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_9	71432	Benzene	0.00E+00	0.00E+00
ROAD_9	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_9	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_9	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_9	7440473	Chromium	0.00E+00	0.00E+00
ROAD_9	218019	Chrysene	0.00E+00	0.00E+00
ROAD_9	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_9	7440508	Copper	0.00E+00	0.00E+00
ROAD_9	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_9	98828	Cumene	0.00E+00	0.00E+00
ROAD_9	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_9	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_9	111773	DEGME	0.00E+00	0.00E+00
ROAD_9	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_9	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_9	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_9	86737	Fluorene	0.00E+00	0.00E+00
ROAD_9	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_9	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_9	7647010	HCl	0.00E+00	0.00E+00
ROAD_9	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_9	110543	Hexane	0.00E+00	1.07E-04
ROAD_9	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_9	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_9	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_9	7439921	Lead	0.00E+00	0.00E+00
ROAD_9	7439965	Manganese	0.00E+00	0.00E+00
ROAD_9	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_9	78933	MEK	0.00E+00	0.00E+00
ROAD_9	7439976	Mercury	0.00E+00	0.00E+00
ROAD_9	108101	MIBK	0.00E+00	0.00E+00
ROAD_9	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_9	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_9	7664417	NH3	0.00E+00	0.00E+00
ROAD_9	7440020	Nickel	0.00E+00	0.00E+00
ROAD_9	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_9	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_9	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_9	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_9	1336363	PCBs	0.00E+00	0.00E+00
ROAD_9	98566	PCBTF	0.00E+00	0.00E+00
ROAD_9	107982	PGME	0.00E+00	0.00E+00
ROAD_9	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_9	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_9	108952	Phenol	0.00E+00	0.00E+00
ROAD_9	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_9	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_9	115071	Propylene	0.00E+00	0.00E+00
ROAD_9	129000	Pyrene	0.00E+00	0.00E+00
ROAD_9	7782492	Selenium	0.00E+00	0.00E+00
ROAD_9	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_9	100425	Styrene	0.00E+00	9.11E-05
ROAD_9	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_9	108883	Toluene	0.00E+00	0.00E+00
ROAD_9	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_9	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_9	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_9	7440666	Zinc	0.00E+00	0.00E+00
ROAD_9	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_10	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_10	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_10	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_10	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_10	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_10	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_10	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_10	107028	Acrolein	0.00E+00	0.00E+00
ROAD_10	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_10	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_10	120127	Anthracene	0.00E+00	0.00E+00
ROAD_10	7440360	Antimony	0.00E+00	0.00E+00
ROAD_10	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_10	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_10	50328	B[a]P	0.00E+00	0.00E+00
ROAD_10	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_10	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_10	71432	Benzene	0.00E+00	0.00E+00
ROAD_10	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_10	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_10	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_10	7440473	Chromium	0.00E+00	0.00E+00
ROAD_10	218019	Chrysene	0.00E+00	0.00E+00
ROAD_10	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_10	7440508	Copper	0.00E+00	0.00E+00
ROAD_10	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_10	98828	Cumene	0.00E+00	0.00E+00
ROAD_10	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_10	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_10	111773	DEGME	0.00E+00	0.00E+00
ROAD_10	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_10	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_10	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_10	86737	Fluorene	0.00E+00	0.00E+00
ROAD_10	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_10	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_10	7647010	HCl	0.00E+00	0.00E+00
ROAD_10	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_10	110543	Hexane	0.00E+00	1.07E-04
ROAD_10	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_10	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_10	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_10	7439921	Lead	0.00E+00	0.00E+00
ROAD_10	7439965	Manganese	0.00E+00	0.00E+00
ROAD_10	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_10	78933	MEK	0.00E+00	0.00E+00
ROAD_10	7439976	Mercury	0.00E+00	0.00E+00
ROAD_10	108101	MIBK	0.00E+00	0.00E+00
ROAD_10	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_10	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_10	7664417	NH3	0.00E+00	0.00E+00
ROAD_10	7440020	Nickel	0.00E+00	0.00E+00
ROAD_10	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_10	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_10	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_10	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_10	1336363	PCBs	0.00E+00	0.00E+00
ROAD_10	98566	PCBTF	0.00E+00	0.00E+00
ROAD_10	107982	PGME	0.00E+00	0.00E+00
ROAD_10	108656	PGMEA	0.00E+00	0.00E+00
ROAD_10	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_10	108952	Phenol	0.00E+00	0.00E+00
ROAD_10	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_10	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_10	115071	Propylene	0.00E+00	0.00E+00
ROAD_10	129000	Pyrene	0.00E+00	0.00E+00
ROAD_10	7782492	Selenium	0.00E+00	0.00E+00
ROAD_10	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_10	100425	Styrene	0.00E+00	9.11E-05
ROAD_10	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_10	108883	Toluene	0.00E+00	0.00E+00
ROAD_10	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_10	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_10	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_10	7440666	Zinc	0.00E+00	0.00E+00
ROAD_10	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_11	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_11	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_11	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_11	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_11	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_11	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_11	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_11	107028	Acrolein	0.00E+00	0.00E+00
ROAD_11	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_11	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_11	120127	Anthracene	0.00E+00	0.00E+00
ROAD_11	7440360	Antimony	0.00E+00	0.00E+00
ROAD_11	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_11	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_11	50328	B[a]P	0.00E+00	0.00E+00
ROAD_11	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_11	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_11	71432	Benzene	0.00E+00	0.00E+00
ROAD_11	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_11	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_11	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_11	7440473	Chromium	0.00E+00	0.00E+00
ROAD_11	218019	Chrysene	0.00E+00	0.00E+00
ROAD_11	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_11	7440508	Copper	0.00E+00	0.00E+00
ROAD_11	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_11	98828	Cumene	0.00E+00	0.00E+00
ROAD_11	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_11	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_11	111773	DEGME	0.00E+00	0.00E+00
ROAD_11	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_11	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_11	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_11	86737	Fluorene	0.00E+00	0.00E+00
ROAD_11	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_11	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_11	7647010	HCl	0.00E+00	0.00E+00
ROAD_11	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_11	110543	Hexane	0.00E+00	1.07E-04
ROAD_11	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_11	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_11	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_11	7439921	Lead	0.00E+00	0.00E+00
ROAD_11	7439965	Manganese	0.00E+00	0.00E+00
ROAD_11	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_11	78933	MEK	0.00E+00	0.00E+00
ROAD_11	7439976	Mercury	0.00E+00	0.00E+00
ROAD_11	108101	MIBK	0.00E+00	0.00E+00
ROAD_11	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_11	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_11	7664417	NH3	0.00E+00	0.00E+00
ROAD_11	7440020	Nickel	0.00E+00	0.00E+00
ROAD_11	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_11	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_11	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_11	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_11	1336363	PCBs	0.00E+00	0.00E+00
ROAD_11	98566	PCBTF	0.00E+00	0.00E+00
ROAD_11	107982	PGME	0.00E+00	0.00E+00
ROAD_11	108656	PGMEA	0.00E+00	0.00E+00
ROAD_11	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_11	108952	Phenol	0.00E+00	0.00E+00
ROAD_11	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_11	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_11	115071	Propylene	0.00E+00	0.00E+00
ROAD_11	129000	Pyrene	0.00E+00	0.00E+00
ROAD_11	7782492	Selenium	0.00E+00	0.00E+00
ROAD_11	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_11	100425	Styrene	0.00E+00	9.11E-05
ROAD_11	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_11	108883	Toluene	0.00E+00	0.00E+00
ROAD_11	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_11	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_11	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_11	7440666	Zinc	0.00E+00	0.00E+00
ROAD_11	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_12	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_12	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_12	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_12	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_12	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_12	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_12	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_12	107028	Acrolein	0.00E+00	0.00E+00
ROAD_12	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_12	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_12	120127	Anthracene	0.00E+00	0.00E+00
ROAD_12	7440360	Antimony	0.00E+00	0.00E+00
ROAD_12	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_12	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_12	50328	B[a]P	0.00E+00	0.00E+00
ROAD_12	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_12	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_12	71432	Benzene	0.00E+00	0.00E+00
ROAD_12	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_12	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_12	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_12	7440473	Chromium	0.00E+00	0.00E+00
ROAD_12	218019	Chrysene	0.00E+00	0.00E+00
ROAD_12	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_12	7440508	Copper	0.00E+00	0.00E+00
ROAD_12	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_12	98828	Cumene	0.00E+00	0.00E+00
ROAD_12	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_12	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_12	111773	DEGME	0.00E+00	0.00E+00
ROAD_12	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_12	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_12	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_12	86737	Fluorene	0.00E+00	0.00E+00
ROAD_12	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_12	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_12	7647010	HCl	0.00E+00	0.00E+00
ROAD_12	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_12	110543	Hexane	0.00E+00	1.07E-04
ROAD_12	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_12	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_12	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_12	7439921	Lead	0.00E+00	0.00E+00
ROAD_12	7439965	Manganese	0.00E+00	0.00E+00
ROAD_12	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_12	78933	MEK	0.00E+00	0.00E+00
ROAD_12	7439976	Mercury	0.00E+00	0.00E+00
ROAD_12	108101	MIBK	0.00E+00	0.00E+00
ROAD_12	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_12	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_12	7664417	NH3	0.00E+00	0.00E+00
ROAD_12	7440020	Nickel	0.00E+00	0.00E+00
ROAD_12	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_12	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_12	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_12	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_12	1336363	PCBs	0.00E+00	0.00E+00
ROAD_12	98566	PCBTF	0.00E+00	0.00E+00
ROAD_12	107982	PGME	0.00E+00	0.00E+00
ROAD_12	108656	PGMEA	0.00E+00	0.00E+00
ROAD_12	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_12	108952	Phenol	0.00E+00	0.00E+00
ROAD_12	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_12	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_12	115071	Propylene	0.00E+00	0.00E+00
ROAD_12	129000	Pyrene	0.00E+00	0.00E+00
ROAD_12	7782492	Selenium	0.00E+00	0.00E+00
ROAD_12	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_12	100425	Styrene	0.00E+00	9.11E-05
ROAD_12	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_12	108883	Toluene	0.00E+00	0.00E+00
ROAD_12	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_12	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_12	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_12	7440666	Zinc	0.00E+00	0.00E+00
ROAD_12	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_13	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_13	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_13	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_13	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_13	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_13	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_13	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_13	107028	Acrolein	0.00E+00	0.00E+00
ROAD_13	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_13	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_13	120127	Anthracene	0.00E+00	0.00E+00
ROAD_13	7440360	Antimony	0.00E+00	0.00E+00
ROAD_13	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_13	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_13	50328	B[a]P	0.00E+00	0.00E+00
ROAD_13	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_13	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_13	71432	Benzene	0.00E+00	0.00E+00
ROAD_13	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_13	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_13	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_13	7440473	Chromium	0.00E+00	0.00E+00
ROAD_13	218019	Chrysene	0.00E+00	0.00E+00
ROAD_13	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_13	7440508	Copper	0.00E+00	0.00E+00
ROAD_13	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_13	98828	Cumene	0.00E+00	0.00E+00
ROAD_13	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_13	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_13	111773	DEGME	0.00E+00	0.00E+00
ROAD_13	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_13	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_13	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_13	86737	Fluorene	0.00E+00	0.00E+00
ROAD_13	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_13	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_13	7647010	HCl	0.00E+00	0.00E+00
ROAD_13	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_13	110543	Hexane	0.00E+00	1.07E-04
ROAD_13	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_13	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_13	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_13	7439921	Lead	0.00E+00	0.00E+00
ROAD_13	7439965	Manganese	0.00E+00	0.00E+00
ROAD_13	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_13	78933	MEK	0.00E+00	0.00E+00
ROAD_13	7439976	Mercury	0.00E+00	0.00E+00
ROAD_13	108101	MIBK	0.00E+00	0.00E+00
ROAD_13	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_13	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_13	7664417	NH3	0.00E+00	0.00E+00
ROAD_13	7440020	Nickel	0.00E+00	0.00E+00
ROAD_13	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_13	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_13	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_13	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_13	1336363	PCBs	0.00E+00	0.00E+00
ROAD_13	98566	PCBTF	0.00E+00	0.00E+00
ROAD_13	107982	PGME	0.00E+00	0.00E+00
ROAD_13	108656	PGMEA	0.00E+00	0.00E+00
ROAD_13	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_13	108952	Phenol	0.00E+00	0.00E+00
ROAD_13	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_13	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_13	115071	Propylene	0.00E+00	0.00E+00
ROAD_13	129000	Pyrene	0.00E+00	0.00E+00
ROAD_13	7782492	Selenium	0.00E+00	0.00E+00
ROAD_13	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_13	100425	Styrene	0.00E+00	9.11E-05
ROAD_13	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_13	108883	Toluene	0.00E+00	0.00E+00
ROAD_13	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_13	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_13	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_13	7440666	Zinc	0.00E+00	0.00E+00
ROAD_13	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_14	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_14	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_14	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_14	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_14	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_14	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_14	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_14	107028	Acrolein	0.00E+00	0.00E+00
ROAD_14	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_14	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_14	120127	Anthracene	0.00E+00	0.00E+00
ROAD_14	7440360	Antimony	0.00E+00	0.00E+00
ROAD_14	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_14	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_14	50328	B[a]P	0.00E+00	0.00E+00
ROAD_14	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_14	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_14	71432	Benzene	0.00E+00	0.00E+00
ROAD_14	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_14	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_14	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_14	7440473	Chromium	0.00E+00	0.00E+00
ROAD_14	218019	Chrysene	0.00E+00	0.00E+00
ROAD_14	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_14	7440508	Copper	0.00E+00	0.00E+00
ROAD_14	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_14	98828	Cumene	0.00E+00	0.00E+00
ROAD_14	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_14	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_14	111773	DEGME	0.00E+00	0.00E+00
ROAD_14	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_14	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_14	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_14	86737	Fluorene	0.00E+00	0.00E+00
ROAD_14	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_14	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_14	7647010	HCl	0.00E+00	0.00E+00
ROAD_14	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_14	110543	Hexane	0.00E+00	1.07E-04
ROAD_14	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_14	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_14	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_14	7439921	Lead	0.00E+00	0.00E+00
ROAD_14	7439965	Manganese	0.00E+00	0.00E+00
ROAD_14	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_14	78933	MEK	0.00E+00	0.00E+00
ROAD_14	7439976	Mercury	0.00E+00	0.00E+00
ROAD_14	108101	MIBK	0.00E+00	0.00E+00
ROAD_14	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_14	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_14	7664417	NH3	0.00E+00	0.00E+00
ROAD_14	7440020	Nickel	0.00E+00	0.00E+00
ROAD_14	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_14	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_14	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_14	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_14	1336363	PCBs	0.00E+00	0.00E+00
ROAD_14	98566	PCBTF	0.00E+00	0.00E+00
ROAD_14	107982	PGME	0.00E+00	0.00E+00
ROAD_14	108656	PGMEA	0.00E+00	0.00E+00
ROAD_14	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_14	108952	Phenol	0.00E+00	0.00E+00
ROAD_14	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_14	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_14	115071	Propylene	0.00E+00	0.00E+00
ROAD_14	129000	Pyrene	0.00E+00	0.00E+00
ROAD_14	7782492	Selenium	0.00E+00	0.00E+00
ROAD_14	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_14	100425	Styrene	0.00E+00	9.11E-05
ROAD_14	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_14	108883	Toluene	0.00E+00	0.00E+00
ROAD_14	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_14	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_14	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_14	7440666	Zinc	0.00E+00	0.00E+00
ROAD_14	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_15	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_15	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_15	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_15	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_15	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_15	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_15	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_15	107028	Acrolein	0.00E+00	0.00E+00
ROAD_15	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_15	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_15	120127	Anthracene	0.00E+00	0.00E+00
ROAD_15	7440360	Antimony	0.00E+00	0.00E+00
ROAD_15	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_15	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_15	50328	B[a]P	0.00E+00	0.00E+00
ROAD_15	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_15	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_15	71432	Benzene	0.00E+00	0.00E+00
ROAD_15	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_15	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_15	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_15	7440473	Chromium	0.00E+00	0.00E+00
ROAD_15	218019	Chrysene	0.00E+00	0.00E+00
ROAD_15	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_15	7440508	Copper	0.00E+00	0.00E+00
ROAD_15	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_15	98828	Cumene	0.00E+00	0.00E+00
ROAD_15	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_15	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_15	111773	DEGME	0.00E+00	0.00E+00
ROAD_15	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_15	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_15	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_15	86737	Fluorene	0.00E+00	0.00E+00
ROAD_15	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_15	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_15	7647010	HCl	0.00E+00	0.00E+00
ROAD_15	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_15	110543	Hexane	0.00E+00	1.07E-04
ROAD_15	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_15	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_15	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_15	7439921	Lead	0.00E+00	0.00E+00
ROAD_15	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_15	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_15	78933	MEK	0.00E+00	0.00E+00
ROAD_15	7439976	Mercury	0.00E+00	0.00E+00
ROAD_15	108101	MIBK	0.00E+00	0.00E+00
ROAD_15	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_15	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_15	7664417	NH3	0.00E+00	0.00E+00
ROAD_15	7440020	Nickel	0.00E+00	0.00E+00
ROAD_15	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_15	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_15	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_15	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_15	1336363	PCBs	0.00E+00	0.00E+00
ROAD_15	98566	PCBTF	0.00E+00	0.00E+00
ROAD_15	107982	PGME	0.00E+00	0.00E+00
ROAD_15	108656	PGMEA	0.00E+00	0.00E+00
ROAD_15	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_15	108952	Phenol	0.00E+00	0.00E+00
ROAD_15	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_15	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_15	115071	Propylene	0.00E+00	0.00E+00
ROAD_15	129000	Pyrene	0.00E+00	0.00E+00
ROAD_15	7782492	Selenium	0.00E+00	0.00E+00
ROAD_15	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_15	100425	Styrene	0.00E+00	9.11E-05
ROAD_15	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_15	108883	Toluene	0.00E+00	0.00E+00
ROAD_15	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_15	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_15	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_15	7440666	Zinc	0.00E+00	0.00E+00
ROAD_15	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_16	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_16	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_16	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_16	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_16	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_16	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_16	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_16	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_16	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_16	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_16	120127	Anthracene	0.00E+00	0.00E+00
ROAD_16	7440360	Antimony	0.00E+00	0.00E+00
ROAD_16	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_16	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_16	50328	B[a]P	0.00E+00	0.00E+00
ROAD_16	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_16	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_16	71432	Benzene	0.00E+00	0.00E+00
ROAD_16	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_16	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_16	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_16	7440473	Chromium	0.00E+00	0.00E+00
ROAD_16	218019	Chrysene	0.00E+00	0.00E+00
ROAD_16	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_16	7440508	Copper	0.00E+00	0.00E+00
ROAD_16	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_16	98828	Cumene	0.00E+00	0.00E+00
ROAD_16	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_16	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_16	111773	DEGME	0.00E+00	0.00E+00
ROAD_16	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_16	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_16	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_16	86737	Fluorene	0.00E+00	0.00E+00
ROAD_16	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_16	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_16	7647010	HCl	0.00E+00	0.00E+00
ROAD_16	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_16	110543	Hexane	0.00E+00	1.07E-04
ROAD_16	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_16	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_16	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_16	7439921	Lead	0.00E+00	0.00E+00
ROAD_16	7439965	Manganese	0.00E+00	0.00E+00
ROAD_16	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_16	78933	MEK	0.00E+00	0.00E+00
ROAD_16	7439976	Mercury	0.00E+00	0.00E+00
ROAD_16	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_16	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_16	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_16	7664417	NH3	0.00E+00	0.00E+00
ROAD_16	7440020	Nickel	0.00E+00	0.00E+00
ROAD_16	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_16	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_16	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_16	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_16	1336363	PCBs	0.00E+00	0.00E+00
ROAD_16	98566	PCBTF	0.00E+00	0.00E+00
ROAD_16	107982	PGME	0.00E+00	0.00E+00
ROAD_16	108656	PGMEA	0.00E+00	0.00E+00
ROAD_16	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_16	108952	Phenol	0.00E+00	0.00E+00
ROAD_16	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_16	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_16	115071	Propylene	0.00E+00	0.00E+00
ROAD_16	129000	Pyrene	0.00E+00	0.00E+00
ROAD_16	7782492	Selenium	0.00E+00	0.00E+00
ROAD_16	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_16	100425	Styrene	0.00E+00	9.11E-05
ROAD_16	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_16	108883	Toluene	0.00E+00	0.00E+00
ROAD_16	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_16	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_16	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_16	7440666	Zinc	0.00E+00	0.00E+00
ROAD_16	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_17	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_17	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_17	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_17	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_17	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_17	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_17	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_17	107028	Acrolein	0.00E+00	0.00E+00
ROAD_17	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_17	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_17	120127	Anthracene	0.00E+00	0.00E+00
ROAD_17	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_17	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_17	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_17	50328	B[a]P	0.00E+00	0.00E+00
ROAD_17	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_17	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_17	71432	Benzene	0.00E+00	0.00E+00
ROAD_17	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_17	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_17	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_17	7440473	Chromium	0.00E+00	0.00E+00
ROAD_17	218019	Chrysene	0.00E+00	0.00E+00
ROAD_17	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_17	7440508	Copper	0.00E+00	0.00E+00
ROAD_17	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_17	98828	Cumene	0.00E+00	0.00E+00
ROAD_17	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_17	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_17	111773	DEGME	0.00E+00	0.00E+00
ROAD_17	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_17	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_17	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_17	86737	Fluorene	0.00E+00	0.00E+00
ROAD_17	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_17	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_17	7647010	HCl	0.00E+00	0.00E+00
ROAD_17	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_17	110543	Hexane	0.00E+00	1.07E-04
ROAD_17	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_17	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_17	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_17	7439921	Lead	0.00E+00	0.00E+00
ROAD_17	7439965	Manganese	0.00E+00	0.00E+00
ROAD_17	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_17	78933	MEK	0.00E+00	0.00E+00
ROAD_17	7439976	Mercury	0.00E+00	0.00E+00
ROAD_17	108101	MIBK	0.00E+00	0.00E+00
ROAD_17	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_17	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_17	7664417	NH3	0.00E+00	0.00E+00
ROAD_17	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_17	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_17	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_17	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_17	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_17	1336363	PCBs	0.00E+00	0.00E+00
ROAD_17	98566	PCBTF	0.00E+00	0.00E+00
ROAD_17	107982	PGME	0.00E+00	0.00E+00
ROAD_17	108656	PGMEA	0.00E+00	0.00E+00
ROAD_17	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_17	108952	Phenol	0.00E+00	0.00E+00
ROAD_17	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_17	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_17	115071	Propylene	0.00E+00	0.00E+00
ROAD_17	129000	Pyrene	0.00E+00	0.00E+00
ROAD_17	7782492	Selenium	0.00E+00	0.00E+00
ROAD_17	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_17	100425	Styrene	0.00E+00	9.11E-05
ROAD_17	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_17	108883	Toluene	0.00E+00	0.00E+00
ROAD_17	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_17	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_17	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_17	7440666	Zinc	0.00E+00	0.00E+00
ROAD_17	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_18	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_18	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_18	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_18	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_18	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_18	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_18	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_18	107028	Acrolein	0.00E+00	0.00E+00
ROAD_18	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_18	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_18	120127	Anthracene	0.00E+00	0.00E+00
ROAD_18	7440360	Antimony	0.00E+00	0.00E+00
ROAD_18	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_18	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_18	50328	B[a]P	0.00E+00	0.00E+00
ROAD_18	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_18	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_18	71432	Benzene	0.00E+00	0.00E+00
ROAD_18	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_18	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_18	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_18	7440473	Chromium	0.00E+00	0.00E+00
ROAD_18	218019	Chrysene	0.00E+00	0.00E+00
ROAD_18	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_18	7440508	Copper	0.00E+00	0.00E+00
ROAD_18	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_18	98828	Cumene	0.00E+00	0.00E+00
ROAD_18	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_18	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_18	111773	DEGME	0.00E+00	0.00E+00
ROAD_18	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_18	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_18	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_18	86737	Fluorene	0.00E+00	0.00E+00
ROAD_18	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_18	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_18	7647010	HCl	0.00E+00	0.00E+00
ROAD_18	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_18	110543	Hexane	0.00E+00	1.07E-04
ROAD_18	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_18	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_18	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_18	7439921	Lead	0.00E+00	0.00E+00
ROAD_18	7439965	Manganese	0.00E+00	0.00E+00
ROAD_18	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_18	78933	MEK	0.00E+00	0.00E+00
ROAD_18	7439976	Mercury	0.00E+00	0.00E+00
ROAD_18	108101	MIBK	0.00E+00	0.00E+00
ROAD_18	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_18	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_18	7664417	NH3	0.00E+00	0.00E+00
ROAD_18	7440020	Nickel	0.00E+00	0.00E+00
ROAD_18	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_18	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_18	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_18	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_18	1336363	PCBs	0.00E+00	0.00E+00
ROAD_18	98566	PCBTF	0.00E+00	0.00E+00
ROAD_18	107982	PGME	0.00E+00	0.00E+00
ROAD_18	108656	PGMEA	0.00E+00	0.00E+00
ROAD_18	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_18	108952	Phenol	0.00E+00	0.00E+00
ROAD_18	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_18	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_18	115071	Propylene	0.00E+00	0.00E+00
ROAD_18	129000	Pyrene	0.00E+00	0.00E+00
ROAD_18	7782492	Selenium	0.00E+00	0.00E+00
ROAD_18	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_18	100425	Styrene	0.00E+00	9.11E-05
ROAD_18	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_18	108883	Toluene	0.00E+00	0.00E+00
ROAD_18	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_18	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_18	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_18	7440666	Zinc	0.00E+00	0.00E+00
ROAD_18	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_19	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_19	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_19	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_19	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_19	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_19	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_19	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_19	107028	Acrolein	0.00E+00	0.00E+00
ROAD_19	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_19	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_19	120127	Anthracene	0.00E+00	0.00E+00
ROAD_19	7440360	Antimony	0.00E+00	0.00E+00
ROAD_19	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_19	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_19	50328	B[a]P	0.00E+00	0.00E+00
ROAD_19	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_19	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_19	71432	Benzene	0.00E+00	0.00E+00
ROAD_19	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_19	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_19	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_19	7440473	Chromium	0.00E+00	0.00E+00
ROAD_19	218019	Chrysene	0.00E+00	0.00E+00
ROAD_19	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_19	7440508	Copper	0.00E+00	0.00E+00
ROAD_19	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_19	98828	Cumene	0.00E+00	0.00E+00
ROAD_19	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_19	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_19	111773	DEGME	0.00E+00	0.00E+00
ROAD_19	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_19	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_19	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_19	86737	Fluorene	0.00E+00	0.00E+00
ROAD_19	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_19	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_19	7647010	HCl	0.00E+00	0.00E+00
ROAD_19	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_19	110543	Hexane	0.00E+00	1.07E-04
ROAD_19	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_19	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_19	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_19	7439921	Lead	0.00E+00	0.00E+00
ROAD_19	7439965	Manganese	0.00E+00	0.00E+00
ROAD_19	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_19	78933	MEK	0.00E+00	0.00E+00
ROAD_19	7439976	Mercury	0.00E+00	0.00E+00
ROAD_19	108101	MIBK	0.00E+00	0.00E+00
ROAD_19	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_19	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_19	7664417	NH3	0.00E+00	0.00E+00
ROAD_19	7440020	Nickel	0.00E+00	0.00E+00
ROAD_19	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_19	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_19	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_19	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_19	1336363	PCBs	0.00E+00	0.00E+00
ROAD_19	98566	PCBTF	0.00E+00	0.00E+00
ROAD_19	107982	PGME	0.00E+00	0.00E+00
ROAD_19	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_19	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_19	108952	Phenol	0.00E+00	0.00E+00
ROAD_19	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_19	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_19	115071	Propylene	0.00E+00	0.00E+00
ROAD_19	129000	Pyrene	0.00E+00	0.00E+00
ROAD_19	7782492	Selenium	0.00E+00	0.00E+00
ROAD_19	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_19	100425	Styrene	0.00E+00	9.11E-05
ROAD_19	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_19	108883	Toluene	0.00E+00	0.00E+00
ROAD_19	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_19	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_19	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_19	7440666	Zinc	0.00E+00	0.00E+00
ROAD_19	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_20	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_20	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_20	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_20	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_20	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_20	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_20	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_20	107028	Acrolein	0.00E+00	0.00E+00
ROAD_20	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_20	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_20	120127	Anthracene	0.00E+00	0.00E+00
ROAD_20	7440360	Antimony	0.00E+00	0.00E+00
ROAD_20	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_20	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_20	50328	B[a]P	0.00E+00	0.00E+00
ROAD_20	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_20	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_20	71432	Benzene	0.00E+00	0.00E+00
ROAD_20	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_20	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_20	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_20	7440473	Chromium	0.00E+00	0.00E+00
ROAD_20	218019	Chrysene	0.00E+00	0.00E+00
ROAD_20	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_20	7440508	Copper	0.00E+00	0.00E+00
ROAD_20	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_20	98828	Cumene	0.00E+00	0.00E+00
ROAD_20	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_20	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_20	111773	DEGME	0.00E+00	0.00E+00
ROAD_20	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_20	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_20	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_20	86737	Fluorene	0.00E+00	0.00E+00
ROAD_20	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_20	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_20	7647010	HCl	0.00E+00	0.00E+00
ROAD_20	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_20	110543	Hexane	0.00E+00	1.07E-04
ROAD_20	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_20	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_20	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_20	7439921	Lead	0.00E+00	0.00E+00
ROAD_20	7439965	Manganese	0.00E+00	0.00E+00
ROAD_20	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_20	78933	MEK	0.00E+00	0.00E+00
ROAD_20	7439976	Mercury	0.00E+00	0.00E+00
ROAD_20	108101	MIBK	0.00E+00	0.00E+00
ROAD_20	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_20	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_20	7664417	NH3	0.00E+00	0.00E+00
ROAD_20	7440020	Nickel	0.00E+00	0.00E+00
ROAD_20	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_20	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_20	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_20	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_20	1336363	PCBs	0.00E+00	0.00E+00
ROAD_20	98566	PCBTF	0.00E+00	0.00E+00
ROAD_20	107982	PGME	0.00E+00	0.00E+00
ROAD_20	108656	PGMEA	0.00E+00	0.00E+00
ROAD_20	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_20	108952	Phenol	0.00E+00	0.00E+00
ROAD_20	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_20	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_20	115071	Propylene	0.00E+00	0.00E+00
ROAD_20	129000	Pyrene	0.00E+00	0.00E+00
ROAD_20	7782492	Selenium	0.00E+00	0.00E+00
ROAD_20	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_20	100425	Styrene	0.00E+00	9.11E-05
ROAD_20	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_20	108883	Toluene	0.00E+00	0.00E+00
ROAD_20	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_20	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_20	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_20	7440666	Zinc	0.00E+00	0.00E+00
ROAD_20	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_21	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_21	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_21	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_21	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_21	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_21	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_21	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_21	107028	Acrolein	0.00E+00	0.00E+00
ROAD_21	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_21	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_21	120127	Anthracene	0.00E+00	0.00E+00
ROAD_21	7440360	Antimony	0.00E+00	0.00E+00
ROAD_21	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_21	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_21	50328	B[a]P	0.00E+00	0.00E+00
ROAD_21	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_21	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_21	71432	Benzene	0.00E+00	0.00E+00
ROAD_21	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_21	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_21	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_21	7440473	Chromium	0.00E+00	0.00E+00
ROAD_21	218019	Chrysene	0.00E+00	0.00E+00
ROAD_21	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_21	7440508	Copper	0.00E+00	0.00E+00
ROAD_21	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_21	98828	Cumene	0.00E+00	0.00E+00
ROAD_21	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_21	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_21	111773	DEGME	0.00E+00	0.00E+00
ROAD_21	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_21	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_21	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_21	86737	Fluorene	0.00E+00	0.00E+00
ROAD_21	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_21	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_21	7647010	HCl	0.00E+00	0.00E+00
ROAD_21	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_21	110543	Hexane	0.00E+00	1.07E-04
ROAD_21	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_21	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_21	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_21	7439921	Lead	0.00E+00	0.00E+00
ROAD_21	7439965	Manganese	0.00E+00	0.00E+00
ROAD_21	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_21	78933	MEK	0.00E+00	0.00E+00
ROAD_21	7439976	Mercury	0.00E+00	0.00E+00
ROAD_21	108101	MIBK	0.00E+00	0.00E+00
ROAD_21	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_21	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_21	7664417	NH3	0.00E+00	0.00E+00
ROAD_21	7440020	Nickel	0.00E+00	0.00E+00
ROAD_21	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_21	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_21	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_21	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_21	1336363	PCBs	0.00E+00	0.00E+00
ROAD_21	98566	PCBTF	0.00E+00	0.00E+00
ROAD_21	107982	PGME	0.00E+00	0.00E+00
ROAD_21	108656	PGMEA	0.00E+00	0.00E+00
ROAD_21	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_21	108952	Phenol	0.00E+00	0.00E+00
ROAD_21	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_21	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_21	115071	Propylene	0.00E+00	0.00E+00
ROAD_21	129000	Pyrene	0.00E+00	0.00E+00
ROAD_21	7782492	Selenium	0.00E+00	0.00E+00
ROAD_21	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_21	100425	Styrene	0.00E+00	9.11E-05
ROAD_21	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_21	108883	Toluene	0.00E+00	0.00E+00
ROAD_21	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_21	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_21	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_21	7440666	Zinc	0.00E+00	0.00E+00
ROAD_21	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_22	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_22	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_22	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_22	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_22	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_22	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_22	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_22	107028	Acrolein	0.00E+00	0.00E+00
ROAD_22	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_22	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_22	120127	Anthracene	0.00E+00	0.00E+00
ROAD_22	7440360	Antimony	0.00E+00	0.00E+00
ROAD_22	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_22	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_22	50328	B[a]P	0.00E+00	0.00E+00
ROAD_22	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_22	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_22	71432	Benzene	0.00E+00	0.00E+00
ROAD_22	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_22	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_22	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_22	7440473	Chromium	0.00E+00	0.00E+00
ROAD_22	218019	Chrysene	0.00E+00	0.00E+00
ROAD_22	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_22	7440508	Copper	0.00E+00	0.00E+00
ROAD_22	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_22	98828	Cumene	0.00E+00	0.00E+00
ROAD_22	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_22	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_22	111773	DEGME	0.00E+00	0.00E+00
ROAD_22	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_22	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_22	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_22	86737	Fluorene	0.00E+00	0.00E+00
ROAD_22	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_22	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_22	7647010	HCl	0.00E+00	0.00E+00
ROAD_22	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_22	110543	Hexane	0.00E+00	1.07E-04
ROAD_22	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_22	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_22	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_22	7439921	Lead	0.00E+00	0.00E+00
ROAD_22	7439965	Manganese	0.00E+00	0.00E+00
ROAD_22	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_22	78933	MEK	0.00E+00	0.00E+00
ROAD_22	7439976	Mercury	0.00E+00	0.00E+00
ROAD_22	108101	MIBK	0.00E+00	0.00E+00
ROAD_22	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_22	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_22	7664417	NH3	0.00E+00	0.00E+00
ROAD_22	7440020	Nickel	0.00E+00	0.00E+00
ROAD_22	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_22	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_22	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_22	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_22	1336363	PCBs	0.00E+00	0.00E+00
ROAD_22	98566	PCBTF	0.00E+00	0.00E+00
ROAD_22	107982	PGME	0.00E+00	0.00E+00
ROAD_22	108656	PGMEA	0.00E+00	0.00E+00
ROAD_22	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_22	108952	Phenol	0.00E+00	0.00E+00
ROAD_22	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_22	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_22	115071	Propylene	0.00E+00	0.00E+00
ROAD_22	129000	Pyrene	0.00E+00	0.00E+00
ROAD_22	7782492	Selenium	0.00E+00	0.00E+00
ROAD_22	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_22	100425	Styrene	0.00E+00	9.11E-05
ROAD_22	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_22	108883	Toluene	0.00E+00	0.00E+00
ROAD_22	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_22	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_22	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_22	7440666	Zinc	0.00E+00	0.00E+00
ROAD_22	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_23	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_23	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_23	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_23	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_23	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_23	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_23	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_23	107028	Acrolein	0.00E+00	0.00E+00
ROAD_23	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_23	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_23	120127	Anthracene	0.00E+00	0.00E+00
ROAD_23	7440360	Antimony	0.00E+00	0.00E+00
ROAD_23	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_23	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_23	50328	B[a]P	0.00E+00	0.00E+00
ROAD_23	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_23	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_23	71432	Benzene	0.00E+00	0.00E+00
ROAD_23	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_23	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_23	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_23	7440473	Chromium	0.00E+00	0.00E+00
ROAD_23	218019	Chrysene	0.00E+00	0.00E+00
ROAD_23	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_23	7440508	Copper	0.00E+00	0.00E+00
ROAD_23	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_23	98828	Cumene	0.00E+00	0.00E+00
ROAD_23	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_23	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_23	111773	DEGME	0.00E+00	0.00E+00
ROAD_23	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_23	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_23	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_23	86737	Fluorene	0.00E+00	0.00E+00
ROAD_23	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_23	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_23	7647010	HCl	0.00E+00	0.00E+00
ROAD_23	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_23	110543	Hexane	0.00E+00	1.07E-04
ROAD_23	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_23	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_23	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_23	7439921	Lead	0.00E+00	0.00E+00
ROAD_23	7439965	Manganese	0.00E+00	0.00E+00
ROAD_23	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_23	78933	MEK	0.00E+00	0.00E+00
ROAD_23	7439976	Mercury	0.00E+00	0.00E+00
ROAD_23	108101	MIBK	0.00E+00	0.00E+00
ROAD_23	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_23	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_23	7664417	NH3	0.00E+00	0.00E+00
ROAD_23	7440020	Nickel	0.00E+00	0.00E+00
ROAD_23	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_23	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_23	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_23	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_23	1336363	PCBs	0.00E+00	0.00E+00
ROAD_23	98566	PCBTF	0.00E+00	0.00E+00
ROAD_23	107982	PGME	0.00E+00	0.00E+00
ROAD_23	108656	PGMEA	0.00E+00	0.00E+00
ROAD_23	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_23	108952	Phenol	0.00E+00	0.00E+00
ROAD_23	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_23	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_23	115071	Propylene	0.00E+00	0.00E+00
ROAD_23	129000	Pyrene	0.00E+00	0.00E+00
ROAD_23	7782492	Selenium	0.00E+00	0.00E+00
ROAD_23	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_23	100425	Styrene	0.00E+00	9.11E-05
ROAD_23	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_23	108883	Toluene	0.00E+00	0.00E+00
ROAD_23	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_23	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_23	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_23	7440666	Zinc	0.00E+00	0.00E+00
ROAD_23	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_24	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_24	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_24	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_24	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_24	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_24	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_24	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_24	107028	Acrolein	0.00E+00	0.00E+00
ROAD_24	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_24	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_24	120127	Anthracene	0.00E+00	0.00E+00
ROAD_24	7440360	Antimony	0.00E+00	0.00E+00
ROAD_24	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_24	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_24	50328	B[a]P	0.00E+00	0.00E+00
ROAD_24	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_24	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_24	71432	Benzene	0.00E+00	0.00E+00
ROAD_24	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_24	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_24	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_24	7440473	Chromium	0.00E+00	0.00E+00
ROAD_24	218019	Chrysene	0.00E+00	0.00E+00
ROAD_24	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_24	7440508	Copper	0.00E+00	0.00E+00
ROAD_24	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_24	98828	Cumene	0.00E+00	0.00E+00
ROAD_24	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_24	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_24	111773	DEGME	0.00E+00	0.00E+00
ROAD_24	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_24	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_24	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_24	86737	Fluorene	0.00E+00	0.00E+00
ROAD_24	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_24	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_24	7647010	HCl	0.00E+00	0.00E+00
ROAD_24	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_24	110543	Hexane	0.00E+00	1.07E-04
ROAD_24	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_24	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_24	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_24	7439921	Lead	0.00E+00	0.00E+00
ROAD_24	7439965	Manganese	0.00E+00	0.00E+00
ROAD_24	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_24	78933	MEK	0.00E+00	0.00E+00
ROAD_24	7439976	Mercury	0.00E+00	0.00E+00
ROAD_24	108101	MIBK	0.00E+00	0.00E+00
ROAD_24	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_24	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_24	7664417	NH3	0.00E+00	0.00E+00
ROAD_24	7440020	Nickel	0.00E+00	0.00E+00
ROAD_24	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_24	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_24	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_24	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_24	1336363	PCBs	0.00E+00	0.00E+00
ROAD_24	98566	PCBTF	0.00E+00	0.00E+00
ROAD_24	107982	PGME	0.00E+00	0.00E+00
ROAD_24	108656	PGMEA	0.00E+00	0.00E+00
ROAD_24	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_24	108952	Phenol	0.00E+00	0.00E+00
ROAD_24	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_24	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_24	115071	Propylene	0.00E+00	0.00E+00
ROAD_24	129000	Pyrene	0.00E+00	0.00E+00
ROAD_24	7782492	Selenium	0.00E+00	0.00E+00
ROAD_24	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_24	100425	Styrene	0.00E+00	9.11E-05
ROAD_24	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_24	108883	Toluene	0.00E+00	0.00E+00
ROAD_24	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_24	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_24	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_24	7440666	Zinc	0.00E+00	0.00E+00
ROAD_24	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_25	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_25	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_25	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_25	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_25	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_25	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_25	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_25	107028	Acrolein	0.00E+00	0.00E+00
ROAD_25	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_25	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_25	120127	Anthracene	0.00E+00	0.00E+00
ROAD_25	7440360	Antimony	0.00E+00	0.00E+00
ROAD_25	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_25	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_25	50328	B[a]P	0.00E+00	0.00E+00
ROAD_25	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_25	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_25	71432	Benzene	0.00E+00	0.00E+00
ROAD_25	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_25	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_25	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_25	7440473	Chromium	0.00E+00	0.00E+00
ROAD_25	218019	Chrysene	0.00E+00	0.00E+00
ROAD_25	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_25	7440508	Copper	0.00E+00	0.00E+00
ROAD_25	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_25	98828	Cumene	0.00E+00	0.00E+00
ROAD_25	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_25	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_25	111773	DEGME	0.00E+00	0.00E+00
ROAD_25	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_25	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_25	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_25	86737	Fluorene	0.00E+00	0.00E+00
ROAD_25	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_25	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_25	7647010	HCl	0.00E+00	0.00E+00
ROAD_25	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_25	110543	Hexane	0.00E+00	1.07E-04
ROAD_25	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_25	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_25	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_25	7439921	Lead	0.00E+00	0.00E+00
ROAD_25	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_25	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_25	78933	MEK	0.00E+00	0.00E+00
ROAD_25	7439976	Mercury	0.00E+00	0.00E+00
ROAD_25	108101	MIBK	0.00E+00	0.00E+00
ROAD_25	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_25	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_25	7664417	NH3	0.00E+00	0.00E+00
ROAD_25	7440020	Nickel	0.00E+00	0.00E+00
ROAD_25	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_25	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_25	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_25	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_25	1336363	PCBs	0.00E+00	0.00E+00
ROAD_25	98566	PCBTF	0.00E+00	0.00E+00
ROAD_25	107982	PGME	0.00E+00	0.00E+00
ROAD_25	108656	PGMEA	0.00E+00	0.00E+00
ROAD_25	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_25	108952	Phenol	0.00E+00	0.00E+00
ROAD_25	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_25	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_25	115071	Propylene	0.00E+00	0.00E+00
ROAD_25	129000	Pyrene	0.00E+00	0.00E+00
ROAD_25	7782492	Selenium	0.00E+00	0.00E+00
ROAD_25	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_25	100425	Styrene	0.00E+00	9.11E-05
ROAD_25	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_25	108883	Toluene	0.00E+00	0.00E+00
ROAD_25	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_25	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_25	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_25	7440666	Zinc	0.00E+00	0.00E+00
ROAD_25	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_26	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_26	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_26	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_26	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_26	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_26	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_26	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_26	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_26	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_26	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_26	120127	Anthracene	0.00E+00	0.00E+00
ROAD_26	7440360	Antimony	0.00E+00	0.00E+00
ROAD_26	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_26	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_26	50328	B[a]P	0.00E+00	0.00E+00
ROAD_26	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_26	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_26	71432	Benzene	0.00E+00	0.00E+00
ROAD_26	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_26	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_26	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_26	7440473	Chromium	0.00E+00	0.00E+00
ROAD_26	218019	Chrysene	0.00E+00	0.00E+00
ROAD_26	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_26	7440508	Copper	0.00E+00	0.00E+00
ROAD_26	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_26	98828	Cumene	0.00E+00	0.00E+00
ROAD_26	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_26	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_26	111773	DEGME	0.00E+00	0.00E+00
ROAD_26	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_26	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_26	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_26	86737	Fluorene	0.00E+00	0.00E+00
ROAD_26	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_26	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_26	7647010	HCl	0.00E+00	0.00E+00
ROAD_26	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_26	110543	Hexane	0.00E+00	1.07E-04
ROAD_26	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_26	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_26	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_26	7439921	Lead	0.00E+00	0.00E+00
ROAD_26	7439965	Manganese	0.00E+00	0.00E+00
ROAD_26	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_26	78933	MEK	0.00E+00	0.00E+00
ROAD_26	7439976	Mercury	0.00E+00	0.00E+00
ROAD_26	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_26	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_26	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_26	7664417	NH3	0.00E+00	0.00E+00
ROAD_26	7440020	Nickel	0.00E+00	0.00E+00
ROAD_26	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_26	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_26	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_26	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_26	1336363	PCBs	0.00E+00	0.00E+00
ROAD_26	98566	PCBTF	0.00E+00	0.00E+00
ROAD_26	107982	PGME	0.00E+00	0.00E+00
ROAD_26	108656	PGMEA	0.00E+00	0.00E+00
ROAD_26	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_26	108952	Phenol	0.00E+00	0.00E+00
ROAD_26	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_26	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_26	115071	Propylene	0.00E+00	0.00E+00
ROAD_26	129000	Pyrene	0.00E+00	0.00E+00
ROAD_26	7782492	Selenium	0.00E+00	0.00E+00
ROAD_26	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_26	100425	Styrene	0.00E+00	9.11E-05
ROAD_26	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_26	108883	Toluene	0.00E+00	0.00E+00
ROAD_26	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_26	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_26	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_26	7440666	Zinc	0.00E+00	0.00E+00
ROAD_26	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_27	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_27	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_27	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_27	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_27	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_27	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_27	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_27	107028	Acrolein	0.00E+00	0.00E+00
ROAD_27	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_27	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_27	120127	Anthracene	0.00E+00	0.00E+00
ROAD_27	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_27	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_27	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_27	50328	B[a]P	0.00E+00	0.00E+00
ROAD_27	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_27	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_27	71432	Benzene	0.00E+00	0.00E+00
ROAD_27	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_27	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_27	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_27	7440473	Chromium	0.00E+00	0.00E+00
ROAD_27	218019	Chrysene	0.00E+00	0.00E+00
ROAD_27	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_27	7440508	Copper	0.00E+00	0.00E+00
ROAD_27	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_27	98828	Cumene	0.00E+00	0.00E+00
ROAD_27	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_27	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_27	111773	DEGME	0.00E+00	0.00E+00
ROAD_27	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_27	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_27	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_27	86737	Fluorene	0.00E+00	0.00E+00
ROAD_27	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_27	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_27	7647010	HCl	0.00E+00	0.00E+00
ROAD_27	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_27	110543	Hexane	0.00E+00	1.07E-04
ROAD_27	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_27	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_27	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_27	7439921	Lead	0.00E+00	0.00E+00
ROAD_27	7439965	Manganese	0.00E+00	0.00E+00
ROAD_27	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_27	78933	MEK	0.00E+00	0.00E+00
ROAD_27	7439976	Mercury	0.00E+00	0.00E+00
ROAD_27	108101	MIBK	0.00E+00	0.00E+00
ROAD_27	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_27	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_27	7664417	NH3	0.00E+00	0.00E+00
ROAD_27	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_27	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_27	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_27	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_27	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_27	1336363	PCBs	0.00E+00	0.00E+00
ROAD_27	98566	PCBTF	0.00E+00	0.00E+00
ROAD_27	107982	PGME	0.00E+00	0.00E+00
ROAD_27	108656	PGMEA	0.00E+00	0.00E+00
ROAD_27	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_27	108952	Phenol	0.00E+00	0.00E+00
ROAD_27	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_27	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_27	115071	Propylene	0.00E+00	0.00E+00
ROAD_27	129000	Pyrene	0.00E+00	0.00E+00
ROAD_27	7782492	Selenium	0.00E+00	0.00E+00
ROAD_27	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_27	100425	Styrene	0.00E+00	9.11E-05
ROAD_27	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_27	108883	Toluene	0.00E+00	0.00E+00
ROAD_27	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_27	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_27	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_27	7440666	Zinc	0.00E+00	0.00E+00
ROAD_27	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_28	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_28	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_28	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_28	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_28	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_28	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_28	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_28	107028	Acrolein	0.00E+00	0.00E+00
ROAD_28	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_28	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_28	120127	Anthracene	0.00E+00	0.00E+00
ROAD_28	7440360	Antimony	0.00E+00	0.00E+00
ROAD_28	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_28	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_28	50328	B[a]P	0.00E+00	0.00E+00
ROAD_28	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_28	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_28	71432	Benzene	0.00E+00	0.00E+00
ROAD_28	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_28	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_28	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_28	7440473	Chromium	0.00E+00	0.00E+00
ROAD_28	218019	Chrysene	0.00E+00	0.00E+00
ROAD_28	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_28	7440508	Copper	0.00E+00	0.00E+00
ROAD_28	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_28	98828	Cumene	0.00E+00	0.00E+00
ROAD_28	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_28	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_28	111773	DEGME	0.00E+00	0.00E+00
ROAD_28	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_28	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_28	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_28	86737	Fluorene	0.00E+00	0.00E+00
ROAD_28	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_28	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_28	7647010	HCl	0.00E+00	0.00E+00
ROAD_28	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_28	110543	Hexane	0.00E+00	1.07E-04
ROAD_28	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_28	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_28	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_28	7439921	Lead	0.00E+00	0.00E+00
ROAD_28	7439965	Manganese	0.00E+00	0.00E+00
ROAD_28	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_28	78933	MEK	0.00E+00	0.00E+00
ROAD_28	7439976	Mercury	0.00E+00	0.00E+00
ROAD_28	108101	MIBK	0.00E+00	0.00E+00
ROAD_28	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_28	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_28	7664417	NH3	0.00E+00	0.00E+00
ROAD_28	7440020	Nickel	0.00E+00	0.00E+00
ROAD_28	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_28	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_28	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_28	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_28	1336363	PCBs	0.00E+00	0.00E+00
ROAD_28	98566	PCBTF	0.00E+00	0.00E+00
ROAD_28	107982	PGME	0.00E+00	0.00E+00
ROAD_28	108656	PGMEA	0.00E+00	0.00E+00
ROAD_28	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_28	108952	Phenol	0.00E+00	0.00E+00
ROAD_28	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_28	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_28	115071	Propylene	0.00E+00	0.00E+00
ROAD_28	129000	Pyrene	0.00E+00	0.00E+00
ROAD_28	7782492	Selenium	0.00E+00	0.00E+00
ROAD_28	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_28	100425	Styrene	0.00E+00	9.11E-05
ROAD_28	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_28	108883	Toluene	0.00E+00	0.00E+00
ROAD_28	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_28	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_28	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_28	7440666	Zinc	0.00E+00	0.00E+00
ROAD_28	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_29	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_29	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_29	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_29	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_29	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_29	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_29	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_29	107028	Acrolein	0.00E+00	0.00E+00
ROAD_29	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_29	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_29	120127	Anthracene	0.00E+00	0.00E+00
ROAD_29	7440360	Antimony	0.00E+00	0.00E+00
ROAD_29	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_29	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_29	50328	B[a]P	0.00E+00	0.00E+00
ROAD_29	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_29	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_29	71432	Benzene	0.00E+00	0.00E+00
ROAD_29	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_29	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_29	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_29	7440473	Chromium	0.00E+00	0.00E+00
ROAD_29	218019	Chrysene	0.00E+00	0.00E+00
ROAD_29	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_29	7440508	Copper	0.00E+00	0.00E+00
ROAD_29	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_29	98828	Cumene	0.00E+00	0.00E+00
ROAD_29	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_29	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_29	111773	DEGME	0.00E+00	0.00E+00
ROAD_29	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_29	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_29	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_29	86737	Fluorene	0.00E+00	0.00E+00
ROAD_29	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_29	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_29	7647010	HCl	0.00E+00	0.00E+00
ROAD_29	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_29	110543	Hexane	0.00E+00	1.07E-04
ROAD_29	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_29	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_29	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_29	7439921	Lead	0.00E+00	0.00E+00
ROAD_29	7439965	Manganese	0.00E+00	0.00E+00
ROAD_29	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_29	78933	MEK	0.00E+00	0.00E+00
ROAD_29	7439976	Mercury	0.00E+00	0.00E+00
ROAD_29	108101	MIBK	0.00E+00	0.00E+00
ROAD_29	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_29	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_29	7664417	NH3	0.00E+00	0.00E+00
ROAD_29	7440020	Nickel	0.00E+00	0.00E+00
ROAD_29	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_29	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_29	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_29	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_29	1336363	PCBs	0.00E+00	0.00E+00
ROAD_29	98566	PCBTF	0.00E+00	0.00E+00
ROAD_29	107982	PGME	0.00E+00	0.00E+00
ROAD_29	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_29	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_29	108952	Phenol	0.00E+00	0.00E+00
ROAD_29	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_29	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_29	115071	Propylene	0.00E+00	0.00E+00
ROAD_29	129000	Pyrene	0.00E+00	0.00E+00
ROAD_29	7782492	Selenium	0.00E+00	0.00E+00
ROAD_29	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_29	100425	Styrene	0.00E+00	9.11E-05
ROAD_29	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_29	108883	Toluene	0.00E+00	0.00E+00
ROAD_29	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_29	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_29	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_29	7440666	Zinc	0.00E+00	0.00E+00
ROAD_29	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_30	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_30	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_30	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_30	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_30	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_30	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_30	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_30	107028	Acrolein	0.00E+00	0.00E+00
ROAD_30	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_30	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_30	120127	Anthracene	0.00E+00	0.00E+00
ROAD_30	7440360	Antimony	0.00E+00	0.00E+00
ROAD_30	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_30	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_30	50328	B[a]P	0.00E+00	0.00E+00
ROAD_30	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_30	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_30	71432	Benzene	0.00E+00	0.00E+00
ROAD_30	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_30	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_30	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_30	7440473	Chromium	0.00E+00	0.00E+00
ROAD_30	218019	Chrysene	0.00E+00	0.00E+00
ROAD_30	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_30	7440508	Copper	0.00E+00	0.00E+00
ROAD_30	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_30	98828	Cumene	0.00E+00	0.00E+00
ROAD_30	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_30	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_30	111773	DEGME	0.00E+00	0.00E+00
ROAD_30	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_30	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_30	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_30	86737	Fluorene	0.00E+00	0.00E+00
ROAD_30	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_30	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_30	7647010	HCl	0.00E+00	0.00E+00
ROAD_30	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_30	110543	Hexane	0.00E+00	1.07E-04
ROAD_30	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_30	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_30	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_30	7439921	Lead	0.00E+00	0.00E+00
ROAD_30	7439965	Manganese	0.00E+00	0.00E+00
ROAD_30	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_30	78933	MEK	0.00E+00	0.00E+00
ROAD_30	7439976	Mercury	0.00E+00	0.00E+00
ROAD_30	108101	MIBK	0.00E+00	0.00E+00
ROAD_30	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_30	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_30	7664417	NH3	0.00E+00	0.00E+00
ROAD_30	7440020	Nickel	0.00E+00	0.00E+00
ROAD_30	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_30	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_30	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_30	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_30	1336363	PCBs	0.00E+00	0.00E+00
ROAD_30	98566	PCBTF	0.00E+00	0.00E+00
ROAD_30	107982	PGME	0.00E+00	0.00E+00
ROAD_30	108656	PGMEA	0.00E+00	0.00E+00
ROAD_30	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_30	108952	Phenol	0.00E+00	0.00E+00
ROAD_30	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_30	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_30	115071	Propylene	0.00E+00	0.00E+00
ROAD_30	129000	Pyrene	0.00E+00	0.00E+00
ROAD_30	7782492	Selenium	0.00E+00	0.00E+00
ROAD_30	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_30	100425	Styrene	0.00E+00	9.11E-05
ROAD_30	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_30	108883	Toluene	0.00E+00	0.00E+00
ROAD_30	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_30	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_30	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_30	7440666	Zinc	0.00E+00	0.00E+00
ROAD_30	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_31	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_31	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_31	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_31	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_31	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_31	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_31	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_31	107028	Acrolein	0.00E+00	0.00E+00
ROAD_31	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_31	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_31	120127	Anthracene	0.00E+00	0.00E+00
ROAD_31	7440360	Antimony	0.00E+00	0.00E+00
ROAD_31	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_31	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_31	50328	B[a]P	0.00E+00	0.00E+00
ROAD_31	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_31	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_31	71432	Benzene	0.00E+00	0.00E+00
ROAD_31	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_31	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_31	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_31	7440473	Chromium	0.00E+00	0.00E+00
ROAD_31	218019	Chrysene	0.00E+00	0.00E+00
ROAD_31	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_31	7440508	Copper	0.00E+00	0.00E+00
ROAD_31	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_31	98828	Cumene	0.00E+00	0.00E+00
ROAD_31	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_31	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_31	111773	DEGME	0.00E+00	0.00E+00
ROAD_31	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_31	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_31	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_31	86737	Fluorene	0.00E+00	0.00E+00
ROAD_31	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_31	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_31	7647010	HCl	0.00E+00	0.00E+00
ROAD_31	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_31	110543	Hexane	0.00E+00	1.07E-04
ROAD_31	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_31	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_31	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_31	7439921	Lead	0.00E+00	0.00E+00
ROAD_31	7439965	Manganese	0.00E+00	0.00E+00
ROAD_31	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_31	78933	MEK	0.00E+00	0.00E+00
ROAD_31	7439976	Mercury	0.00E+00	0.00E+00
ROAD_31	108101	MIBK	0.00E+00	0.00E+00
ROAD_31	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_31	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_31	7664417	NH3	0.00E+00	0.00E+00
ROAD_31	7440020	Nickel	0.00E+00	0.00E+00
ROAD_31	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_31	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_31	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_31	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_31	1336363	PCBs	0.00E+00	0.00E+00
ROAD_31	98566	PCBTF	0.00E+00	0.00E+00
ROAD_31	107982	PGME	0.00E+00	0.00E+00
ROAD_31	108656	PGMEA	0.00E+00	0.00E+00
ROAD_31	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_31	108952	Phenol	0.00E+00	0.00E+00
ROAD_31	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_31	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_31	115071	Propylene	0.00E+00	0.00E+00
ROAD_31	129000	Pyrene	0.00E+00	0.00E+00
ROAD_31	7782492	Selenium	0.00E+00	0.00E+00
ROAD_31	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_31	100425	Styrene	0.00E+00	9.11E-05
ROAD_31	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_31	108883	Toluene	0.00E+00	0.00E+00
ROAD_31	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_31	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_31	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_31	7440666	Zinc	0.00E+00	0.00E+00
ROAD_31	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_32	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_32	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_32	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_32	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_32	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_32	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_32	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_32	107028	Acrolein	0.00E+00	0.00E+00
ROAD_32	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_32	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_32	120127	Anthracene	0.00E+00	0.00E+00
ROAD_32	7440360	Antimony	0.00E+00	0.00E+00
ROAD_32	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_32	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_32	50328	B[a]P	0.00E+00	0.00E+00
ROAD_32	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_32	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_32	71432	Benzene	0.00E+00	0.00E+00
ROAD_32	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_32	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_32	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_32	7440473	Chromium	0.00E+00	0.00E+00
ROAD_32	218019	Chrysene	0.00E+00	0.00E+00
ROAD_32	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_32	7440508	Copper	0.00E+00	0.00E+00
ROAD_32	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_32	98828	Cumene	0.00E+00	0.00E+00
ROAD_32	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_32	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_32	111773	DEGME	0.00E+00	0.00E+00
ROAD_32	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_32	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_32	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_32	86737	Fluorene	0.00E+00	0.00E+00
ROAD_32	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_32	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_32	7647010	HCl	0.00E+00	0.00E+00
ROAD_32	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_32	110543	Hexane	0.00E+00	1.07E-04
ROAD_32	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_32	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_32	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_32	7439921	Lead	0.00E+00	0.00E+00
ROAD_32	7439965	Manganese	0.00E+00	0.00E+00
ROAD_32	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_32	78933	MEK	0.00E+00	0.00E+00
ROAD_32	7439976	Mercury	0.00E+00	0.00E+00
ROAD_32	108101	MIBK	0.00E+00	0.00E+00
ROAD_32	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_32	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_32	7664417	NH3	0.00E+00	0.00E+00
ROAD_32	7440020	Nickel	0.00E+00	0.00E+00
ROAD_32	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_32	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_32	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_32	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_32	1336363	PCBs	0.00E+00	0.00E+00
ROAD_32	98566	PCBTF	0.00E+00	0.00E+00
ROAD_32	107982	PGME	0.00E+00	0.00E+00
ROAD_32	108656	PGMEA	0.00E+00	0.00E+00
ROAD_32	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_32	108952	Phenol	0.00E+00	0.00E+00
ROAD_32	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_32	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_32	115071	Propylene	0.00E+00	0.00E+00
ROAD_32	129000	Pyrene	0.00E+00	0.00E+00
ROAD_32	7782492	Selenium	0.00E+00	0.00E+00
ROAD_32	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_32	100425	Styrene	0.00E+00	9.11E-05
ROAD_32	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_32	108883	Toluene	0.00E+00	0.00E+00
ROAD_32	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_32	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_32	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_32	7440666	Zinc	0.00E+00	0.00E+00
ROAD_32	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_33	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_33	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_33	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_33	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_33	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_33	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_33	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_33	107028	Acrolein	0.00E+00	0.00E+00
ROAD_33	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_33	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_33	120127	Anthracene	0.00E+00	0.00E+00
ROAD_33	7440360	Antimony	0.00E+00	0.00E+00
ROAD_33	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_33	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_33	50328	B[a]P	0.00E+00	0.00E+00
ROAD_33	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_33	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_33	71432	Benzene	0.00E+00	0.00E+00
ROAD_33	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_33	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_33	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_33	7440473	Chromium	0.00E+00	0.00E+00
ROAD_33	218019	Chrysene	0.00E+00	0.00E+00
ROAD_33	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_33	7440508	Copper	0.00E+00	0.00E+00
ROAD_33	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_33	98828	Cumene	0.00E+00	0.00E+00
ROAD_33	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_33	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_33	111773	DEGME	0.00E+00	0.00E+00
ROAD_33	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_33	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_33	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_33	86737	Fluorene	0.00E+00	0.00E+00
ROAD_33	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_33	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_33	7647010	HCl	0.00E+00	0.00E+00
ROAD_33	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_33	110543	Hexane	0.00E+00	1.07E-04
ROAD_33	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_33	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_33	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_33	7439921	Lead	0.00E+00	0.00E+00
ROAD_33	7439965	Manganese	0.00E+00	0.00E+00
ROAD_33	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_33	78933	MEK	0.00E+00	0.00E+00
ROAD_33	7439976	Mercury	0.00E+00	0.00E+00
ROAD_33	108101	MIBK	0.00E+00	0.00E+00
ROAD_33	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_33	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_33	7664417	NH3	0.00E+00	0.00E+00
ROAD_33	7440020	Nickel	0.00E+00	0.00E+00
ROAD_33	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_33	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_33	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_33	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_33	1336363	PCBs	0.00E+00	0.00E+00
ROAD_33	98566	PCBTF	0.00E+00	0.00E+00
ROAD_33	107982	PGME	0.00E+00	0.00E+00
ROAD_33	108656	PGMEA	0.00E+00	0.00E+00
ROAD_33	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_33	108952	Phenol	0.00E+00	0.00E+00
ROAD_33	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_33	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_33	115071	Propylene	0.00E+00	0.00E+00
ROAD_33	129000	Pyrene	0.00E+00	0.00E+00
ROAD_33	7782492	Selenium	0.00E+00	0.00E+00
ROAD_33	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_33	100425	Styrene	0.00E+00	9.11E-05
ROAD_33	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_33	108883	Toluene	0.00E+00	0.00E+00
ROAD_33	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_33	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_33	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_33	7440666	Zinc	0.00E+00	0.00E+00
ROAD_33	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_34	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_34	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_34	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_34	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_34	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_34	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_34	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_34	107028	Acrolein	0.00E+00	0.00E+00
ROAD_34	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_34	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_34	120127	Anthracene	0.00E+00	0.00E+00
ROAD_34	7440360	Antimony	0.00E+00	0.00E+00
ROAD_34	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_34	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_34	50328	B[a]P	0.00E+00	0.00E+00
ROAD_34	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_34	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_34	71432	Benzene	0.00E+00	0.00E+00
ROAD_34	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_34	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_34	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_34	7440473	Chromium	0.00E+00	0.00E+00
ROAD_34	218019	Chrysene	0.00E+00	0.00E+00
ROAD_34	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_34	7440508	Copper	0.00E+00	0.00E+00
ROAD_34	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_34	98828	Cumene	0.00E+00	0.00E+00
ROAD_34	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_34	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_34	111773	DEGME	0.00E+00	0.00E+00
ROAD_34	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_34	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_34	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_34	86737	Fluorene	0.00E+00	0.00E+00
ROAD_34	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_34	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_34	7647010	HCl	0.00E+00	0.00E+00
ROAD_34	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_34	110543	Hexane	0.00E+00	1.07E-04
ROAD_34	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_34	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_34	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_34	7439921	Lead	0.00E+00	0.00E+00
ROAD_34	7439965	Manganese	0.00E+00	0.00E+00
ROAD_34	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_34	78933	MEK	0.00E+00	0.00E+00
ROAD_34	7439976	Mercury	0.00E+00	0.00E+00
ROAD_34	108101	MIBK	0.00E+00	0.00E+00
ROAD_34	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_34	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_34	7664417	NH3	0.00E+00	0.00E+00
ROAD_34	7440020	Nickel	0.00E+00	0.00E+00
ROAD_34	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_34	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_34	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_34	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_34	1336363	PCBs	0.00E+00	0.00E+00
ROAD_34	98566	PCBTF	0.00E+00	0.00E+00
ROAD_34	107982	PGME	0.00E+00	0.00E+00
ROAD_34	108656	PGMEA	0.00E+00	0.00E+00
ROAD_34	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_34	108952	Phenol	0.00E+00	0.00E+00
ROAD_34	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_34	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_34	115071	Propylene	0.00E+00	0.00E+00
ROAD_34	129000	Pyrene	0.00E+00	0.00E+00
ROAD_34	7782492	Selenium	0.00E+00	0.00E+00
ROAD_34	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_34	100425	Styrene	0.00E+00	9.11E-05
ROAD_34	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_34	108883	Toluene	0.00E+00	0.00E+00
ROAD_34	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_34	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_34	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_34	7440666	Zinc	0.00E+00	0.00E+00
ROAD_34	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_35	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_35	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_35	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_35	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_35	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_35	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_35	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_35	107028	Acrolein	0.00E+00	0.00E+00
ROAD_35	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_35	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_35	120127	Anthracene	0.00E+00	0.00E+00
ROAD_35	7440360	Antimony	0.00E+00	0.00E+00
ROAD_35	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_35	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_35	50328	B[a]P	0.00E+00	0.00E+00
ROAD_35	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_35	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_35	71432	Benzene	0.00E+00	0.00E+00
ROAD_35	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_35	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_35	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_35	7440473	Chromium	0.00E+00	0.00E+00
ROAD_35	218019	Chrysene	0.00E+00	0.00E+00
ROAD_35	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_35	7440508	Copper	0.00E+00	0.00E+00
ROAD_35	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_35	98828	Cumene	0.00E+00	0.00E+00
ROAD_35	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_35	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_35	111773	DEGME	0.00E+00	0.00E+00
ROAD_35	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_35	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_35	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_35	86737	Fluorene	0.00E+00	0.00E+00
ROAD_35	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_35	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_35	7647010	HCl	0.00E+00	0.00E+00
ROAD_35	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_35	110543	Hexane	0.00E+00	1.07E-04
ROAD_35	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_35	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_35	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_35	7439921	Lead	0.00E+00	0.00E+00
ROAD_35	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_35	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_35	78933	MEK	0.00E+00	0.00E+00
ROAD_35	7439976	Mercury	0.00E+00	0.00E+00
ROAD_35	108101	MIBK	0.00E+00	0.00E+00
ROAD_35	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_35	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_35	7664417	NH3	0.00E+00	0.00E+00
ROAD_35	7440020	Nickel	0.00E+00	0.00E+00
ROAD_35	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_35	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_35	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_35	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_35	1336363	PCBs	0.00E+00	0.00E+00
ROAD_35	98566	PCBTF	0.00E+00	0.00E+00
ROAD_35	107982	PGME	0.00E+00	0.00E+00
ROAD_35	108656	PGMEA	0.00E+00	0.00E+00
ROAD_35	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_35	108952	Phenol	0.00E+00	0.00E+00
ROAD_35	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_35	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_35	115071	Propylene	0.00E+00	0.00E+00
ROAD_35	129000	Pyrene	0.00E+00	0.00E+00
ROAD_35	7782492	Selenium	0.00E+00	0.00E+00
ROAD_35	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_35	100425	Styrene	0.00E+00	9.11E-05
ROAD_35	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_35	108883	Toluene	0.00E+00	0.00E+00
ROAD_35	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_35	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_35	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_35	7440666	Zinc	0.00E+00	0.00E+00
ROAD_35	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_36	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_36	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_36	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_36	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_36	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_36	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_36	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_36	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_36	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_36	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_36	120127	Anthracene	0.00E+00	0.00E+00
ROAD_36	7440360	Antimony	0.00E+00	0.00E+00
ROAD_36	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_36	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_36	50328	B[a]P	0.00E+00	0.00E+00
ROAD_36	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_36	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_36	71432	Benzene	0.00E+00	0.00E+00
ROAD_36	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_36	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_36	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_36	7440473	Chromium	0.00E+00	0.00E+00
ROAD_36	218019	Chrysene	0.00E+00	0.00E+00
ROAD_36	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_36	7440508	Copper	0.00E+00	0.00E+00
ROAD_36	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_36	98828	Cumene	0.00E+00	0.00E+00
ROAD_36	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_36	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_36	111773	DEGME	0.00E+00	0.00E+00
ROAD_36	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_36	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_36	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_36	86737	Fluorene	0.00E+00	0.00E+00
ROAD_36	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_36	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_36	7647010	HCl	0.00E+00	0.00E+00
ROAD_36	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_36	110543	Hexane	0.00E+00	1.07E-04
ROAD_36	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_36	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_36	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_36	7439921	Lead	0.00E+00	0.00E+00
ROAD_36	7439965	Manganese	0.00E+00	0.00E+00
ROAD_36	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_36	78933	MEK	0.00E+00	0.00E+00
ROAD_36	7439976	Mercury	0.00E+00	0.00E+00
ROAD_36	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_36	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_36	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_36	7664417	NH3	0.00E+00	0.00E+00
ROAD_36	7440020	Nickel	0.00E+00	0.00E+00
ROAD_36	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_36	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_36	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_36	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_36	1336363	PCBs	0.00E+00	0.00E+00
ROAD_36	98566	PCBTF	0.00E+00	0.00E+00
ROAD_36	107982	PGME	0.00E+00	0.00E+00
ROAD_36	108656	PGMEA	0.00E+00	0.00E+00
ROAD_36	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_36	108952	Phenol	0.00E+00	0.00E+00
ROAD_36	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_36	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_36	115071	Propylene	0.00E+00	0.00E+00
ROAD_36	129000	Pyrene	0.00E+00	0.00E+00
ROAD_36	7782492	Selenium	0.00E+00	0.00E+00
ROAD_36	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_36	100425	Styrene	0.00E+00	9.11E-05
ROAD_36	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_36	108883	Toluene	0.00E+00	0.00E+00
ROAD_36	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_36	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_36	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_36	7440666	Zinc	0.00E+00	0.00E+00
ROAD_36	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_37	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_37	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_37	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_37	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_37	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_37	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_37	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_37	107028	Acrolein	0.00E+00	0.00E+00
ROAD_37	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_37	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_37	120127	Anthracene	0.00E+00	0.00E+00
ROAD_37	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_37	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_37	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_37	50328	B[a]P	0.00E+00	0.00E+00
ROAD_37	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_37	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_37	71432	Benzene	0.00E+00	0.00E+00
ROAD_37	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_37	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_37	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_37	7440473	Chromium	0.00E+00	0.00E+00
ROAD_37	218019	Chrysene	0.00E+00	0.00E+00
ROAD_37	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_37	7440508	Copper	0.00E+00	0.00E+00
ROAD_37	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_37	98828	Cumene	0.00E+00	0.00E+00
ROAD_37	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_37	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_37	111773	DEGME	0.00E+00	0.00E+00
ROAD_37	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_37	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_37	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_37	86737	Fluorene	0.00E+00	0.00E+00
ROAD_37	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_37	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_37	7647010	HCl	0.00E+00	0.00E+00
ROAD_37	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_37	110543	Hexane	0.00E+00	1.07E-04
ROAD_37	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_37	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_37	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_37	7439921	Lead	0.00E+00	0.00E+00
ROAD_37	7439965	Manganese	0.00E+00	0.00E+00
ROAD_37	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_37	78933	MEK	0.00E+00	0.00E+00
ROAD_37	7439976	Mercury	0.00E+00	0.00E+00
ROAD_37	108101	MIBK	0.00E+00	0.00E+00
ROAD_37	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_37	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_37	7664417	NH3	0.00E+00	0.00E+00
ROAD_37	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_37	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_37	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_37	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_37	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_37	1336363	PCBs	0.00E+00	0.00E+00
ROAD_37	98566	PCBTF	0.00E+00	0.00E+00
ROAD_37	107982	PGME	0.00E+00	0.00E+00
ROAD_37	108656	PGMEA	0.00E+00	0.00E+00
ROAD_37	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_37	108952	Phenol	0.00E+00	0.00E+00
ROAD_37	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_37	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_37	115071	Propylene	0.00E+00	0.00E+00
ROAD_37	129000	Pyrene	0.00E+00	0.00E+00
ROAD_37	7782492	Selenium	0.00E+00	0.00E+00
ROAD_37	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_37	100425	Styrene	0.00E+00	9.11E-05
ROAD_37	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_37	108883	Toluene	0.00E+00	0.00E+00
ROAD_37	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_37	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_37	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_37	7440666	Zinc	0.00E+00	0.00E+00
ROAD_37	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_38	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_38	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_38	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_38	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_38	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_38	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_38	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_38	107028	Acrolein	0.00E+00	0.00E+00
ROAD_38	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_38	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_38	120127	Anthracene	0.00E+00	0.00E+00
ROAD_38	7440360	Antimony	0.00E+00	0.00E+00
ROAD_38	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_38	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_38	50328	B[a]P	0.00E+00	0.00E+00
ROAD_38	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_38	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_38	71432	Benzene	0.00E+00	0.00E+00
ROAD_38	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_38	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_38	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_38	7440473	Chromium	0.00E+00	0.00E+00
ROAD_38	218019	Chrysene	0.00E+00	0.00E+00
ROAD_38	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_38	7440508	Copper	0.00E+00	0.00E+00
ROAD_38	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_38	98828	Cumene	0.00E+00	0.00E+00
ROAD_38	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_38	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_38	111773	DEGME	0.00E+00	0.00E+00
ROAD_38	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_38	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_38	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_38	86737	Fluorene	0.00E+00	0.00E+00
ROAD_38	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_38	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_38	7647010	HCl	0.00E+00	0.00E+00
ROAD_38	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_38	110543	Hexane	0.00E+00	1.07E-04
ROAD_38	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_38	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_38	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_38	7439921	Lead	0.00E+00	0.00E+00
ROAD_38	7439965	Manganese	0.00E+00	0.00E+00
ROAD_38	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_38	78933	MEK	0.00E+00	0.00E+00
ROAD_38	7439976	Mercury	0.00E+00	0.00E+00
ROAD_38	108101	MIBK	0.00E+00	0.00E+00
ROAD_38	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_38	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_38	7664417	NH3	0.00E+00	0.00E+00
ROAD_38	7440020	Nickel	0.00E+00	0.00E+00
ROAD_38	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_38	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_38	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_38	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_38	1336363	PCBs	0.00E+00	0.00E+00
ROAD_38	98566	PCBTF	0.00E+00	0.00E+00
ROAD_38	107982	PGME	0.00E+00	0.00E+00
ROAD_38	108656	PGMEA	0.00E+00	0.00E+00
ROAD_38	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_38	108952	Phenol	0.00E+00	0.00E+00
ROAD_38	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_38	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_38	115071	Propylene	0.00E+00	0.00E+00
ROAD_38	129000	Pyrene	0.00E+00	0.00E+00
ROAD_38	7782492	Selenium	0.00E+00	0.00E+00
ROAD_38	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_38	100425	Styrene	0.00E+00	9.11E-05
ROAD_38	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_38	108883	Toluene	0.00E+00	0.00E+00
ROAD_38	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_38	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_38	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_38	7440666	Zinc	0.00E+00	0.00E+00
ROAD_38	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_39	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_39	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_39	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_39	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_39	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_39	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_39	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_39	107028	Acrolein	0.00E+00	0.00E+00
ROAD_39	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_39	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_39	120127	Anthracene	0.00E+00	0.00E+00
ROAD_39	7440360	Antimony	0.00E+00	0.00E+00
ROAD_39	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_39	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_39	50328	B[a]P	0.00E+00	0.00E+00
ROAD_39	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_39	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_39	71432	Benzene	0.00E+00	0.00E+00
ROAD_39	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_39	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_39	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_39	7440473	Chromium	0.00E+00	0.00E+00
ROAD_39	218019	Chrysene	0.00E+00	0.00E+00
ROAD_39	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_39	7440508	Copper	0.00E+00	0.00E+00
ROAD_39	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_39	98828	Cumene	0.00E+00	0.00E+00
ROAD_39	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_39	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_39	111773	DEGME	0.00E+00	0.00E+00
ROAD_39	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_39	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_39	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_39	86737	Fluorene	0.00E+00	0.00E+00
ROAD_39	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_39	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_39	7647010	HCl	0.00E+00	0.00E+00
ROAD_39	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_39	110543	Hexane	0.00E+00	1.07E-04
ROAD_39	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_39	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_39	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_39	7439921	Lead	0.00E+00	0.00E+00
ROAD_39	7439965	Manganese	0.00E+00	0.00E+00
ROAD_39	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_39	78933	MEK	0.00E+00	0.00E+00
ROAD_39	7439976	Mercury	0.00E+00	0.00E+00
ROAD_39	108101	MIBK	0.00E+00	0.00E+00
ROAD_39	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_39	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_39	7664417	NH3	0.00E+00	0.00E+00
ROAD_39	7440020	Nickel	0.00E+00	0.00E+00
ROAD_39	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_39	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_39	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_39	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_39	1336363	PCBs	0.00E+00	0.00E+00
ROAD_39	98566	PCBTF	0.00E+00	0.00E+00
ROAD_39	107982	PGME	0.00E+00	0.00E+00
ROAD_39	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_39	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_39	108952	Phenol	0.00E+00	0.00E+00
ROAD_39	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_39	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_39	115071	Propylene	0.00E+00	0.00E+00
ROAD_39	129000	Pyrene	0.00E+00	0.00E+00
ROAD_39	7782492	Selenium	0.00E+00	0.00E+00
ROAD_39	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_39	100425	Styrene	0.00E+00	9.11E-05
ROAD_39	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_39	108883	Toluene	0.00E+00	0.00E+00
ROAD_39	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_39	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_39	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_39	7440666	Zinc	0.00E+00	0.00E+00
ROAD_39	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_40	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_40	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_40	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_40	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_40	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_40	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_40	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_40	107028	Acrolein	0.00E+00	0.00E+00
ROAD_40	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_40	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_40	120127	Anthracene	0.00E+00	0.00E+00
ROAD_40	7440360	Antimony	0.00E+00	0.00E+00
ROAD_40	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_40	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_40	50328	B[a]P	0.00E+00	0.00E+00
ROAD_40	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_40	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_40	71432	Benzene	0.00E+00	0.00E+00
ROAD_40	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_40	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_40	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_40	7440473	Chromium	0.00E+00	0.00E+00
ROAD_40	218019	Chrysene	0.00E+00	0.00E+00
ROAD_40	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_40	7440508	Copper	0.00E+00	0.00E+00
ROAD_40	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_40	98828	Cumene	0.00E+00	0.00E+00
ROAD_40	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_40	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_40	111773	DEGME	0.00E+00	0.00E+00
ROAD_40	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_40	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_40	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_40	86737	Fluorene	0.00E+00	0.00E+00
ROAD_40	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_40	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_40	7647010	HCl	0.00E+00	0.00E+00
ROAD_40	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_40	110543	Hexane	0.00E+00	1.07E-04
ROAD_40	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_40	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_40	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_40	7439921	Lead	0.00E+00	0.00E+00
ROAD_40	7439965	Manganese	0.00E+00	0.00E+00
ROAD_40	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_40	78933	MEK	0.00E+00	0.00E+00
ROAD_40	7439976	Mercury	0.00E+00	0.00E+00
ROAD_40	108101	MIBK	0.00E+00	0.00E+00
ROAD_40	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_40	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_40	7664417	NH3	0.00E+00	0.00E+00
ROAD_40	7440020	Nickel	0.00E+00	0.00E+00
ROAD_40	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_40	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_40	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_40	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_40	1336363	PCBs	0.00E+00	0.00E+00
ROAD_40	98566	PCBTF	0.00E+00	0.00E+00
ROAD_40	107982	PGME	0.00E+00	0.00E+00
ROAD_40	108656	PGMEA	0.00E+00	0.00E+00
ROAD_40	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_40	108952	Phenol	0.00E+00	0.00E+00
ROAD_40	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_40	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_40	115071	Propylene	0.00E+00	0.00E+00
ROAD_40	129000	Pyrene	0.00E+00	0.00E+00
ROAD_40	7782492	Selenium	0.00E+00	0.00E+00
ROAD_40	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_40	100425	Styrene	0.00E+00	9.11E-05
ROAD_40	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_40	108883	Toluene	0.00E+00	0.00E+00
ROAD_40	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_40	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_40	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_40	7440666	Zinc	0.00E+00	0.00E+00
ROAD_40	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_41	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_41	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_41	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_41	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_41	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_41	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_41	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_41	107028	Acrolein	0.00E+00	0.00E+00
ROAD_41	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_41	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_41	120127	Anthracene	0.00E+00	0.00E+00
ROAD_41	7440360	Antimony	0.00E+00	0.00E+00
ROAD_41	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_41	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_41	50328	B[a]P	0.00E+00	0.00E+00
ROAD_41	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_41	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_41	71432	Benzene	0.00E+00	0.00E+00
ROAD_41	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_41	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_41	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_41	7440473	Chromium	0.00E+00	0.00E+00
ROAD_41	218019	Chrysene	0.00E+00	0.00E+00
ROAD_41	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_41	7440508	Copper	0.00E+00	0.00E+00
ROAD_41	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_41	98828	Cumene	0.00E+00	0.00E+00
ROAD_41	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_41	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_41	111773	DEGME	0.00E+00	0.00E+00
ROAD_41	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_41	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_41	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_41	86737	Fluorene	0.00E+00	0.00E+00
ROAD_41	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_41	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_41	7647010	HCl	0.00E+00	0.00E+00
ROAD_41	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_41	110543	Hexane	0.00E+00	1.07E-04
ROAD_41	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_41	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_41	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_41	7439921	Lead	0.00E+00	0.00E+00
ROAD_41	7439965	Manganese	0.00E+00	0.00E+00
ROAD_41	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_41	78933	MEK	0.00E+00	0.00E+00
ROAD_41	7439976	Mercury	0.00E+00	0.00E+00
ROAD_41	108101	MIBK	0.00E+00	0.00E+00
ROAD_41	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_41	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_41	7664417	NH3	0.00E+00	0.00E+00
ROAD_41	7440020	Nickel	0.00E+00	0.00E+00
ROAD_41	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_41	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_41	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_41	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_41	1336363	PCBs	0.00E+00	0.00E+00
ROAD_41	98566	PCBTF	0.00E+00	0.00E+00
ROAD_41	107982	PGME	0.00E+00	0.00E+00
ROAD_41	108656	PGMEA	0.00E+00	0.00E+00
ROAD_41	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_41	108952	Phenol	0.00E+00	0.00E+00
ROAD_41	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_41	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_41	115071	Propylene	0.00E+00	0.00E+00
ROAD_41	129000	Pyrene	0.00E+00	0.00E+00
ROAD_41	7782492	Selenium	0.00E+00	0.00E+00
ROAD_41	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_41	100425	Styrene	0.00E+00	9.11E-05
ROAD_41	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_41	108883	Toluene	0.00E+00	0.00E+00
ROAD_41	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_41	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_41	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_41	7440666	Zinc	0.00E+00	0.00E+00
ROAD_41	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_42	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_42	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_42	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_42	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_42	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_42	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_42	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_42	107028	Acrolein	0.00E+00	0.00E+00
ROAD_42	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_42	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_42	120127	Anthracene	0.00E+00	0.00E+00
ROAD_42	7440360	Antimony	0.00E+00	0.00E+00
ROAD_42	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_42	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_42	50328	B[a]P	0.00E+00	0.00E+00
ROAD_42	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_42	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_42	71432	Benzene	0.00E+00	0.00E+00
ROAD_42	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_42	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_42	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_42	7440473	Chromium	0.00E+00	0.00E+00
ROAD_42	218019	Chrysene	0.00E+00	0.00E+00
ROAD_42	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_42	7440508	Copper	0.00E+00	0.00E+00
ROAD_42	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_42	98828	Cumene	0.00E+00	0.00E+00
ROAD_42	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_42	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_42	111773	DEGME	0.00E+00	0.00E+00
ROAD_42	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_42	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_42	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_42	86737	Fluorene	0.00E+00	0.00E+00
ROAD_42	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_42	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_42	7647010	HCl	0.00E+00	0.00E+00
ROAD_42	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_42	110543	Hexane	0.00E+00	1.07E-04
ROAD_42	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_42	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_42	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_42	7439921	Lead	0.00E+00	0.00E+00
ROAD_42	7439965	Manganese	0.00E+00	0.00E+00
ROAD_42	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_42	78933	MEK	0.00E+00	0.00E+00
ROAD_42	7439976	Mercury	0.00E+00	0.00E+00
ROAD_42	108101	MIBK	0.00E+00	0.00E+00
ROAD_42	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_42	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_42	7664417	NH3	0.00E+00	0.00E+00
ROAD_42	7440020	Nickel	0.00E+00	0.00E+00
ROAD_42	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_42	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_42	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_42	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_42	1336363	PCBs	0.00E+00	0.00E+00
ROAD_42	98566	PCBTF	0.00E+00	0.00E+00
ROAD_42	107982	PGME	0.00E+00	0.00E+00
ROAD_42	108656	PGMEA	0.00E+00	0.00E+00
ROAD_42	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_42	108952	Phenol	0.00E+00	0.00E+00
ROAD_42	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_42	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_42	115071	Propylene	0.00E+00	0.00E+00
ROAD_42	129000	Pyrene	0.00E+00	0.00E+00
ROAD_42	7782492	Selenium	0.00E+00	0.00E+00
ROAD_42	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_42	100425	Styrene	0.00E+00	9.11E-05
ROAD_42	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_42	108883	Toluene	0.00E+00	0.00E+00
ROAD_42	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_42	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_42	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_42	7440666	Zinc	0.00E+00	0.00E+00
ROAD_42	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_43	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_43	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_43	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_43	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_43	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_43	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_43	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_43	107028	Acrolein	0.00E+00	0.00E+00
ROAD_43	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_43	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_43	120127	Anthracene	0.00E+00	0.00E+00
ROAD_43	7440360	Antimony	0.00E+00	0.00E+00
ROAD_43	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_43	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_43	50328	B[a]P	0.00E+00	0.00E+00
ROAD_43	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_43	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_43	71432	Benzene	0.00E+00	0.00E+00
ROAD_43	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_43	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_43	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_43	7440473	Chromium	0.00E+00	0.00E+00
ROAD_43	218019	Chrysene	0.00E+00	0.00E+00
ROAD_43	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_43	7440508	Copper	0.00E+00	0.00E+00
ROAD_43	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_43	98828	Cumene	0.00E+00	0.00E+00
ROAD_43	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_43	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_43	111773	DEGME	0.00E+00	0.00E+00
ROAD_43	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_43	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_43	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_43	86737	Fluorene	0.00E+00	0.00E+00
ROAD_43	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_43	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_43	7647010	HCl	0.00E+00	0.00E+00
ROAD_43	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_43	110543	Hexane	0.00E+00	1.07E-04
ROAD_43	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_43	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_43	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_43	7439921	Lead	0.00E+00	0.00E+00
ROAD_43	7439965	Manganese	0.00E+00	0.00E+00
ROAD_43	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_43	78933	MEK	0.00E+00	0.00E+00
ROAD_43	7439976	Mercury	0.00E+00	0.00E+00
ROAD_43	108101	MIBK	0.00E+00	0.00E+00
ROAD_43	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_43	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_43	7664417	NH3	0.00E+00	0.00E+00
ROAD_43	7440020	Nickel	0.00E+00	0.00E+00
ROAD_43	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_43	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_43	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_43	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_43	1336363	PCBs	0.00E+00	0.00E+00
ROAD_43	98566	PCBTF	0.00E+00	0.00E+00
ROAD_43	107982	PGME	0.00E+00	0.00E+00
ROAD_43	108656	PGMEA	0.00E+00	0.00E+00
ROAD_43	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_43	108952	Phenol	0.00E+00	0.00E+00
ROAD_43	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_43	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_43	115071	Propylene	0.00E+00	0.00E+00
ROAD_43	129000	Pyrene	0.00E+00	0.00E+00
ROAD_43	7782492	Selenium	0.00E+00	0.00E+00
ROAD_43	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_43	100425	Styrene	0.00E+00	9.11E-05
ROAD_43	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_43	108883	Toluene	0.00E+00	0.00E+00
ROAD_43	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_43	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_43	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_43	7440666	Zinc	0.00E+00	0.00E+00
ROAD_43	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_44	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_44	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_44	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_44	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_44	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_44	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_44	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_44	107028	Acrolein	0.00E+00	0.00E+00
ROAD_44	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_44	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_44	120127	Anthracene	0.00E+00	0.00E+00
ROAD_44	7440360	Antimony	0.00E+00	0.00E+00
ROAD_44	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_44	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_44	50328	B[a]P	0.00E+00	0.00E+00
ROAD_44	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_44	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_44	71432	Benzene	0.00E+00	0.00E+00
ROAD_44	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_44	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_44	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_44	7440473	Chromium	0.00E+00	0.00E+00
ROAD_44	218019	Chrysene	0.00E+00	0.00E+00
ROAD_44	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_44	7440508	Copper	0.00E+00	0.00E+00
ROAD_44	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_44	98828	Cumene	0.00E+00	0.00E+00
ROAD_44	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_44	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_44	111773	DEGME	0.00E+00	0.00E+00
ROAD_44	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_44	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_44	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_44	86737	Fluorene	0.00E+00	0.00E+00
ROAD_44	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_44	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_44	7647010	HCl	0.00E+00	0.00E+00
ROAD_44	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_44	110543	Hexane	0.00E+00	1.07E-04
ROAD_44	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_44	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_44	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_44	7439921	Lead	0.00E+00	0.00E+00
ROAD_44	7439965	Manganese	0.00E+00	0.00E+00
ROAD_44	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_44	78933	MEK	0.00E+00	0.00E+00
ROAD_44	7439976	Mercury	0.00E+00	0.00E+00
ROAD_44	108101	MIBK	0.00E+00	0.00E+00
ROAD_44	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_44	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_44	7664417	NH3	0.00E+00	0.00E+00
ROAD_44	7440020	Nickel	0.00E+00	0.00E+00
ROAD_44	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_44	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_44	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_44	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_44	1336363	PCBs	0.00E+00	0.00E+00
ROAD_44	98566	PCBTF	0.00E+00	0.00E+00
ROAD_44	107982	PGME	0.00E+00	0.00E+00
ROAD_44	108656	PGMEA	0.00E+00	0.00E+00
ROAD_44	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_44	108952	Phenol	0.00E+00	0.00E+00
ROAD_44	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_44	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_44	115071	Propylene	0.00E+00	0.00E+00
ROAD_44	129000	Pyrene	0.00E+00	0.00E+00
ROAD_44	7782492	Selenium	0.00E+00	0.00E+00
ROAD_44	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_44	100425	Styrene	0.00E+00	9.11E-05
ROAD_44	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_44	108883	Toluene	0.00E+00	0.00E+00
ROAD_44	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_44	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_44	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_44	7440666	Zinc	0.00E+00	0.00E+00
ROAD_44	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_45	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_45	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_45	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_45	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_45	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_45	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_45	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_45	107028	Acrolein	0.00E+00	0.00E+00
ROAD_45	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_45	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_45	120127	Anthracene	0.00E+00	0.00E+00
ROAD_45	7440360	Antimony	0.00E+00	0.00E+00
ROAD_45	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_45	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_45	50328	B[a]P	0.00E+00	0.00E+00
ROAD_45	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_45	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_45	71432	Benzene	0.00E+00	0.00E+00
ROAD_45	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_45	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_45	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_45	7440473	Chromium	0.00E+00	0.00E+00
ROAD_45	218019	Chrysene	0.00E+00	0.00E+00
ROAD_45	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_45	7440508	Copper	0.00E+00	0.00E+00
ROAD_45	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_45	98828	Cumene	0.00E+00	0.00E+00
ROAD_45	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_45	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_45	111773	DEGME	0.00E+00	0.00E+00
ROAD_45	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_45	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_45	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_45	86737	Fluorene	0.00E+00	0.00E+00
ROAD_45	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_45	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_45	7647010	HCl	0.00E+00	0.00E+00
ROAD_45	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_45	110543	Hexane	0.00E+00	1.07E-04
ROAD_45	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_45	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_45	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_45	7439921	Lead	0.00E+00	0.00E+00
ROAD_45	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_45	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_45	78933	MEK	0.00E+00	0.00E+00
ROAD_45	7439976	Mercury	0.00E+00	0.00E+00
ROAD_45	108101	MIBK	0.00E+00	0.00E+00
ROAD_45	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_45	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_45	7664417	NH3	0.00E+00	0.00E+00
ROAD_45	7440020	Nickel	0.00E+00	0.00E+00
ROAD_45	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_45	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_45	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_45	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_45	1336363	PCBs	0.00E+00	0.00E+00
ROAD_45	98566	PCBTF	0.00E+00	0.00E+00
ROAD_45	107982	PGME	0.00E+00	0.00E+00
ROAD_45	108656	PGMEA	0.00E+00	0.00E+00
ROAD_45	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_45	108952	Phenol	0.00E+00	0.00E+00
ROAD_45	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_45	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_45	115071	Propylene	0.00E+00	0.00E+00
ROAD_45	129000	Pyrene	0.00E+00	0.00E+00
ROAD_45	7782492	Selenium	0.00E+00	0.00E+00
ROAD_45	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_45	100425	Styrene	0.00E+00	9.11E-05
ROAD_45	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_45	108883	Toluene	0.00E+00	0.00E+00
ROAD_45	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_45	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_45	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_45	7440666	Zinc	0.00E+00	0.00E+00
ROAD_45	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_46	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_46	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_46	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_46	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_46	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_46	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_46	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_46	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_46	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_46	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_46	120127	Anthracene	0.00E+00	0.00E+00
ROAD_46	7440360	Antimony	0.00E+00	0.00E+00
ROAD_46	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_46	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_46	50328	B[a]P	0.00E+00	0.00E+00
ROAD_46	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_46	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_46	71432	Benzene	0.00E+00	0.00E+00
ROAD_46	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_46	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_46	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_46	7440473	Chromium	0.00E+00	0.00E+00
ROAD_46	218019	Chrysene	0.00E+00	0.00E+00
ROAD_46	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_46	7440508	Copper	0.00E+00	0.00E+00
ROAD_46	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_46	98828	Cumene	0.00E+00	0.00E+00
ROAD_46	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_46	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_46	111773	DEGME	0.00E+00	0.00E+00
ROAD_46	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_46	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_46	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_46	86737	Fluorene	0.00E+00	0.00E+00
ROAD_46	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_46	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_46	7647010	HCl	0.00E+00	0.00E+00
ROAD_46	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_46	110543	Hexane	0.00E+00	1.07E-04
ROAD_46	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_46	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_46	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_46	7439921	Lead	0.00E+00	0.00E+00
ROAD_46	7439965	Manganese	0.00E+00	0.00E+00
ROAD_46	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_46	78933	MEK	0.00E+00	0.00E+00
ROAD_46	7439976	Mercury	0.00E+00	0.00E+00
ROAD_46	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_46	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_46	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_46	7664417	NH3	0.00E+00	0.00E+00
ROAD_46	7440020	Nickel	0.00E+00	0.00E+00
ROAD_46	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_46	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_46	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_46	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_46	1336363	PCBs	0.00E+00	0.00E+00
ROAD_46	98566	PCBTF	0.00E+00	0.00E+00
ROAD_46	107982	PGME	0.00E+00	0.00E+00
ROAD_46	108656	PGMEA	0.00E+00	0.00E+00
ROAD_46	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_46	108952	Phenol	0.00E+00	0.00E+00
ROAD_46	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_46	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_46	115071	Propylene	0.00E+00	0.00E+00
ROAD_46	129000	Pyrene	0.00E+00	0.00E+00
ROAD_46	7782492	Selenium	0.00E+00	0.00E+00
ROAD_46	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_46	100425	Styrene	0.00E+00	9.11E-05
ROAD_46	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_46	108883	Toluene	0.00E+00	0.00E+00
ROAD_46	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_46	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_46	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_46	7440666	Zinc	0.00E+00	0.00E+00
ROAD_46	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_47	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_47	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_47	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_47	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_47	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_47	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_47	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_47	107028	Acrolein	0.00E+00	0.00E+00
ROAD_47	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_47	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_47	120127	Anthracene	0.00E+00	0.00E+00
ROAD_47	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_47	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_47	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_47	50328	B[a]P	0.00E+00	0.00E+00
ROAD_47	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_47	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_47	71432	Benzene	0.00E+00	0.00E+00
ROAD_47	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_47	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_47	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_47	7440473	Chromium	0.00E+00	0.00E+00
ROAD_47	218019	Chrysene	0.00E+00	0.00E+00
ROAD_47	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_47	7440508	Copper	0.00E+00	0.00E+00
ROAD_47	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_47	98828	Cumene	0.00E+00	0.00E+00
ROAD_47	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_47	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_47	111773	DEGME	0.00E+00	0.00E+00
ROAD_47	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_47	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_47	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_47	86737	Fluorene	0.00E+00	0.00E+00
ROAD_47	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_47	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_47	7647010	HCl	0.00E+00	0.00E+00
ROAD_47	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_47	110543	Hexane	0.00E+00	1.07E-04
ROAD_47	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_47	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_47	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_47	7439921	Lead	0.00E+00	0.00E+00
ROAD_47	7439965	Manganese	0.00E+00	0.00E+00
ROAD_47	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_47	78933	MEK	0.00E+00	0.00E+00
ROAD_47	7439976	Mercury	0.00E+00	0.00E+00
ROAD_47	108101	MIBK	0.00E+00	0.00E+00
ROAD_47	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_47	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_47	7664417	NH3	0.00E+00	0.00E+00
ROAD_47	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_47	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_47	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_47	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_47	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_47	1336363	PCBs	0.00E+00	0.00E+00
ROAD_47	98566	PCBTF	0.00E+00	0.00E+00
ROAD_47	107982	PGME	0.00E+00	0.00E+00
ROAD_47	108656	PGMEA	0.00E+00	0.00E+00
ROAD_47	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_47	108952	Phenol	0.00E+00	0.00E+00
ROAD_47	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_47	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_47	115071	Propylene	0.00E+00	0.00E+00
ROAD_47	129000	Pyrene	0.00E+00	0.00E+00
ROAD_47	7782492	Selenium	0.00E+00	0.00E+00
ROAD_47	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_47	100425	Styrene	0.00E+00	9.11E-05
ROAD_47	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_47	108883	Toluene	0.00E+00	0.00E+00
ROAD_47	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_47	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_47	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_47	7440666	Zinc	0.00E+00	0.00E+00
ROAD_47	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_48	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_48	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_48	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_48	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_48	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_48	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_48	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_48	107028	Acrolein	0.00E+00	0.00E+00
ROAD_48	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_48	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_48	120127	Anthracene	0.00E+00	0.00E+00
ROAD_48	7440360	Antimony	0.00E+00	0.00E+00
ROAD_48	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_48	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_48	50328	B[a]P	0.00E+00	0.00E+00
ROAD_48	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_48	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_48	71432	Benzene	0.00E+00	0.00E+00
ROAD_48	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_48	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_48	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_48	7440473	Chromium	0.00E+00	0.00E+00
ROAD_48	218019	Chrysene	0.00E+00	0.00E+00
ROAD_48	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_48	7440508	Copper	0.00E+00	0.00E+00
ROAD_48	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_48	98828	Cumene	0.00E+00	0.00E+00
ROAD_48	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_48	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_48	111773	DEGME	0.00E+00	0.00E+00
ROAD_48	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_48	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_48	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_48	86737	Fluorene	0.00E+00	0.00E+00
ROAD_48	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_48	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_48	7647010	HCl	0.00E+00	0.00E+00
ROAD_48	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_48	110543	Hexane	0.00E+00	1.07E-04
ROAD_48	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_48	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_48	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_48	7439921	Lead	0.00E+00	0.00E+00
ROAD_48	7439965	Manganese	0.00E+00	0.00E+00
ROAD_48	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_48	78933	MEK	0.00E+00	0.00E+00
ROAD_48	7439976	Mercury	0.00E+00	0.00E+00
ROAD_48	108101	MIBK	0.00E+00	0.00E+00
ROAD_48	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_48	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_48	7664417	NH3	0.00E+00	0.00E+00
ROAD_48	7440020	Nickel	0.00E+00	0.00E+00
ROAD_48	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_48	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_48	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_48	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_48	1336363	PCBs	0.00E+00	0.00E+00
ROAD_48	98566	PCBTF	0.00E+00	0.00E+00
ROAD_48	107982	PGME	0.00E+00	0.00E+00
ROAD_48	108656	PGMEA	0.00E+00	0.00E+00
ROAD_48	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_48	108952	Phenol	0.00E+00	0.00E+00
ROAD_48	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_48	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_48	115071	Propylene	0.00E+00	0.00E+00
ROAD_48	129000	Pyrene	0.00E+00	0.00E+00
ROAD_48	7782492	Selenium	0.00E+00	0.00E+00
ROAD_48	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_48	100425	Styrene	0.00E+00	9.11E-05
ROAD_48	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_48	108883	Toluene	0.00E+00	0.00E+00
ROAD_48	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_48	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_48	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_48	7440666	Zinc	0.00E+00	0.00E+00
ROAD_48	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_49	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_49	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_49	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_49	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_49	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_49	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_49	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_49	107028	Acrolein	0.00E+00	0.00E+00
ROAD_49	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_49	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_49	120127	Anthracene	0.00E+00	0.00E+00
ROAD_49	7440360	Antimony	0.00E+00	0.00E+00
ROAD_49	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_49	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_49	50328	B[a]P	0.00E+00	0.00E+00
ROAD_49	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_49	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_49	71432	Benzene	0.00E+00	0.00E+00
ROAD_49	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_49	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_49	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_49	7440473	Chromium	0.00E+00	0.00E+00
ROAD_49	218019	Chrysene	0.00E+00	0.00E+00
ROAD_49	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_49	7440508	Copper	0.00E+00	0.00E+00
ROAD_49	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_49	98828	Cumene	0.00E+00	0.00E+00
ROAD_49	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_49	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_49	111773	DEGME	0.00E+00	0.00E+00
ROAD_49	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_49	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_49	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_49	86737	Fluorene	0.00E+00	0.00E+00
ROAD_49	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_49	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_49	7647010	HCl	0.00E+00	0.00E+00
ROAD_49	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_49	110543	Hexane	0.00E+00	1.07E-04
ROAD_49	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_49	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_49	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_49	7439921	Lead	0.00E+00	0.00E+00
ROAD_49	7439965	Manganese	0.00E+00	0.00E+00
ROAD_49	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_49	78933	MEK	0.00E+00	0.00E+00
ROAD_49	7439976	Mercury	0.00E+00	0.00E+00
ROAD_49	108101	MIBK	0.00E+00	0.00E+00
ROAD_49	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_49	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_49	7664417	NH3	0.00E+00	0.00E+00
ROAD_49	7440020	Nickel	0.00E+00	0.00E+00
ROAD_49	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_49	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_49	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_49	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_49	1336363	PCBs	0.00E+00	0.00E+00
ROAD_49	98566	PCBTF	0.00E+00	0.00E+00
ROAD_49	107982	PGME	0.00E+00	0.00E+00
ROAD_49	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_49	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_49	108952	Phenol	0.00E+00	0.00E+00
ROAD_49	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_49	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_49	115071	Propylene	0.00E+00	0.00E+00
ROAD_49	129000	Pyrene	0.00E+00	0.00E+00
ROAD_49	7782492	Selenium	0.00E+00	0.00E+00
ROAD_49	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_49	100425	Styrene	0.00E+00	9.11E-05
ROAD_49	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_49	108883	Toluene	0.00E+00	0.00E+00
ROAD_49	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_49	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_49	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_49	7440666	Zinc	0.00E+00	0.00E+00
ROAD_49	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_50	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_50	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_50	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_50	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_50	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_50	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_50	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_50	107028	Acrolein	0.00E+00	0.00E+00
ROAD_50	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_50	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_50	120127	Anthracene	0.00E+00	0.00E+00
ROAD_50	7440360	Antimony	0.00E+00	0.00E+00
ROAD_50	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_50	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_50	50328	B[a]P	0.00E+00	0.00E+00
ROAD_50	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_50	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_50	71432	Benzene	0.00E+00	0.00E+00
ROAD_50	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_50	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_50	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_50	7440473	Chromium	0.00E+00	0.00E+00
ROAD_50	218019	Chrysene	0.00E+00	0.00E+00
ROAD_50	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_50	7440508	Copper	0.00E+00	0.00E+00
ROAD_50	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_50	98828	Cumene	0.00E+00	0.00E+00
ROAD_50	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_50	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_50	111773	DEGME	0.00E+00	0.00E+00
ROAD_50	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_50	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_50	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_50	86737	Fluorene	0.00E+00	0.00E+00
ROAD_50	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_50	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_50	7647010	HCl	0.00E+00	0.00E+00
ROAD_50	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_50	110543	Hexane	0.00E+00	1.07E-04
ROAD_50	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_50	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_50	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_50	7439921	Lead	0.00E+00	0.00E+00
ROAD_50	7439965	Manganese	0.00E+00	0.00E+00
ROAD_50	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_50	78933	MEK	0.00E+00	0.00E+00
ROAD_50	7439976	Mercury	0.00E+00	0.00E+00
ROAD_50	108101	MIBK	0.00E+00	0.00E+00
ROAD_50	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_50	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_50	7664417	NH3	0.00E+00	0.00E+00
ROAD_50	7440020	Nickel	0.00E+00	0.00E+00
ROAD_50	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_50	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_50	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_50	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_50	1336363	PCBs	0.00E+00	0.00E+00
ROAD_50	98566	PCBTF	0.00E+00	0.00E+00
ROAD_50	107982	PGME	0.00E+00	0.00E+00
ROAD_50	108656	PGMEA	0.00E+00	0.00E+00
ROAD_50	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_50	108952	Phenol	0.00E+00	0.00E+00
ROAD_50	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_50	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_50	115071	Propylene	0.00E+00	0.00E+00
ROAD_50	129000	Pyrene	0.00E+00	0.00E+00
ROAD_50	7782492	Selenium	0.00E+00	0.00E+00
ROAD_50	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_50	100425	Styrene	0.00E+00	9.11E-05
ROAD_50	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_50	108883	Toluene	0.00E+00	0.00E+00
ROAD_50	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_50	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_50	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_50	7440666	Zinc	0.00E+00	0.00E+00
ROAD_50	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_51	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_51	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_51	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_51	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_51	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_51	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_51	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_51	107028	Acrolein	0.00E+00	0.00E+00
ROAD_51	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_51	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_51	120127	Anthracene	0.00E+00	0.00E+00
ROAD_51	7440360	Antimony	0.00E+00	0.00E+00
ROAD_51	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_51	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_51	50328	B[a]P	0.00E+00	0.00E+00
ROAD_51	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_51	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_51	71432	Benzene	0.00E+00	0.00E+00
ROAD_51	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_51	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_51	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_51	7440473	Chromium	0.00E+00	0.00E+00
ROAD_51	218019	Chrysene	0.00E+00	0.00E+00
ROAD_51	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_51	7440508	Copper	0.00E+00	0.00E+00
ROAD_51	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_51	98828	Cumene	0.00E+00	0.00E+00
ROAD_51	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_51	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_51	111773	DEGME	0.00E+00	0.00E+00
ROAD_51	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_51	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_51	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_51	86737	Fluorene	0.00E+00	0.00E+00
ROAD_51	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_51	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_51	7647010	HCl	0.00E+00	0.00E+00
ROAD_51	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_51	110543	Hexane	0.00E+00	1.07E-04
ROAD_51	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_51	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_51	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_51	7439921	Lead	0.00E+00	0.00E+00
ROAD_51	7439965	Manganese	0.00E+00	0.00E+00
ROAD_51	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_51	78933	MEK	0.00E+00	0.00E+00
ROAD_51	7439976	Mercury	0.00E+00	0.00E+00
ROAD_51	108101	MIBK	0.00E+00	0.00E+00
ROAD_51	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_51	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_51	7664417	NH3	0.00E+00	0.00E+00
ROAD_51	7440020	Nickel	0.00E+00	0.00E+00
ROAD_51	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_51	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_51	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_51	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_51	1336363	PCBs	0.00E+00	0.00E+00
ROAD_51	98566	PCBTF	0.00E+00	0.00E+00
ROAD_51	107982	PGME	0.00E+00	0.00E+00
ROAD_51	108656	PGMEA	0.00E+00	0.00E+00
ROAD_51	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_51	108952	Phenol	0.00E+00	0.00E+00
ROAD_51	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_51	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_51	115071	Propylene	0.00E+00	0.00E+00
ROAD_51	129000	Pyrene	0.00E+00	0.00E+00
ROAD_51	7782492	Selenium	0.00E+00	0.00E+00
ROAD_51	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_51	100425	Styrene	0.00E+00	9.11E-05
ROAD_51	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_51	108883	Toluene	0.00E+00	0.00E+00
ROAD_51	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_51	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_51	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_51	7440666	Zinc	0.00E+00	0.00E+00
ROAD_51	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_52	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_52	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_52	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_52	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_52	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_52	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_52	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_52	107028	Acrolein	0.00E+00	0.00E+00
ROAD_52	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_52	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_52	120127	Anthracene	0.00E+00	0.00E+00
ROAD_52	7440360	Antimony	0.00E+00	0.00E+00
ROAD_52	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_52	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_52	50328	B[a]P	0.00E+00	0.00E+00
ROAD_52	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_52	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_52	71432	Benzene	0.00E+00	0.00E+00
ROAD_52	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_52	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_52	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_52	7440473	Chromium	0.00E+00	0.00E+00
ROAD_52	218019	Chrysene	0.00E+00	0.00E+00
ROAD_52	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_52	7440508	Copper	0.00E+00	0.00E+00
ROAD_52	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_52	98828	Cumene	0.00E+00	0.00E+00
ROAD_52	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_52	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_52	111773	DEGME	0.00E+00	0.00E+00
ROAD_52	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_52	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_52	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_52	86737	Fluorene	0.00E+00	0.00E+00
ROAD_52	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_52	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_52	7647010	HCl	0.00E+00	0.00E+00
ROAD_52	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_52	110543	Hexane	0.00E+00	1.07E-04
ROAD_52	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_52	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_52	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_52	7439921	Lead	0.00E+00	0.00E+00
ROAD_52	7439965	Manganese	0.00E+00	0.00E+00
ROAD_52	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_52	78933	MEK	0.00E+00	0.00E+00
ROAD_52	7439976	Mercury	0.00E+00	0.00E+00
ROAD_52	108101	MIBK	0.00E+00	0.00E+00
ROAD_52	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_52	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_52	7664417	NH3	0.00E+00	0.00E+00
ROAD_52	7440020	Nickel	0.00E+00	0.00E+00
ROAD_52	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_52	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_52	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_52	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_52	1336363	PCBs	0.00E+00	0.00E+00
ROAD_52	98566	PCBTF	0.00E+00	0.00E+00
ROAD_52	107982	PGME	0.00E+00	0.00E+00
ROAD_52	108656	PGMEA	0.00E+00	0.00E+00
ROAD_52	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_52	108952	Phenol	0.00E+00	0.00E+00
ROAD_52	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_52	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_52	115071	Propylene	0.00E+00	0.00E+00
ROAD_52	129000	Pyrene	0.00E+00	0.00E+00
ROAD_52	7782492	Selenium	0.00E+00	0.00E+00
ROAD_52	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_52	100425	Styrene	0.00E+00	9.11E-05
ROAD_52	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_52	108883	Toluene	0.00E+00	0.00E+00
ROAD_52	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_52	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_52	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_52	7440666	Zinc	0.00E+00	0.00E+00
ROAD_52	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_53	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_53	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_53	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_53	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_53	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_53	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_53	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_53	107028	Acrolein	0.00E+00	0.00E+00
ROAD_53	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_53	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_53	120127	Anthracene	0.00E+00	0.00E+00
ROAD_53	7440360	Antimony	0.00E+00	0.00E+00
ROAD_53	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_53	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_53	50328	B[a]P	0.00E+00	0.00E+00
ROAD_53	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_53	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_53	71432	Benzene	0.00E+00	0.00E+00
ROAD_53	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_53	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_53	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_53	7440473	Chromium	0.00E+00	0.00E+00
ROAD_53	218019	Chrysene	0.00E+00	0.00E+00
ROAD_53	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_53	7440508	Copper	0.00E+00	0.00E+00
ROAD_53	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_53	98828	Cumene	0.00E+00	0.00E+00
ROAD_53	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_53	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_53	111773	DEGME	0.00E+00	0.00E+00
ROAD_53	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_53	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_53	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_53	86737	Fluorene	0.00E+00	0.00E+00
ROAD_53	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_53	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_53	7647010	HCl	0.00E+00	0.00E+00
ROAD_53	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_53	110543	Hexane	0.00E+00	1.07E-04
ROAD_53	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_53	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_53	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_53	7439921	Lead	0.00E+00	0.00E+00
ROAD_53	7439965	Manganese	0.00E+00	0.00E+00
ROAD_53	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_53	78933	MEK	0.00E+00	0.00E+00
ROAD_53	7439976	Mercury	0.00E+00	0.00E+00
ROAD_53	108101	MIBK	0.00E+00	0.00E+00
ROAD_53	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_53	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_53	7664417	NH3	0.00E+00	0.00E+00
ROAD_53	7440020	Nickel	0.00E+00	0.00E+00
ROAD_53	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_53	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_53	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_53	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_53	1336363	PCBs	0.00E+00	0.00E+00
ROAD_53	98566	PCBTF	0.00E+00	0.00E+00
ROAD_53	107982	PGME	0.00E+00	0.00E+00
ROAD_53	108656	PGMEA	0.00E+00	0.00E+00
ROAD_53	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_53	108952	Phenol	0.00E+00	0.00E+00
ROAD_53	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_53	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_53	115071	Propylene	0.00E+00	0.00E+00
ROAD_53	129000	Pyrene	0.00E+00	0.00E+00
ROAD_53	7782492	Selenium	0.00E+00	0.00E+00
ROAD_53	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_53	100425	Styrene	0.00E+00	9.11E-05
ROAD_53	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_53	108883	Toluene	0.00E+00	0.00E+00
ROAD_53	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_53	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_53	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_53	7440666	Zinc	0.00E+00	0.00E+00
ROAD_53	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_54	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_54	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_54	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_54	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_54	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_54	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_54	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_54	107028	Acrolein	0.00E+00	0.00E+00
ROAD_54	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_54	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_54	120127	Anthracene	0.00E+00	0.00E+00
ROAD_54	7440360	Antimony	0.00E+00	0.00E+00
ROAD_54	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_54	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_54	50328	B[a]P	0.00E+00	0.00E+00
ROAD_54	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_54	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_54	71432	Benzene	0.00E+00	0.00E+00
ROAD_54	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_54	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_54	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_54	7440473	Chromium	0.00E+00	0.00E+00
ROAD_54	218019	Chrysene	0.00E+00	0.00E+00
ROAD_54	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_54	7440508	Copper	0.00E+00	0.00E+00
ROAD_54	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_54	98828	Cumene	0.00E+00	0.00E+00
ROAD_54	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_54	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_54	111773	DEGME	0.00E+00	0.00E+00
ROAD_54	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_54	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_54	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_54	86737	Fluorene	0.00E+00	0.00E+00
ROAD_54	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_54	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_54	7647010	HCl	0.00E+00	0.00E+00
ROAD_54	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_54	110543	Hexane	0.00E+00	1.07E-04
ROAD_54	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_54	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_54	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_54	7439921	Lead	0.00E+00	0.00E+00
ROAD_54	7439965	Manganese	0.00E+00	0.00E+00
ROAD_54	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_54	78933	MEK	0.00E+00	0.00E+00
ROAD_54	7439976	Mercury	0.00E+00	0.00E+00
ROAD_54	108101	MIBK	0.00E+00	0.00E+00
ROAD_54	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_54	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_54	7664417	NH3	0.00E+00	0.00E+00
ROAD_54	7440020	Nickel	0.00E+00	0.00E+00
ROAD_54	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_54	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_54	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_54	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_54	1336363	PCBs	0.00E+00	0.00E+00
ROAD_54	98566	PCBTF	0.00E+00	0.00E+00
ROAD_54	107982	PGME	0.00E+00	0.00E+00
ROAD_54	108656	PGMEA	0.00E+00	0.00E+00
ROAD_54	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_54	108952	Phenol	0.00E+00	0.00E+00
ROAD_54	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_54	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_54	115071	Propylene	0.00E+00	0.00E+00
ROAD_54	129000	Pyrene	0.00E+00	0.00E+00
ROAD_54	7782492	Selenium	0.00E+00	0.00E+00
ROAD_54	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_54	100425	Styrene	0.00E+00	9.11E-05
ROAD_54	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_54	108883	Toluene	0.00E+00	0.00E+00
ROAD_54	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_54	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_54	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_54	7440666	Zinc	0.00E+00	0.00E+00
ROAD_54	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_55	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_55	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_55	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_55	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_55	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_55	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_55	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_55	107028	Acrolein	0.00E+00	0.00E+00
ROAD_55	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_55	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_55	120127	Anthracene	0.00E+00	0.00E+00
ROAD_55	7440360	Antimony	0.00E+00	0.00E+00
ROAD_55	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_55	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_55	50328	B[a]P	0.00E+00	0.00E+00
ROAD_55	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_55	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_55	71432	Benzene	0.00E+00	0.00E+00
ROAD_55	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_55	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_55	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_55	7440473	Chromium	0.00E+00	0.00E+00
ROAD_55	218019	Chrysene	0.00E+00	0.00E+00
ROAD_55	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_55	7440508	Copper	0.00E+00	0.00E+00
ROAD_55	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_55	98828	Cumene	0.00E+00	0.00E+00
ROAD_55	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_55	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_55	111773	DEGME	0.00E+00	0.00E+00
ROAD_55	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_55	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_55	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_55	86737	Fluorene	0.00E+00	0.00E+00
ROAD_55	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_55	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_55	7647010	HCl	0.00E+00	0.00E+00
ROAD_55	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_55	110543	Hexane	0.00E+00	1.07E-04
ROAD_55	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_55	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_55	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_55	7439921	Lead	0.00E+00	0.00E+00
ROAD_55	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_55	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_55	78933	MEK	0.00E+00	0.00E+00
ROAD_55	7439976	Mercury	0.00E+00	0.00E+00
ROAD_55	108101	MIBK	0.00E+00	0.00E+00
ROAD_55	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_55	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_55	7664417	NH3	0.00E+00	0.00E+00
ROAD_55	7440020	Nickel	0.00E+00	0.00E+00
ROAD_55	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_55	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_55	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_55	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_55	1336363	PCBs	0.00E+00	0.00E+00
ROAD_55	98566	PCBTF	0.00E+00	0.00E+00
ROAD_55	107982	PGME	0.00E+00	0.00E+00
ROAD_55	108656	PGMEA	0.00E+00	0.00E+00
ROAD_55	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_55	108952	Phenol	0.00E+00	0.00E+00
ROAD_55	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_55	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_55	115071	Propylene	0.00E+00	0.00E+00
ROAD_55	129000	Pyrene	0.00E+00	0.00E+00
ROAD_55	7782492	Selenium	0.00E+00	0.00E+00
ROAD_55	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_55	100425	Styrene	0.00E+00	9.11E-05
ROAD_55	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_55	108883	Toluene	0.00E+00	0.00E+00
ROAD_55	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_55	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_55	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_55	7440666	Zinc	0.00E+00	0.00E+00
ROAD_55	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_56	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_56	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_56	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_56	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_56	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_56	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_56	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_56	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_56	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_56	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_56	120127	Anthracene	0.00E+00	0.00E+00
ROAD_56	7440360	Antimony	0.00E+00	0.00E+00
ROAD_56	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_56	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_56	50328	B[a]P	0.00E+00	0.00E+00
ROAD_56	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_56	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_56	71432	Benzene	0.00E+00	0.00E+00
ROAD_56	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_56	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_56	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_56	7440473	Chromium	0.00E+00	0.00E+00
ROAD_56	218019	Chrysene	0.00E+00	0.00E+00
ROAD_56	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_56	7440508	Copper	0.00E+00	0.00E+00
ROAD_56	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_56	98828	Cumene	0.00E+00	0.00E+00
ROAD_56	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_56	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_56	111773	DEGME	0.00E+00	0.00E+00
ROAD_56	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_56	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_56	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_56	86737	Fluorene	0.00E+00	0.00E+00
ROAD_56	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_56	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_56	7647010	HCl	0.00E+00	0.00E+00
ROAD_56	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_56	110543	Hexane	0.00E+00	1.07E-04
ROAD_56	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_56	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_56	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_56	7439921	Lead	0.00E+00	0.00E+00
ROAD_56	7439965	Manganese	0.00E+00	0.00E+00
ROAD_56	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_56	78933	MEK	0.00E+00	0.00E+00
ROAD_56	7439976	Mercury	0.00E+00	0.00E+00
ROAD_56	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_56	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_56	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_56	7664417	NH3	0.00E+00	0.00E+00
ROAD_56	7440020	Nickel	0.00E+00	0.00E+00
ROAD_56	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_56	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_56	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_56	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_56	1336363	PCBs	0.00E+00	0.00E+00
ROAD_56	98566	PCBTF	0.00E+00	0.00E+00
ROAD_56	107982	PGME	0.00E+00	0.00E+00
ROAD_56	108656	PGMEA	0.00E+00	0.00E+00
ROAD_56	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_56	108952	Phenol	0.00E+00	0.00E+00
ROAD_56	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_56	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_56	115071	Propylene	0.00E+00	0.00E+00
ROAD_56	129000	Pyrene	0.00E+00	0.00E+00
ROAD_56	7782492	Selenium	0.00E+00	0.00E+00
ROAD_56	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_56	100425	Styrene	0.00E+00	9.11E-05
ROAD_56	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_56	108883	Toluene	0.00E+00	0.00E+00
ROAD_56	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_56	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_56	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_56	7440666	Zinc	0.00E+00	0.00E+00
ROAD_56	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_57	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_57	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_57	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_57	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_57	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_57	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_57	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_57	107028	Acrolein	0.00E+00	0.00E+00
ROAD_57	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_57	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_57	120127	Anthracene	0.00E+00	0.00E+00
ROAD_57	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_57	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_57	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_57	50328	B[a]P	0.00E+00	0.00E+00
ROAD_57	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_57	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_57	71432	Benzene	0.00E+00	0.00E+00
ROAD_57	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_57	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_57	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_57	7440473	Chromium	0.00E+00	0.00E+00
ROAD_57	218019	Chrysene	0.00E+00	0.00E+00
ROAD_57	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_57	7440508	Copper	0.00E+00	0.00E+00
ROAD_57	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_57	98828	Cumene	0.00E+00	0.00E+00
ROAD_57	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_57	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_57	111773	DEGME	0.00E+00	0.00E+00
ROAD_57	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_57	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_57	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_57	86737	Fluorene	0.00E+00	0.00E+00
ROAD_57	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_57	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_57	7647010	HCl	0.00E+00	0.00E+00
ROAD_57	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_57	110543	Hexane	0.00E+00	1.07E-04
ROAD_57	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_57	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_57	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_57	7439921	Lead	0.00E+00	0.00E+00
ROAD_57	7439965	Manganese	0.00E+00	0.00E+00
ROAD_57	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_57	78933	MEK	0.00E+00	0.00E+00
ROAD_57	7439976	Mercury	0.00E+00	0.00E+00
ROAD_57	108101	MIBK	0.00E+00	0.00E+00
ROAD_57	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_57	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_57	7664417	NH3	0.00E+00	0.00E+00
ROAD_57	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_57	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_57	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_57	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_57	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_57	1336363	PCBs	0.00E+00	0.00E+00
ROAD_57	98566	PCBTF	0.00E+00	0.00E+00
ROAD_57	107982	PGME	0.00E+00	0.00E+00
ROAD_57	108656	PGMEA	0.00E+00	0.00E+00
ROAD_57	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_57	108952	Phenol	0.00E+00	0.00E+00
ROAD_57	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_57	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_57	115071	Propylene	0.00E+00	0.00E+00
ROAD_57	129000	Pyrene	0.00E+00	0.00E+00
ROAD_57	7782492	Selenium	0.00E+00	0.00E+00
ROAD_57	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_57	100425	Styrene	0.00E+00	9.11E-05
ROAD_57	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_57	108883	Toluene	0.00E+00	0.00E+00
ROAD_57	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_57	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_57	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_57	7440666	Zinc	0.00E+00	0.00E+00
ROAD_57	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_58	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_58	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_58	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_58	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_58	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_58	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_58	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_58	107028	Acrolein	0.00E+00	0.00E+00
ROAD_58	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_58	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_58	120127	Anthracene	0.00E+00	0.00E+00
ROAD_58	7440360	Antimony	0.00E+00	0.00E+00
ROAD_58	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_58	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_58	50328	B[a]P	0.00E+00	0.00E+00
ROAD_58	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_58	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_58	71432	Benzene	0.00E+00	0.00E+00
ROAD_58	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_58	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_58	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_58	7440473	Chromium	0.00E+00	0.00E+00
ROAD_58	218019	Chrysene	0.00E+00	0.00E+00
ROAD_58	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_58	7440508	Copper	0.00E+00	0.00E+00
ROAD_58	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_58	98828	Cumene	0.00E+00	0.00E+00
ROAD_58	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_58	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_58	111773	DEGME	0.00E+00	0.00E+00
ROAD_58	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_58	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_58	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_58	86737	Fluorene	0.00E+00	0.00E+00
ROAD_58	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_58	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_58	7647010	HCl	0.00E+00	0.00E+00
ROAD_58	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_58	110543	Hexane	0.00E+00	1.07E-04
ROAD_58	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_58	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_58	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_58	7439921	Lead	0.00E+00	0.00E+00
ROAD_58	7439965	Manganese	0.00E+00	0.00E+00
ROAD_58	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_58	78933	MEK	0.00E+00	0.00E+00
ROAD_58	7439976	Mercury	0.00E+00	0.00E+00
ROAD_58	108101	MIBK	0.00E+00	0.00E+00
ROAD_58	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_58	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_58	7664417	NH3	0.00E+00	0.00E+00
ROAD_58	7440020	Nickel	0.00E+00	0.00E+00
ROAD_58	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_58	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_58	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_58	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_58	1336363	PCBs	0.00E+00	0.00E+00
ROAD_58	98566	PCBTF	0.00E+00	0.00E+00
ROAD_58	107982	PGME	0.00E+00	0.00E+00
ROAD_58	108656	PGMEA	0.00E+00	0.00E+00
ROAD_58	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_58	108952	Phenol	0.00E+00	0.00E+00
ROAD_58	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_58	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_58	115071	Propylene	0.00E+00	0.00E+00
ROAD_58	129000	Pyrene	0.00E+00	0.00E+00
ROAD_58	7782492	Selenium	0.00E+00	0.00E+00
ROAD_58	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_58	100425	Styrene	0.00E+00	9.11E-05
ROAD_58	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_58	108883	Toluene	0.00E+00	0.00E+00
ROAD_58	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_58	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_58	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_58	7440666	Zinc	0.00E+00	0.00E+00
ROAD_58	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_59	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_59	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_59	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_59	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_59	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_59	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_59	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_59	107028	Acrolein	0.00E+00	0.00E+00
ROAD_59	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_59	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_59	120127	Anthracene	0.00E+00	0.00E+00
ROAD_59	7440360	Antimony	0.00E+00	0.00E+00
ROAD_59	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_59	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_59	50328	B[a]P	0.00E+00	0.00E+00
ROAD_59	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_59	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_59	71432	Benzene	0.00E+00	0.00E+00
ROAD_59	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_59	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_59	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_59	7440473	Chromium	0.00E+00	0.00E+00
ROAD_59	218019	Chrysene	0.00E+00	0.00E+00
ROAD_59	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_59	7440508	Copper	0.00E+00	0.00E+00
ROAD_59	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_59	98828	Cumene	0.00E+00	0.00E+00
ROAD_59	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_59	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_59	111773	DEGME	0.00E+00	0.00E+00
ROAD_59	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_59	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_59	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_59	86737	Fluorene	0.00E+00	0.00E+00
ROAD_59	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_59	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_59	7647010	HCl	0.00E+00	0.00E+00
ROAD_59	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_59	110543	Hexane	0.00E+00	1.07E-04
ROAD_59	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_59	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_59	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_59	7439921	Lead	0.00E+00	0.00E+00
ROAD_59	7439965	Manganese	0.00E+00	0.00E+00
ROAD_59	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_59	78933	MEK	0.00E+00	0.00E+00
ROAD_59	7439976	Mercury	0.00E+00	0.00E+00
ROAD_59	108101	MIBK	0.00E+00	0.00E+00
ROAD_59	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_59	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_59	7664417	NH3	0.00E+00	0.00E+00
ROAD_59	7440020	Nickel	0.00E+00	0.00E+00
ROAD_59	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_59	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_59	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_59	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_59	1336363	PCBs	0.00E+00	0.00E+00
ROAD_59	98566	PCBTF	0.00E+00	0.00E+00
ROAD_59	107982	PGME	0.00E+00	0.00E+00
ROAD_59	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_59	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_59	108952	Phenol	0.00E+00	0.00E+00
ROAD_59	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_59	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_59	115071	Propylene	0.00E+00	0.00E+00
ROAD_59	129000	Pyrene	0.00E+00	0.00E+00
ROAD_59	7782492	Selenium	0.00E+00	0.00E+00
ROAD_59	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_59	100425	Styrene	0.00E+00	9.11E-05
ROAD_59	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_59	108883	Toluene	0.00E+00	0.00E+00
ROAD_59	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_59	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_59	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_59	7440666	Zinc	0.00E+00	0.00E+00
ROAD_59	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_60	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_60	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_60	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_60	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_60	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_60	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_60	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_60	107028	Acrolein	0.00E+00	0.00E+00
ROAD_60	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_60	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_60	120127	Anthracene	0.00E+00	0.00E+00
ROAD_60	7440360	Antimony	0.00E+00	0.00E+00
ROAD_60	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_60	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_60	50328	B[a]P	0.00E+00	0.00E+00
ROAD_60	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_60	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_60	71432	Benzene	0.00E+00	0.00E+00
ROAD_60	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_60	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_60	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_60	7440473	Chromium	0.00E+00	0.00E+00
ROAD_60	218019	Chrysene	0.00E+00	0.00E+00
ROAD_60	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_60	7440508	Copper	0.00E+00	0.00E+00
ROAD_60	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_60	98828	Cumene	0.00E+00	0.00E+00
ROAD_60	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_60	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_60	111773	DEGME	0.00E+00	0.00E+00
ROAD_60	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_60	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_60	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_60	86737	Fluorene	0.00E+00	0.00E+00
ROAD_60	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_60	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_60	7647010	HCl	0.00E+00	0.00E+00
ROAD_60	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_60	110543	Hexane	0.00E+00	1.07E-04
ROAD_60	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_60	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_60	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_60	7439921	Lead	0.00E+00	0.00E+00
ROAD_60	7439965	Manganese	0.00E+00	0.00E+00
ROAD_60	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_60	78933	MEK	0.00E+00	0.00E+00
ROAD_60	7439976	Mercury	0.00E+00	0.00E+00
ROAD_60	108101	MIBK	0.00E+00	0.00E+00
ROAD_60	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_60	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_60	7664417	NH3	0.00E+00	0.00E+00
ROAD_60	7440020	Nickel	0.00E+00	0.00E+00
ROAD_60	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_60	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_60	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_60	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_60	1336363	PCBs	0.00E+00	0.00E+00
ROAD_60	98566	PCBTF	0.00E+00	0.00E+00
ROAD_60	107982	PGME	0.00E+00	0.00E+00
ROAD_60	108656	PGMEA	0.00E+00	0.00E+00
ROAD_60	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_60	108952	Phenol	0.00E+00	0.00E+00
ROAD_60	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_60	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_60	115071	Propylene	0.00E+00	0.00E+00
ROAD_60	129000	Pyrene	0.00E+00	0.00E+00
ROAD_60	7782492	Selenium	0.00E+00	0.00E+00
ROAD_60	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_60	100425	Styrene	0.00E+00	9.11E-05
ROAD_60	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_60	108883	Toluene	0.00E+00	0.00E+00
ROAD_60	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_60	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_60	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_60	7440666	Zinc	0.00E+00	0.00E+00
ROAD_60	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_61	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_61	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_61	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_61	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_61	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_61	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_61	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_61	107028	Acrolein	0.00E+00	0.00E+00
ROAD_61	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_61	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_61	120127	Anthracene	0.00E+00	0.00E+00
ROAD_61	7440360	Antimony	0.00E+00	0.00E+00
ROAD_61	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_61	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_61	50328	B[a]P	0.00E+00	0.00E+00
ROAD_61	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_61	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_61	71432	Benzene	0.00E+00	0.00E+00
ROAD_61	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_61	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_61	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_61	7440473	Chromium	0.00E+00	0.00E+00
ROAD_61	218019	Chrysene	0.00E+00	0.00E+00
ROAD_61	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_61	7440508	Copper	0.00E+00	0.00E+00
ROAD_61	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_61	98828	Cumene	0.00E+00	0.00E+00
ROAD_61	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_61	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_61	111773	DEGME	0.00E+00	0.00E+00
ROAD_61	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_61	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_61	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_61	86737	Fluorene	0.00E+00	0.00E+00
ROAD_61	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_61	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_61	7647010	HCl	0.00E+00	0.00E+00
ROAD_61	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_61	110543	Hexane	0.00E+00	1.07E-04
ROAD_61	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_61	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_61	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_61	7439921	Lead	0.00E+00	0.00E+00
ROAD_61	7439965	Manganese	0.00E+00	0.00E+00
ROAD_61	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_61	78933	MEK	0.00E+00	0.00E+00
ROAD_61	7439976	Mercury	0.00E+00	0.00E+00
ROAD_61	108101	MIBK	0.00E+00	0.00E+00
ROAD_61	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_61	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_61	7664417	NH3	0.00E+00	0.00E+00
ROAD_61	7440020	Nickel	0.00E+00	0.00E+00
ROAD_61	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_61	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_61	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_61	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_61	1336363	PCBs	0.00E+00	0.00E+00
ROAD_61	98566	PCBTF	0.00E+00	0.00E+00
ROAD_61	107982	PGME	0.00E+00	0.00E+00
ROAD_61	108656	PGMEA	0.00E+00	0.00E+00
ROAD_61	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_61	108952	Phenol	0.00E+00	0.00E+00
ROAD_61	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_61	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_61	115071	Propylene	0.00E+00	0.00E+00
ROAD_61	129000	Pyrene	0.00E+00	0.00E+00
ROAD_61	7782492	Selenium	0.00E+00	0.00E+00
ROAD_61	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_61	100425	Styrene	0.00E+00	9.11E-05
ROAD_61	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_61	108883	Toluene	0.00E+00	0.00E+00
ROAD_61	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_61	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_61	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_61	7440666	Zinc	0.00E+00	0.00E+00
ROAD_61	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_62	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_62	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_62	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_62	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_62	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_62	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_62	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_62	107028	Acrolein	0.00E+00	0.00E+00
ROAD_62	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_62	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_62	120127	Anthracene	0.00E+00	0.00E+00
ROAD_62	7440360	Antimony	0.00E+00	0.00E+00
ROAD_62	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_62	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_62	50328	B[a]P	0.00E+00	0.00E+00
ROAD_62	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_62	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_62	71432	Benzene	0.00E+00	0.00E+00
ROAD_62	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_62	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_62	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_62	7440473	Chromium	0.00E+00	0.00E+00
ROAD_62	218019	Chrysene	0.00E+00	0.00E+00
ROAD_62	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_62	7440508	Copper	0.00E+00	0.00E+00
ROAD_62	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_62	98828	Cumene	0.00E+00	0.00E+00
ROAD_62	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_62	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_62	111773	DEGME	0.00E+00	0.00E+00
ROAD_62	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_62	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_62	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_62	86737	Fluorene	0.00E+00	0.00E+00
ROAD_62	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_62	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_62	7647010	HCl	0.00E+00	0.00E+00
ROAD_62	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_62	110543	Hexane	0.00E+00	1.07E-04
ROAD_62	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_62	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_62	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_62	7439921	Lead	0.00E+00	0.00E+00
ROAD_62	7439965	Manganese	0.00E+00	0.00E+00
ROAD_62	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_62	78933	MEK	0.00E+00	0.00E+00
ROAD_62	7439976	Mercury	0.00E+00	0.00E+00
ROAD_62	108101	MIBK	0.00E+00	0.00E+00
ROAD_62	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_62	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_62	7664417	NH3	0.00E+00	0.00E+00
ROAD_62	7440020	Nickel	0.00E+00	0.00E+00
ROAD_62	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_62	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_62	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_62	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_62	1336363	PCBs	0.00E+00	0.00E+00
ROAD_62	98566	PCBTF	0.00E+00	0.00E+00
ROAD_62	107982	PGME	0.00E+00	0.00E+00
ROAD_62	108656	PGMEA	0.00E+00	0.00E+00
ROAD_62	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_62	108952	Phenol	0.00E+00	0.00E+00
ROAD_62	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_62	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_62	115071	Propylene	0.00E+00	0.00E+00
ROAD_62	129000	Pyrene	0.00E+00	0.00E+00
ROAD_62	7782492	Selenium	0.00E+00	0.00E+00
ROAD_62	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_62	100425	Styrene	0.00E+00	9.11E-05
ROAD_62	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_62	108883	Toluene	0.00E+00	0.00E+00
ROAD_62	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_62	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_62	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_62	7440666	Zinc	0.00E+00	0.00E+00
ROAD_62	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_63	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_63	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_63	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_63	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_63	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_63	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_63	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_63	107028	Acrolein	0.00E+00	0.00E+00
ROAD_63	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_63	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_63	120127	Anthracene	0.00E+00	0.00E+00
ROAD_63	7440360	Antimony	0.00E+00	0.00E+00
ROAD_63	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_63	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_63	50328	B[a]P	0.00E+00	0.00E+00
ROAD_63	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_63	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_63	71432	Benzene	0.00E+00	0.00E+00
ROAD_63	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_63	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_63	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_63	7440473	Chromium	0.00E+00	0.00E+00
ROAD_63	218019	Chrysene	0.00E+00	0.00E+00
ROAD_63	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_63	7440508	Copper	0.00E+00	0.00E+00
ROAD_63	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_63	98828	Cumene	0.00E+00	0.00E+00
ROAD_63	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_63	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_63	111773	DEGME	0.00E+00	0.00E+00
ROAD_63	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_63	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_63	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_63	86737	Fluorene	0.00E+00	0.00E+00
ROAD_63	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_63	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_63	7647010	HCl	0.00E+00	0.00E+00
ROAD_63	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_63	110543	Hexane	0.00E+00	1.07E-04
ROAD_63	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_63	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_63	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_63	7439921	Lead	0.00E+00	0.00E+00
ROAD_63	7439965	Manganese	0.00E+00	0.00E+00
ROAD_63	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_63	78933	MEK	0.00E+00	0.00E+00
ROAD_63	7439976	Mercury	0.00E+00	0.00E+00
ROAD_63	108101	MIBK	0.00E+00	0.00E+00
ROAD_63	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_63	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_63	7664417	NH3	0.00E+00	0.00E+00
ROAD_63	7440020	Nickel	0.00E+00	0.00E+00
ROAD_63	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_63	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_63	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_63	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_63	1336363	PCBs	0.00E+00	0.00E+00
ROAD_63	98566	PCBTF	0.00E+00	0.00E+00
ROAD_63	107982	PGME	0.00E+00	0.00E+00
ROAD_63	108656	PGMEA	0.00E+00	0.00E+00
ROAD_63	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_63	108952	Phenol	0.00E+00	0.00E+00
ROAD_63	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_63	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_63	115071	Propylene	0.00E+00	0.00E+00
ROAD_63	129000	Pyrene	0.00E+00	0.00E+00
ROAD_63	7782492	Selenium	0.00E+00	0.00E+00
ROAD_63	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_63	100425	Styrene	0.00E+00	9.11E-05
ROAD_63	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_63	108883	Toluene	0.00E+00	0.00E+00
ROAD_63	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_63	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_63	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_63	7440666	Zinc	0.00E+00	0.00E+00
ROAD_63	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_64	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_64	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_64	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_64	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_64	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_64	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_64	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_64	107028	Acrolein	0.00E+00	0.00E+00
ROAD_64	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_64	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_64	120127	Anthracene	0.00E+00	0.00E+00
ROAD_64	7440360	Antimony	0.00E+00	0.00E+00
ROAD_64	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_64	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_64	50328	B[a]P	0.00E+00	0.00E+00
ROAD_64	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_64	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_64	71432	Benzene	0.00E+00	0.00E+00
ROAD_64	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_64	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_64	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_64	7440473	Chromium	0.00E+00	0.00E+00
ROAD_64	218019	Chrysene	0.00E+00	0.00E+00
ROAD_64	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_64	7440508	Copper	0.00E+00	0.00E+00
ROAD_64	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_64	98828	Cumene	0.00E+00	0.00E+00
ROAD_64	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_64	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_64	111773	DEGME	0.00E+00	0.00E+00
ROAD_64	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_64	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_64	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_64	86737	Fluorene	0.00E+00	0.00E+00
ROAD_64	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_64	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_64	7647010	HCl	0.00E+00	0.00E+00
ROAD_64	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_64	110543	Hexane	0.00E+00	1.07E-04
ROAD_64	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_64	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_64	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_64	7439921	Lead	0.00E+00	0.00E+00
ROAD_64	7439965	Manganese	0.00E+00	0.00E+00
ROAD_64	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_64	78933	MEK	0.00E+00	0.00E+00
ROAD_64	7439976	Mercury	0.00E+00	0.00E+00
ROAD_64	108101	MIBK	0.00E+00	0.00E+00
ROAD_64	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_64	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_64	7664417	NH3	0.00E+00	0.00E+00
ROAD_64	7440020	Nickel	0.00E+00	0.00E+00
ROAD_64	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_64	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_64	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_64	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_64	1336363	PCBs	0.00E+00	0.00E+00
ROAD_64	98566	PCBTF	0.00E+00	0.00E+00
ROAD_64	107982	PGME	0.00E+00	0.00E+00
ROAD_64	108656	PGMEA	0.00E+00	0.00E+00
ROAD_64	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_64	108952	Phenol	0.00E+00	0.00E+00
ROAD_64	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_64	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_64	115071	Propylene	0.00E+00	0.00E+00
ROAD_64	129000	Pyrene	0.00E+00	0.00E+00
ROAD_64	7782492	Selenium	0.00E+00	0.00E+00
ROAD_64	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_64	100425	Styrene	0.00E+00	9.11E-05
ROAD_64	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_64	108883	Toluene	0.00E+00	0.00E+00
ROAD_64	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_64	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_64	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_64	7440666	Zinc	0.00E+00	0.00E+00
ROAD_64	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_65	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_65	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_65	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_65	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_65	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_65	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_65	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_65	107028	Acrolein	0.00E+00	0.00E+00
ROAD_65	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_65	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_65	120127	Anthracene	0.00E+00	0.00E+00
ROAD_65	7440360	Antimony	0.00E+00	0.00E+00
ROAD_65	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_65	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_65	50328	B[a]P	0.00E+00	0.00E+00
ROAD_65	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_65	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_65	71432	Benzene	0.00E+00	0.00E+00
ROAD_65	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_65	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_65	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_65	7440473	Chromium	0.00E+00	0.00E+00
ROAD_65	218019	Chrysene	0.00E+00	0.00E+00
ROAD_65	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_65	7440508	Copper	0.00E+00	0.00E+00
ROAD_65	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_65	98828	Cumene	0.00E+00	0.00E+00
ROAD_65	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_65	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_65	111773	DEGME	0.00E+00	0.00E+00
ROAD_65	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_65	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_65	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_65	86737	Fluorene	0.00E+00	0.00E+00
ROAD_65	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_65	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_65	7647010	HCl	0.00E+00	0.00E+00
ROAD_65	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_65	110543	Hexane	0.00E+00	1.07E-04
ROAD_65	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_65	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_65	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_65	7439921	Lead	0.00E+00	0.00E+00
ROAD_65	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_65	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_65	78933	MEK	0.00E+00	0.00E+00
ROAD_65	7439976	Mercury	0.00E+00	0.00E+00
ROAD_65	108101	MIBK	0.00E+00	0.00E+00
ROAD_65	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_65	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_65	7664417	NH3	0.00E+00	0.00E+00
ROAD_65	7440020	Nickel	0.00E+00	0.00E+00
ROAD_65	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_65	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_65	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_65	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_65	1336363	PCBs	0.00E+00	0.00E+00
ROAD_65	98566	PCBTF	0.00E+00	0.00E+00
ROAD_65	107982	PGME	0.00E+00	0.00E+00
ROAD_65	108656	PGMEA	0.00E+00	0.00E+00
ROAD_65	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_65	108952	Phenol	0.00E+00	0.00E+00
ROAD_65	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_65	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_65	115071	Propylene	0.00E+00	0.00E+00
ROAD_65	129000	Pyrene	0.00E+00	0.00E+00
ROAD_65	7782492	Selenium	0.00E+00	0.00E+00
ROAD_65	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_65	100425	Styrene	0.00E+00	9.11E-05
ROAD_65	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_65	108883	Toluene	0.00E+00	0.00E+00
ROAD_65	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_65	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_65	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_65	7440666	Zinc	0.00E+00	0.00E+00
ROAD_65	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_66	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_66	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_66	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_66	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_66	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_66	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_66	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_66	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_66	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_66	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_66	120127	Anthracene	0.00E+00	0.00E+00
ROAD_66	7440360	Antimony	0.00E+00	0.00E+00
ROAD_66	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_66	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_66	50328	B[a]P	0.00E+00	0.00E+00
ROAD_66	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_66	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_66	71432	Benzene	0.00E+00	0.00E+00
ROAD_66	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_66	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_66	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_66	7440473	Chromium	0.00E+00	0.00E+00
ROAD_66	218019	Chrysene	0.00E+00	0.00E+00
ROAD_66	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_66	7440508	Copper	0.00E+00	0.00E+00
ROAD_66	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_66	98828	Cumene	0.00E+00	0.00E+00
ROAD_66	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_66	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_66	111773	DEGME	0.00E+00	0.00E+00
ROAD_66	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_66	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_66	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_66	86737	Fluorene	0.00E+00	0.00E+00
ROAD_66	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_66	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_66	7647010	HCl	0.00E+00	0.00E+00
ROAD_66	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_66	110543	Hexane	0.00E+00	1.07E-04
ROAD_66	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_66	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_66	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_66	7439921	Lead	0.00E+00	0.00E+00
ROAD_66	7439965	Manganese	0.00E+00	0.00E+00
ROAD_66	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_66	78933	MEK	0.00E+00	0.00E+00
ROAD_66	7439976	Mercury	0.00E+00	0.00E+00
ROAD_66	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_66	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_66	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_66	7664417	NH3	0.00E+00	0.00E+00
ROAD_66	7440020	Nickel	0.00E+00	0.00E+00
ROAD_66	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_66	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_66	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_66	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_66	1336363	PCBs	0.00E+00	0.00E+00
ROAD_66	98566	PCBTF	0.00E+00	0.00E+00
ROAD_66	107982	PGME	0.00E+00	0.00E+00
ROAD_66	108656	PGMEA	0.00E+00	0.00E+00
ROAD_66	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_66	108952	Phenol	0.00E+00	0.00E+00
ROAD_66	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_66	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_66	115071	Propylene	0.00E+00	0.00E+00
ROAD_66	129000	Pyrene	0.00E+00	0.00E+00
ROAD_66	7782492	Selenium	0.00E+00	0.00E+00
ROAD_66	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_66	100425	Styrene	0.00E+00	9.11E-05
ROAD_66	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_66	108883	Toluene	0.00E+00	0.00E+00
ROAD_66	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_66	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_66	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_66	7440666	Zinc	0.00E+00	0.00E+00
ROAD_66	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_67	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_67	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_67	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_67	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_67	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_67	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_67	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_67	107028	Acrolein	0.00E+00	0.00E+00
ROAD_67	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_67	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_67	120127	Anthracene	0.00E+00	0.00E+00
ROAD_67	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_67	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_67	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_67	50328	B[a]P	0.00E+00	0.00E+00
ROAD_67	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_67	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_67	71432	Benzene	0.00E+00	0.00E+00
ROAD_67	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_67	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_67	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_67	7440473	Chromium	0.00E+00	0.00E+00
ROAD_67	218019	Chrysene	0.00E+00	0.00E+00
ROAD_67	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_67	7440508	Copper	0.00E+00	0.00E+00
ROAD_67	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_67	98828	Cumene	0.00E+00	0.00E+00
ROAD_67	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_67	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_67	111773	DEGME	0.00E+00	0.00E+00
ROAD_67	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_67	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_67	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_67	86737	Fluorene	0.00E+00	0.00E+00
ROAD_67	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_67	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_67	7647010	HCl	0.00E+00	0.00E+00
ROAD_67	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_67	110543	Hexane	0.00E+00	1.07E-04
ROAD_67	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_67	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_67	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_67	7439921	Lead	0.00E+00	0.00E+00
ROAD_67	7439965	Manganese	0.00E+00	0.00E+00
ROAD_67	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_67	78933	MEK	0.00E+00	0.00E+00
ROAD_67	7439976	Mercury	0.00E+00	0.00E+00
ROAD_67	108101	MIBK	0.00E+00	0.00E+00
ROAD_67	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_67	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_67	7664417	NH3	0.00E+00	0.00E+00
ROAD_67	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_67	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_67	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_67	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_67	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_67	1336363	PCBs	0.00E+00	0.00E+00
ROAD_67	98566	PCBTF	0.00E+00	0.00E+00
ROAD_67	107982	PGME	0.00E+00	0.00E+00
ROAD_67	108656	PGMEA	0.00E+00	0.00E+00
ROAD_67	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_67	108952	Phenol	0.00E+00	0.00E+00
ROAD_67	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_67	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_67	115071	Propylene	0.00E+00	0.00E+00
ROAD_67	129000	Pyrene	0.00E+00	0.00E+00
ROAD_67	7782492	Selenium	0.00E+00	0.00E+00
ROAD_67	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_67	100425	Styrene	0.00E+00	9.11E-05
ROAD_67	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_67	108883	Toluene	0.00E+00	0.00E+00
ROAD_67	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_67	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_67	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_67	7440666	Zinc	0.00E+00	0.00E+00
ROAD_67	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_68	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_68	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_68	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_68	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_68	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_68	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_68	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_68	107028	Acrolein	0.00E+00	0.00E+00
ROAD_68	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_68	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_68	120127	Anthracene	0.00E+00	0.00E+00
ROAD_68	7440360	Antimony	0.00E+00	0.00E+00
ROAD_68	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_68	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_68	50328	B[a]P	0.00E+00	0.00E+00
ROAD_68	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_68	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_68	71432	Benzene	0.00E+00	0.00E+00
ROAD_68	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_68	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_68	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_68	7440473	Chromium	0.00E+00	0.00E+00
ROAD_68	218019	Chrysene	0.00E+00	0.00E+00
ROAD_68	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_68	7440508	Copper	0.00E+00	0.00E+00
ROAD_68	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_68	98828	Cumene	0.00E+00	0.00E+00
ROAD_68	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_68	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_68	111773	DEGME	0.00E+00	0.00E+00
ROAD_68	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_68	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_68	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_68	86737	Fluorene	0.00E+00	0.00E+00
ROAD_68	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_68	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_68	7647010	HCl	0.00E+00	0.00E+00
ROAD_68	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_68	110543	Hexane	0.00E+00	1.07E-04
ROAD_68	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_68	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_68	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_68	7439921	Lead	0.00E+00	0.00E+00
ROAD_68	7439965	Manganese	0.00E+00	0.00E+00
ROAD_68	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_68	78933	MEK	0.00E+00	0.00E+00
ROAD_68	7439976	Mercury	0.00E+00	0.00E+00
ROAD_68	108101	MIBK	0.00E+00	0.00E+00
ROAD_68	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_68	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_68	7664417	NH3	0.00E+00	0.00E+00
ROAD_68	7440020	Nickel	0.00E+00	0.00E+00
ROAD_68	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_68	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_68	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_68	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_68	1336363	PCBs	0.00E+00	0.00E+00
ROAD_68	98566	PCBTF	0.00E+00	0.00E+00
ROAD_68	107982	PGME	0.00E+00	0.00E+00
ROAD_68	108656	PGMEA	0.00E+00	0.00E+00
ROAD_68	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_68	108952	Phenol	0.00E+00	0.00E+00
ROAD_68	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_68	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_68	115071	Propylene	0.00E+00	0.00E+00
ROAD_68	129000	Pyrene	0.00E+00	0.00E+00
ROAD_68	7782492	Selenium	0.00E+00	0.00E+00
ROAD_68	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_68	100425	Styrene	0.00E+00	9.11E-05
ROAD_68	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_68	108883	Toluene	0.00E+00	0.00E+00
ROAD_68	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_68	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_68	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_68	7440666	Zinc	0.00E+00	0.00E+00
ROAD_68	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_69	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_69	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_69	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_69	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_69	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_69	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_69	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_69	107028	Acrolein	0.00E+00	0.00E+00
ROAD_69	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_69	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_69	120127	Anthracene	0.00E+00	0.00E+00
ROAD_69	7440360	Antimony	0.00E+00	0.00E+00
ROAD_69	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_69	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_69	50328	B[a]P	0.00E+00	0.00E+00
ROAD_69	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_69	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_69	71432	Benzene	0.00E+00	0.00E+00
ROAD_69	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_69	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_69	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_69	7440473	Chromium	0.00E+00	0.00E+00
ROAD_69	218019	Chrysene	0.00E+00	0.00E+00
ROAD_69	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_69	7440508	Copper	0.00E+00	0.00E+00
ROAD_69	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_69	98828	Cumene	0.00E+00	0.00E+00
ROAD_69	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_69	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_69	111773	DEGME	0.00E+00	0.00E+00
ROAD_69	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_69	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_69	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_69	86737	Fluorene	0.00E+00	0.00E+00
ROAD_69	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_69	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_69	7647010	HCl	0.00E+00	0.00E+00
ROAD_69	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_69	110543	Hexane	0.00E+00	1.07E-04
ROAD_69	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_69	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_69	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_69	7439921	Lead	0.00E+00	0.00E+00
ROAD_69	7439965	Manganese	0.00E+00	0.00E+00
ROAD_69	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_69	78933	MEK	0.00E+00	0.00E+00
ROAD_69	7439976	Mercury	0.00E+00	0.00E+00
ROAD_69	108101	MIBK	0.00E+00	0.00E+00
ROAD_69	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_69	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_69	7664417	NH3	0.00E+00	0.00E+00
ROAD_69	7440020	Nickel	0.00E+00	0.00E+00
ROAD_69	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_69	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_69	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_69	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_69	1336363	PCBs	0.00E+00	0.00E+00
ROAD_69	98566	PCBTF	0.00E+00	0.00E+00
ROAD_69	107982	PGME	0.00E+00	0.00E+00
ROAD_69	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_69	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_69	108952	Phenol	0.00E+00	0.00E+00
ROAD_69	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_69	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_69	115071	Propylene	0.00E+00	0.00E+00
ROAD_69	129000	Pyrene	0.00E+00	0.00E+00
ROAD_69	7782492	Selenium	0.00E+00	0.00E+00
ROAD_69	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_69	100425	Styrene	0.00E+00	9.11E-05
ROAD_69	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_69	108883	Toluene	0.00E+00	0.00E+00
ROAD_69	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_69	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_69	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_69	7440666	Zinc	0.00E+00	0.00E+00
ROAD_69	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_70	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_70	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_70	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_70	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_70	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_70	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_70	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_70	107028	Acrolein	0.00E+00	0.00E+00
ROAD_70	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_70	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_70	120127	Anthracene	0.00E+00	0.00E+00
ROAD_70	7440360	Antimony	0.00E+00	0.00E+00
ROAD_70	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_70	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_70	50328	B[a]P	0.00E+00	0.00E+00
ROAD_70	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_70	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_70	71432	Benzene	0.00E+00	0.00E+00
ROAD_70	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_70	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_70	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_70	7440473	Chromium	0.00E+00	0.00E+00
ROAD_70	218019	Chrysene	0.00E+00	0.00E+00
ROAD_70	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_70	7440508	Copper	0.00E+00	0.00E+00
ROAD_70	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_70	98828	Cumene	0.00E+00	0.00E+00
ROAD_70	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_70	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_70	111773	DEGME	0.00E+00	0.00E+00
ROAD_70	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_70	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_70	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_70	86737	Fluorene	0.00E+00	0.00E+00
ROAD_70	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_70	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_70	7647010	HCl	0.00E+00	0.00E+00
ROAD_70	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_70	110543	Hexane	0.00E+00	1.07E-04
ROAD_70	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_70	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_70	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_70	7439921	Lead	0.00E+00	0.00E+00
ROAD_70	7439965	Manganese	0.00E+00	0.00E+00
ROAD_70	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_70	78933	MEK	0.00E+00	0.00E+00
ROAD_70	7439976	Mercury	0.00E+00	0.00E+00
ROAD_70	108101	MIBK	0.00E+00	0.00E+00
ROAD_70	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_70	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_70	7664417	NH3	0.00E+00	0.00E+00
ROAD_70	7440020	Nickel	0.00E+00	0.00E+00
ROAD_70	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_70	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_70	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_70	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_70	1336363	PCBs	0.00E+00	0.00E+00
ROAD_70	98566	PCBTF	0.00E+00	0.00E+00
ROAD_70	107982	PGME	0.00E+00	0.00E+00
ROAD_70	108656	PGMEA	0.00E+00	0.00E+00
ROAD_70	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_70	108952	Phenol	0.00E+00	0.00E+00
ROAD_70	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_70	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_70	115071	Propylene	0.00E+00	0.00E+00
ROAD_70	129000	Pyrene	0.00E+00	0.00E+00
ROAD_70	7782492	Selenium	0.00E+00	0.00E+00
ROAD_70	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_70	100425	Styrene	0.00E+00	9.11E-05
ROAD_70	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_70	108883	Toluene	0.00E+00	0.00E+00
ROAD_70	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_70	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_70	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_70	7440666	Zinc	0.00E+00	0.00E+00
ROAD_70	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_71	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_71	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_71	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_71	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_71	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_71	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_71	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_71	107028	Acrolein	0.00E+00	0.00E+00
ROAD_71	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_71	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_71	120127	Anthracene	0.00E+00	0.00E+00
ROAD_71	7440360	Antimony	0.00E+00	0.00E+00
ROAD_71	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_71	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_71	50328	B[a]P	0.00E+00	0.00E+00
ROAD_71	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_71	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_71	71432	Benzene	0.00E+00	0.00E+00
ROAD_71	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_71	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_71	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_71	7440473	Chromium	0.00E+00	0.00E+00
ROAD_71	218019	Chrysene	0.00E+00	0.00E+00
ROAD_71	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_71	7440508	Copper	0.00E+00	0.00E+00
ROAD_71	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_71	98828	Cumene	0.00E+00	0.00E+00
ROAD_71	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_71	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_71	111773	DEGME	0.00E+00	0.00E+00
ROAD_71	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_71	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_71	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_71	86737	Fluorene	0.00E+00	0.00E+00
ROAD_71	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_71	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_71	7647010	HCl	0.00E+00	0.00E+00
ROAD_71	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_71	110543	Hexane	0.00E+00	1.07E-04
ROAD_71	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_71	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_71	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_71	7439921	Lead	0.00E+00	0.00E+00
ROAD_71	7439965	Manganese	0.00E+00	0.00E+00
ROAD_71	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_71	78933	MEK	0.00E+00	0.00E+00
ROAD_71	7439976	Mercury	0.00E+00	0.00E+00
ROAD_71	108101	MIBK	0.00E+00	0.00E+00
ROAD_71	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_71	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_71	7664417	NH3	0.00E+00	0.00E+00
ROAD_71	7440020	Nickel	0.00E+00	0.00E+00
ROAD_71	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_71	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_71	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_71	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_71	1336363	PCBs	0.00E+00	0.00E+00
ROAD_71	98566	PCBTF	0.00E+00	0.00E+00
ROAD_71	107982	PGME	0.00E+00	0.00E+00
ROAD_71	108656	PGMEA	0.00E+00	0.00E+00
ROAD_71	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_71	108952	Phenol	0.00E+00	0.00E+00
ROAD_71	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_71	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_71	115071	Propylene	0.00E+00	0.00E+00
ROAD_71	129000	Pyrene	0.00E+00	0.00E+00
ROAD_71	7782492	Selenium	0.00E+00	0.00E+00
ROAD_71	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_71	100425	Styrene	0.00E+00	9.11E-05
ROAD_71	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_71	108883	Toluene	0.00E+00	0.00E+00
ROAD_71	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_71	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_71	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_71	7440666	Zinc	0.00E+00	0.00E+00
ROAD_71	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_72	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_72	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_72	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_72	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_72	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_72	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_72	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_72	107028	Acrolein	0.00E+00	0.00E+00
ROAD_72	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_72	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_72	120127	Anthracene	0.00E+00	0.00E+00
ROAD_72	7440360	Antimony	0.00E+00	0.00E+00
ROAD_72	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_72	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_72	50328	B[a]P	0.00E+00	0.00E+00
ROAD_72	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_72	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_72	71432	Benzene	0.00E+00	0.00E+00
ROAD_72	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_72	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_72	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_72	7440473	Chromium	0.00E+00	0.00E+00
ROAD_72	218019	Chrysene	0.00E+00	0.00E+00
ROAD_72	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_72	7440508	Copper	0.00E+00	0.00E+00
ROAD_72	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_72	98828	Cumene	0.00E+00	0.00E+00
ROAD_72	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_72	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_72	111773	DEGME	0.00E+00	0.00E+00
ROAD_72	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_72	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_72	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_72	86737	Fluorene	0.00E+00	0.00E+00
ROAD_72	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_72	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_72	7647010	HCl	0.00E+00	0.00E+00
ROAD_72	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_72	110543	Hexane	0.00E+00	1.07E-04
ROAD_72	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_72	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_72	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_72	7439921	Lead	0.00E+00	0.00E+00
ROAD_72	7439965	Manganese	0.00E+00	0.00E+00
ROAD_72	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_72	78933	MEK	0.00E+00	0.00E+00
ROAD_72	7439976	Mercury	0.00E+00	0.00E+00
ROAD_72	108101	MIBK	0.00E+00	0.00E+00
ROAD_72	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_72	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_72	7664417	NH3	0.00E+00	0.00E+00
ROAD_72	7440020	Nickel	0.00E+00	0.00E+00
ROAD_72	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_72	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_72	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_72	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_72	1336363	PCBs	0.00E+00	0.00E+00
ROAD_72	98566	PCBTF	0.00E+00	0.00E+00
ROAD_72	107982	PGME	0.00E+00	0.00E+00
ROAD_72	108656	PGMEA	0.00E+00	0.00E+00
ROAD_72	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_72	108952	Phenol	0.00E+00	0.00E+00
ROAD_72	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_72	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_72	115071	Propylene	0.00E+00	0.00E+00
ROAD_72	129000	Pyrene	0.00E+00	0.00E+00
ROAD_72	7782492	Selenium	0.00E+00	0.00E+00
ROAD_72	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_72	100425	Styrene	0.00E+00	9.11E-05
ROAD_72	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_72	108883	Toluene	0.00E+00	0.00E+00
ROAD_72	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_72	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_72	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_72	7440666	Zinc	0.00E+00	0.00E+00
ROAD_72	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_73	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_73	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_73	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_73	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_73	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_73	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_73	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_73	107028	Acrolein	0.00E+00	0.00E+00
ROAD_73	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_73	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_73	120127	Anthracene	0.00E+00	0.00E+00
ROAD_73	7440360	Antimony	0.00E+00	0.00E+00
ROAD_73	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_73	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_73	50328	B[a]P	0.00E+00	0.00E+00
ROAD_73	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_73	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_73	71432	Benzene	0.00E+00	0.00E+00
ROAD_73	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_73	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_73	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_73	7440473	Chromium	0.00E+00	0.00E+00
ROAD_73	218019	Chrysene	0.00E+00	0.00E+00
ROAD_73	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_73	7440508	Copper	0.00E+00	0.00E+00
ROAD_73	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_73	98828	Cumene	0.00E+00	0.00E+00
ROAD_73	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_73	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_73	111773	DEGME	0.00E+00	0.00E+00
ROAD_73	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_73	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_73	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_73	86737	Fluorene	0.00E+00	0.00E+00
ROAD_73	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_73	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_73	7647010	HCl	0.00E+00	0.00E+00
ROAD_73	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_73	110543	Hexane	0.00E+00	1.07E-04
ROAD_73	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_73	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_73	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_73	7439921	Lead	0.00E+00	0.00E+00
ROAD_73	7439965	Manganese	0.00E+00	0.00E+00
ROAD_73	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_73	78933	MEK	0.00E+00	0.00E+00
ROAD_73	7439976	Mercury	0.00E+00	0.00E+00
ROAD_73	108101	MIBK	0.00E+00	0.00E+00
ROAD_73	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_73	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_73	7664417	NH3	0.00E+00	0.00E+00
ROAD_73	7440020	Nickel	0.00E+00	0.00E+00
ROAD_73	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_73	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_73	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_73	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_73	1336363	PCBs	0.00E+00	0.00E+00
ROAD_73	98566	PCBTF	0.00E+00	0.00E+00
ROAD_73	107982	PGME	0.00E+00	0.00E+00
ROAD_73	108656	PGMEA	0.00E+00	0.00E+00
ROAD_73	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_73	108952	Phenol	0.00E+00	0.00E+00
ROAD_73	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_73	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_73	115071	Propylene	0.00E+00	0.00E+00
ROAD_73	129000	Pyrene	0.00E+00	0.00E+00
ROAD_73	7782492	Selenium	0.00E+00	0.00E+00
ROAD_73	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_73	100425	Styrene	0.00E+00	9.11E-05
ROAD_73	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_73	108883	Toluene	0.00E+00	0.00E+00
ROAD_73	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_73	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_73	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_73	7440666	Zinc	0.00E+00	0.00E+00
ROAD_73	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_74	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_74	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_74	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_74	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_74	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_74	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_74	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_74	107028	Acrolein	0.00E+00	0.00E+00
ROAD_74	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_74	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_74	120127	Anthracene	0.00E+00	0.00E+00
ROAD_74	7440360	Antimony	0.00E+00	0.00E+00
ROAD_74	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_74	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_74	50328	B[a]P	0.00E+00	0.00E+00
ROAD_74	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_74	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_74	71432	Benzene	0.00E+00	0.00E+00
ROAD_74	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_74	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_74	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_74	7440473	Chromium	0.00E+00	0.00E+00
ROAD_74	218019	Chrysene	0.00E+00	0.00E+00
ROAD_74	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_74	7440508	Copper	0.00E+00	0.00E+00
ROAD_74	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_74	98828	Cumene	0.00E+00	0.00E+00
ROAD_74	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_74	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_74	111773	DEGME	0.00E+00	0.00E+00
ROAD_74	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_74	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_74	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_74	86737	Fluorene	0.00E+00	0.00E+00
ROAD_74	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_74	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_74	7647010	HCl	0.00E+00	0.00E+00
ROAD_74	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_74	110543	Hexane	0.00E+00	1.07E-04
ROAD_74	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_74	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_74	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_74	7439921	Lead	0.00E+00	0.00E+00
ROAD_74	7439965	Manganese	0.00E+00	0.00E+00
ROAD_74	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_74	78933	MEK	0.00E+00	0.00E+00
ROAD_74	7439976	Mercury	0.00E+00	0.00E+00
ROAD_74	108101	MIBK	0.00E+00	0.00E+00
ROAD_74	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_74	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_74	7664417	NH3	0.00E+00	0.00E+00
ROAD_74	7440020	Nickel	0.00E+00	0.00E+00
ROAD_74	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_74	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_74	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_74	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_74	1336363	PCBs	0.00E+00	0.00E+00
ROAD_74	98566	PCBTF	0.00E+00	0.00E+00
ROAD_74	107982	PGME	0.00E+00	0.00E+00
ROAD_74	108656	PGMEA	0.00E+00	0.00E+00
ROAD_74	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_74	108952	Phenol	0.00E+00	0.00E+00
ROAD_74	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_74	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_74	115071	Propylene	0.00E+00	0.00E+00
ROAD_74	129000	Pyrene	0.00E+00	0.00E+00
ROAD_74	7782492	Selenium	0.00E+00	0.00E+00
ROAD_74	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_74	100425	Styrene	0.00E+00	9.11E-05
ROAD_74	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_74	108883	Toluene	0.00E+00	0.00E+00
ROAD_74	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_74	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_74	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_74	7440666	Zinc	0.00E+00	0.00E+00
ROAD_74	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_75	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_75	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_75	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_75	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_75	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_75	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_75	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_75	107028	Acrolein	0.00E+00	0.00E+00
ROAD_75	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_75	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_75	120127	Anthracene	0.00E+00	0.00E+00
ROAD_75	7440360	Antimony	0.00E+00	0.00E+00
ROAD_75	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_75	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_75	50328	B[a]P	0.00E+00	0.00E+00
ROAD_75	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_75	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_75	71432	Benzene	0.00E+00	0.00E+00
ROAD_75	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_75	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_75	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_75	7440473	Chromium	0.00E+00	0.00E+00
ROAD_75	218019	Chrysene	0.00E+00	0.00E+00
ROAD_75	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_75	7440508	Copper	0.00E+00	0.00E+00
ROAD_75	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_75	98828	Cumene	0.00E+00	0.00E+00
ROAD_75	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_75	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_75	111773	DEGME	0.00E+00	0.00E+00
ROAD_75	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_75	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_75	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_75	86737	Fluorene	0.00E+00	0.00E+00
ROAD_75	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_75	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_75	7647010	HCl	0.00E+00	0.00E+00
ROAD_75	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_75	110543	Hexane	0.00E+00	1.07E-04
ROAD_75	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_75	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_75	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_75	7439921	Lead	0.00E+00	0.00E+00
ROAD_75	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_75	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_75	78933	MEK	0.00E+00	0.00E+00
ROAD_75	7439976	Mercury	0.00E+00	0.00E+00
ROAD_75	108101	MIBK	0.00E+00	0.00E+00
ROAD_75	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_75	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_75	7664417	NH3	0.00E+00	0.00E+00
ROAD_75	7440020	Nickel	0.00E+00	0.00E+00
ROAD_75	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_75	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_75	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_75	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_75	1336363	PCBs	0.00E+00	0.00E+00
ROAD_75	98566	PCBTF	0.00E+00	0.00E+00
ROAD_75	107982	PGME	0.00E+00	0.00E+00
ROAD_75	108656	PGMEA	0.00E+00	0.00E+00
ROAD_75	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_75	108952	Phenol	0.00E+00	0.00E+00
ROAD_75	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_75	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_75	115071	Propylene	0.00E+00	0.00E+00
ROAD_75	129000	Pyrene	0.00E+00	0.00E+00
ROAD_75	7782492	Selenium	0.00E+00	0.00E+00
ROAD_75	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_75	100425	Styrene	0.00E+00	9.11E-05
ROAD_75	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_75	108883	Toluene	0.00E+00	0.00E+00
ROAD_75	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_75	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_75	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_75	7440666	Zinc	0.00E+00	0.00E+00
ROAD_75	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_76	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_76	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_76	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_76	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_76	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_76	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_76	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_76	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_76	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_76	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_76	120127	Anthracene	0.00E+00	0.00E+00
ROAD_76	7440360	Antimony	0.00E+00	0.00E+00
ROAD_76	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_76	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_76	50328	B[a]P	0.00E+00	0.00E+00
ROAD_76	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_76	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_76	71432	Benzene	0.00E+00	0.00E+00
ROAD_76	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_76	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_76	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_76	7440473	Chromium	0.00E+00	0.00E+00
ROAD_76	218019	Chrysene	0.00E+00	0.00E+00
ROAD_76	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_76	7440508	Copper	0.00E+00	0.00E+00
ROAD_76	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_76	98828	Cumene	0.00E+00	0.00E+00
ROAD_76	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_76	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_76	111773	DEGME	0.00E+00	0.00E+00
ROAD_76	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_76	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_76	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_76	86737	Fluorene	0.00E+00	0.00E+00
ROAD_76	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_76	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_76	7647010	HCl	0.00E+00	0.00E+00
ROAD_76	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_76	110543	Hexane	0.00E+00	1.07E-04
ROAD_76	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_76	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_76	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_76	7439921	Lead	0.00E+00	0.00E+00
ROAD_76	7439965	Manganese	0.00E+00	0.00E+00
ROAD_76	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_76	78933	MEK	0.00E+00	0.00E+00
ROAD_76	7439976	Mercury	0.00E+00	0.00E+00
ROAD_76	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_76	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_76	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_76	7664417	NH3	0.00E+00	0.00E+00
ROAD_76	7440020	Nickel	0.00E+00	0.00E+00
ROAD_76	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_76	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_76	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_76	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_76	1336363	PCBs	0.00E+00	0.00E+00
ROAD_76	98566	PCBTF	0.00E+00	0.00E+00
ROAD_76	107982	PGME	0.00E+00	0.00E+00
ROAD_76	108656	PGMEA	0.00E+00	0.00E+00
ROAD_76	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_76	108952	Phenol	0.00E+00	0.00E+00
ROAD_76	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_76	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_76	115071	Propylene	0.00E+00	0.00E+00
ROAD_76	129000	Pyrene	0.00E+00	0.00E+00
ROAD_76	7782492	Selenium	0.00E+00	0.00E+00
ROAD_76	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_76	100425	Styrene	0.00E+00	9.11E-05
ROAD_76	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_76	108883	Toluene	0.00E+00	0.00E+00
ROAD_76	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_76	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_76	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_76	7440666	Zinc	0.00E+00	0.00E+00
ROAD_76	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_77	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_77	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_77	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_77	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_77	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_77	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_77	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_77	107028	Acrolein	0.00E+00	0.00E+00
ROAD_77	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_77	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_77	120127	Anthracene	0.00E+00	0.00E+00
ROAD_77	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_77	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_77	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_77	50328	B[a]P	0.00E+00	0.00E+00
ROAD_77	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_77	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_77	71432	Benzene	0.00E+00	0.00E+00
ROAD_77	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_77	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_77	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_77	7440473	Chromium	0.00E+00	0.00E+00
ROAD_77	218019	Chrysene	0.00E+00	0.00E+00
ROAD_77	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_77	7440508	Copper	0.00E+00	0.00E+00
ROAD_77	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_77	98828	Cumene	0.00E+00	0.00E+00
ROAD_77	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_77	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_77	111773	DEGME	0.00E+00	0.00E+00
ROAD_77	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_77	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_77	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_77	86737	Fluorene	0.00E+00	0.00E+00
ROAD_77	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_77	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_77	7647010	HCl	0.00E+00	0.00E+00
ROAD_77	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_77	110543	Hexane	0.00E+00	1.07E-04
ROAD_77	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_77	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_77	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_77	7439921	Lead	0.00E+00	0.00E+00
ROAD_77	7439965	Manganese	0.00E+00	0.00E+00
ROAD_77	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_77	78933	MEK	0.00E+00	0.00E+00
ROAD_77	7439976	Mercury	0.00E+00	0.00E+00
ROAD_77	108101	MIBK	0.00E+00	0.00E+00
ROAD_77	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_77	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_77	7664417	NH3	0.00E+00	0.00E+00
ROAD_77	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_77	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_77	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_77	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_77	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_77	1336363	PCBs	0.00E+00	0.00E+00
ROAD_77	98566	PCBTF	0.00E+00	0.00E+00
ROAD_77	107982	PGME	0.00E+00	0.00E+00
ROAD_77	108656	PGMEA	0.00E+00	0.00E+00
ROAD_77	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_77	108952	Phenol	0.00E+00	0.00E+00
ROAD_77	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_77	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_77	115071	Propylene	0.00E+00	0.00E+00
ROAD_77	129000	Pyrene	0.00E+00	0.00E+00
ROAD_77	7782492	Selenium	0.00E+00	0.00E+00
ROAD_77	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_77	100425	Styrene	0.00E+00	9.11E-05
ROAD_77	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_77	108883	Toluene	0.00E+00	0.00E+00
ROAD_77	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_77	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_77	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_77	7440666	Zinc	0.00E+00	0.00E+00
ROAD_77	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_78	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_78	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_78	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_78	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_78	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_78	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_78	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_78	107028	Acrolein	0.00E+00	0.00E+00
ROAD_78	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_78	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_78	120127	Anthracene	0.00E+00	0.00E+00
ROAD_78	7440360	Antimony	0.00E+00	0.00E+00
ROAD_78	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_78	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_78	50328	B[a]P	0.00E+00	0.00E+00
ROAD_78	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_78	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_78	71432	Benzene	0.00E+00	0.00E+00
ROAD_78	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_78	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_78	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_78	7440473	Chromium	0.00E+00	0.00E+00
ROAD_78	218019	Chrysene	0.00E+00	0.00E+00
ROAD_78	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_78	7440508	Copper	0.00E+00	0.00E+00
ROAD_78	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_78	98828	Cumene	0.00E+00	0.00E+00
ROAD_78	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_78	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_78	111773	DEGME	0.00E+00	0.00E+00
ROAD_78	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_78	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_78	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_78	86737	Fluorene	0.00E+00	0.00E+00
ROAD_78	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_78	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_78	7647010	HCl	0.00E+00	0.00E+00
ROAD_78	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_78	110543	Hexane	0.00E+00	1.07E-04
ROAD_78	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_78	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_78	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_78	7439921	Lead	0.00E+00	0.00E+00
ROAD_78	7439965	Manganese	0.00E+00	0.00E+00
ROAD_78	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_78	78933	MEK	0.00E+00	0.00E+00
ROAD_78	7439976	Mercury	0.00E+00	0.00E+00
ROAD_78	108101	MIBK	0.00E+00	0.00E+00
ROAD_78	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_78	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_78	7664417	NH3	0.00E+00	0.00E+00
ROAD_78	7440020	Nickel	0.00E+00	0.00E+00
ROAD_78	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_78	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_78	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_78	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_78	1336363	PCBs	0.00E+00	0.00E+00
ROAD_78	98566	PCBTF	0.00E+00	0.00E+00
ROAD_78	107982	PGME	0.00E+00	0.00E+00
ROAD_78	108656	PGMEA	0.00E+00	0.00E+00
ROAD_78	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_78	108952	Phenol	0.00E+00	0.00E+00
ROAD_78	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_78	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_78	115071	Propylene	0.00E+00	0.00E+00
ROAD_78	129000	Pyrene	0.00E+00	0.00E+00
ROAD_78	7782492	Selenium	0.00E+00	0.00E+00
ROAD_78	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_78	100425	Styrene	0.00E+00	9.11E-05
ROAD_78	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_78	108883	Toluene	0.00E+00	0.00E+00
ROAD_78	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_78	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_78	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_78	7440666	Zinc	0.00E+00	0.00E+00
ROAD_78	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_79	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_79	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_79	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_79	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_79	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_79	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_79	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_79	107028	Acrolein	0.00E+00	0.00E+00
ROAD_79	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_79	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_79	120127	Anthracene	0.00E+00	0.00E+00
ROAD_79	7440360	Antimony	0.00E+00	0.00E+00
ROAD_79	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_79	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_79	50328	B[a]P	0.00E+00	0.00E+00
ROAD_79	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_79	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_79	71432	Benzene	0.00E+00	0.00E+00
ROAD_79	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_79	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_79	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_79	7440473	Chromium	0.00E+00	0.00E+00
ROAD_79	218019	Chrysene	0.00E+00	0.00E+00
ROAD_79	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_79	7440508	Copper	0.00E+00	0.00E+00
ROAD_79	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_79	98828	Cumene	0.00E+00	0.00E+00
ROAD_79	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_79	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_79	111773	DEGME	0.00E+00	0.00E+00
ROAD_79	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_79	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_79	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_79	86737	Fluorene	0.00E+00	0.00E+00
ROAD_79	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_79	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_79	7647010	HCl	0.00E+00	0.00E+00
ROAD_79	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_79	110543	Hexane	0.00E+00	1.07E-04
ROAD_79	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_79	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_79	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_79	7439921	Lead	0.00E+00	0.00E+00
ROAD_79	7439965	Manganese	0.00E+00	0.00E+00
ROAD_79	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_79	78933	MEK	0.00E+00	0.00E+00
ROAD_79	7439976	Mercury	0.00E+00	0.00E+00
ROAD_79	108101	MIBK	0.00E+00	0.00E+00
ROAD_79	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_79	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_79	7664417	NH3	0.00E+00	0.00E+00
ROAD_79	7440020	Nickel	0.00E+00	0.00E+00
ROAD_79	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_79	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_79	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_79	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_79	1336363	PCBs	0.00E+00	0.00E+00
ROAD_79	98566	PCBTF	0.00E+00	0.00E+00
ROAD_79	107982	PGME	0.00E+00	0.00E+00
ROAD_79	108656	PGMEA	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_79	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_79	108952	Phenol	0.00E+00	0.00E+00
ROAD_79	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_79	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_79	115071	Propylene	0.00E+00	0.00E+00
ROAD_79	129000	Pyrene	0.00E+00	0.00E+00
ROAD_79	7782492	Selenium	0.00E+00	0.00E+00
ROAD_79	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_79	100425	Styrene	0.00E+00	9.11E-05
ROAD_79	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_79	108883	Toluene	0.00E+00	0.00E+00
ROAD_79	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_79	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_79	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_79	7440666	Zinc	0.00E+00	0.00E+00
ROAD_79	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_80	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_80	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_80	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_80	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_80	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_80	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_80	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_80	107028	Acrolein	0.00E+00	0.00E+00
ROAD_80	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_80	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_80	120127	Anthracene	0.00E+00	0.00E+00
ROAD_80	7440360	Antimony	0.00E+00	0.00E+00
ROAD_80	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_80	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_80	50328	B[a]P	0.00E+00	0.00E+00
ROAD_80	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_80	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_80	71432	Benzene	0.00E+00	0.00E+00
ROAD_80	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_80	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_80	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_80	7440473	Chromium	0.00E+00	0.00E+00
ROAD_80	218019	Chrysene	0.00E+00	0.00E+00
ROAD_80	7440484	Cobalt	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_80	7440508	Copper	0.00E+00	0.00E+00
ROAD_80	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_80	98828	Cumene	0.00E+00	0.00E+00
ROAD_80	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_80	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_80	111773	DEGME	0.00E+00	0.00E+00
ROAD_80	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_80	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_80	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_80	86737	Fluorene	0.00E+00	0.00E+00
ROAD_80	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_80	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_80	7647010	HCl	0.00E+00	0.00E+00
ROAD_80	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_80	110543	Hexane	0.00E+00	1.07E-04
ROAD_80	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_80	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_80	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_80	7439921	Lead	0.00E+00	0.00E+00
ROAD_80	7439965	Manganese	0.00E+00	0.00E+00
ROAD_80	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_80	78933	MEK	0.00E+00	0.00E+00
ROAD_80	7439976	Mercury	0.00E+00	0.00E+00
ROAD_80	108101	MIBK	0.00E+00	0.00E+00
ROAD_80	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_80	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_80	7664417	NH3	0.00E+00	0.00E+00
ROAD_80	7440020	Nickel	0.00E+00	0.00E+00
ROAD_80	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_80	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_80	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_80	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_80	1336363	PCBs	0.00E+00	0.00E+00
ROAD_80	98566	PCBTF	0.00E+00	0.00E+00
ROAD_80	107982	PGME	0.00E+00	0.00E+00
ROAD_80	108656	PGMEA	0.00E+00	0.00E+00
ROAD_80	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_80	108952	Phenol	0.00E+00	0.00E+00
ROAD_80	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_80	123386	Propionaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_80	115071	Propylene	0.00E+00	0.00E+00
ROAD_80	129000	Pyrene	0.00E+00	0.00E+00
ROAD_80	7782492	Selenium	0.00E+00	0.00E+00
ROAD_80	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_80	100425	Styrene	0.00E+00	9.11E-05
ROAD_80	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_80	108883	Toluene	0.00E+00	0.00E+00
ROAD_80	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_80	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_80	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_80	7440666	Zinc	0.00E+00	0.00E+00
ROAD_80	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_81	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_81	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_81	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_81	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_81	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_81	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_81	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_81	107028	Acrolein	0.00E+00	0.00E+00
ROAD_81	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_81	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_81	120127	Anthracene	0.00E+00	0.00E+00
ROAD_81	7440360	Antimony	0.00E+00	0.00E+00
ROAD_81	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_81	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_81	50328	B[a]P	0.00E+00	0.00E+00
ROAD_81	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_81	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_81	71432	Benzene	0.00E+00	0.00E+00
ROAD_81	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_81	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_81	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_81	7440473	Chromium	0.00E+00	0.00E+00
ROAD_81	218019	Chrysene	0.00E+00	0.00E+00
ROAD_81	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_81	7440508	Copper	0.00E+00	0.00E+00
ROAD_81	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_81	98828	Cumene	0.00E+00	0.00E+00
ROAD_81	110827	Cyclohexane	0.00E+00	7.68E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_81	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_81	111773	DEGME	0.00E+00	0.00E+00
ROAD_81	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_81	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_81	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_81	86737	Fluorene	0.00E+00	0.00E+00
ROAD_81	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_81	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_81	7647010	HCl	0.00E+00	0.00E+00
ROAD_81	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_81	110543	Hexane	0.00E+00	1.07E-04
ROAD_81	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_81	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_81	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_81	7439921	Lead	0.00E+00	0.00E+00
ROAD_81	7439965	Manganese	0.00E+00	0.00E+00
ROAD_81	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_81	78933	MEK	0.00E+00	0.00E+00
ROAD_81	7439976	Mercury	0.00E+00	0.00E+00
ROAD_81	108101	MIBK	0.00E+00	0.00E+00
ROAD_81	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_81	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_81	7664417	NH3	0.00E+00	0.00E+00
ROAD_81	7440020	Nickel	0.00E+00	0.00E+00
ROAD_81	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_81	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_81	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_81	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_81	1336363	PCBs	0.00E+00	0.00E+00
ROAD_81	98566	PCBTF	0.00E+00	0.00E+00
ROAD_81	107982	PGME	0.00E+00	0.00E+00
ROAD_81	108656	PGMEA	0.00E+00	0.00E+00
ROAD_81	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_81	108952	Phenol	0.00E+00	0.00E+00
ROAD_81	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_81	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_81	115071	Propylene	0.00E+00	0.00E+00
ROAD_81	129000	Pyrene	0.00E+00	0.00E+00
ROAD_81	7782492	Selenium	0.00E+00	0.00E+00
ROAD_81	1175	Silica, Crystln	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_81	100425	Styrene	0.00E+00	9.11E-05
ROAD_81	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_81	108883	Toluene	0.00E+00	0.00E+00
ROAD_81	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_81	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_81	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_81	7440666	Zinc	0.00E+00	0.00E+00
ROAD_81	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_82	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_82	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_82	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_82	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_82	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_82	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_82	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_82	107028	Acrolein	0.00E+00	0.00E+00
ROAD_82	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_82	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_82	120127	Anthracene	0.00E+00	0.00E+00
ROAD_82	7440360	Antimony	0.00E+00	0.00E+00
ROAD_82	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_82	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_82	50328	B[a]P	0.00E+00	0.00E+00
ROAD_82	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_82	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_82	71432	Benzene	0.00E+00	0.00E+00
ROAD_82	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_82	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_82	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_82	7440473	Chromium	0.00E+00	0.00E+00
ROAD_82	218019	Chrysene	0.00E+00	0.00E+00
ROAD_82	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_82	7440508	Copper	0.00E+00	0.00E+00
ROAD_82	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_82	98828	Cumene	0.00E+00	0.00E+00
ROAD_82	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_82	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_82	111773	DEGME	0.00E+00	0.00E+00
ROAD_82	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_82	100414	Ethyl Benzene	0.00E+00	5.76E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_82	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_82	86737	Fluorene	0.00E+00	0.00E+00
ROAD_82	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_82	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_82	7647010	HCl	0.00E+00	0.00E+00
ROAD_82	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_82	110543	Hexane	0.00E+00	1.07E-04
ROAD_82	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_82	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_82	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_82	7439921	Lead	0.00E+00	0.00E+00
ROAD_82	7439965	Manganese	0.00E+00	0.00E+00
ROAD_82	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_82	78933	MEK	0.00E+00	0.00E+00
ROAD_82	7439976	Mercury	0.00E+00	0.00E+00
ROAD_82	108101	MIBK	0.00E+00	0.00E+00
ROAD_82	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_82	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_82	7664417	NH3	0.00E+00	0.00E+00
ROAD_82	7440020	Nickel	0.00E+00	0.00E+00
ROAD_82	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_82	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_82	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_82	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_82	1336363	PCBs	0.00E+00	0.00E+00
ROAD_82	98566	PCBTF	0.00E+00	0.00E+00
ROAD_82	107982	PGME	0.00E+00	0.00E+00
ROAD_82	108656	PGMEA	0.00E+00	0.00E+00
ROAD_82	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_82	108952	Phenol	0.00E+00	0.00E+00
ROAD_82	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_82	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_82	115071	Propylene	0.00E+00	0.00E+00
ROAD_82	129000	Pyrene	0.00E+00	0.00E+00
ROAD_82	7782492	Selenium	0.00E+00	0.00E+00
ROAD_82	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_82	100425	Styrene	0.00E+00	9.11E-05
ROAD_82	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_82	108883	Toluene	0.00E+00	0.00E+00
ROAD_82	25551137	TriMeBenzns	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_82	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_82	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_82	7440666	Zinc	0.00E+00	0.00E+00
ROAD_82	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_83	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_83	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_83	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_83	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_83	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_83	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_83	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_83	107028	Acrolein	0.00E+00	0.00E+00
ROAD_83	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_83	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_83	120127	Anthracene	0.00E+00	0.00E+00
ROAD_83	7440360	Antimony	0.00E+00	0.00E+00
ROAD_83	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_83	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_83	50328	B[a]P	0.00E+00	0.00E+00
ROAD_83	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_83	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_83	71432	Benzene	0.00E+00	0.00E+00
ROAD_83	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_83	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_83	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_83	7440473	Chromium	0.00E+00	0.00E+00
ROAD_83	218019	Chrysene	0.00E+00	0.00E+00
ROAD_83	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_83	7440508	Copper	0.00E+00	0.00E+00
ROAD_83	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_83	98828	Cumene	0.00E+00	0.00E+00
ROAD_83	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_83	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_83	111773	DEGME	0.00E+00	0.00E+00
ROAD_83	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_83	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_83	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_83	86737	Fluorene	0.00E+00	0.00E+00
ROAD_83	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_83	50000	Formaldehyde	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_83	7647010	HCl	0.00E+00	0.00E+00
ROAD_83	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_83	110543	Hexane	0.00E+00	1.07E-04
ROAD_83	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_83	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_83	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_83	7439921	Lead	0.00E+00	0.00E+00
ROAD_83	7439965	Manganese	0.00E+00	0.00E+00
ROAD_83	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_83	78933	MEK	0.00E+00	0.00E+00
ROAD_83	7439976	Mercury	0.00E+00	0.00E+00
ROAD_83	108101	MIBK	0.00E+00	0.00E+00
ROAD_83	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_83	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_83	7664417	NH3	0.00E+00	0.00E+00
ROAD_83	7440020	Nickel	0.00E+00	0.00E+00
ROAD_83	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_83	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_83	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_83	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_83	1336363	PCBs	0.00E+00	0.00E+00
ROAD_83	98566	PCBTF	0.00E+00	0.00E+00
ROAD_83	107982	PGME	0.00E+00	0.00E+00
ROAD_83	108656	PGMEA	0.00E+00	0.00E+00
ROAD_83	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_83	108952	Phenol	0.00E+00	0.00E+00
ROAD_83	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_83	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_83	115071	Propylene	0.00E+00	0.00E+00
ROAD_83	129000	Pyrene	0.00E+00	0.00E+00
ROAD_83	7782492	Selenium	0.00E+00	0.00E+00
ROAD_83	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_83	100425	Styrene	0.00E+00	9.11E-05
ROAD_83	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_83	108883	Toluene	0.00E+00	0.00E+00
ROAD_83	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_83	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_83	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_83	7440666	Zinc	0.00E+00	0.00E+00
ROAD_83	1314132	Zinc Oxide	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_84	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_84	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_84	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_84	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_84	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_84	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_84	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_84	107028	Acrolein	0.00E+00	0.00E+00
ROAD_84	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_84	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_84	120127	Anthracene	0.00E+00	0.00E+00
ROAD_84	7440360	Antimony	0.00E+00	0.00E+00
ROAD_84	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_84	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_84	50328	B[a]P	0.00E+00	0.00E+00
ROAD_84	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_84	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_84	71432	Benzene	0.00E+00	0.00E+00
ROAD_84	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_84	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_84	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_84	7440473	Chromium	0.00E+00	0.00E+00
ROAD_84	218019	Chrysene	0.00E+00	0.00E+00
ROAD_84	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_84	7440508	Copper	0.00E+00	0.00E+00
ROAD_84	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_84	98828	Cumene	0.00E+00	0.00E+00
ROAD_84	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_84	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_84	111773	DEGME	0.00E+00	0.00E+00
ROAD_84	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_84	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_84	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_84	86737	Fluorene	0.00E+00	0.00E+00
ROAD_84	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_84	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_84	7647010	HCl	0.00E+00	0.00E+00
ROAD_84	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_84	110543	Hexane	0.00E+00	1.07E-04
ROAD_84	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_84	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_84	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_84	7439921	Lead	0.00E+00	0.00E+00
ROAD_84	7439965	Manganese	0.00E+00	0.00E+00
ROAD_84	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_84	78933	MEK	0.00E+00	0.00E+00
ROAD_84	7439976	Mercury	0.00E+00	0.00E+00
ROAD_84	108101	MIBK	0.00E+00	0.00E+00
ROAD_84	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_84	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_84	7664417	NH3	0.00E+00	0.00E+00
ROAD_84	7440020	Nickel	0.00E+00	0.00E+00
ROAD_84	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_84	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_84	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_84	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_84	1336363	PCBs	0.00E+00	0.00E+00
ROAD_84	98566	PCBTF	0.00E+00	0.00E+00
ROAD_84	107982	PGME	0.00E+00	0.00E+00
ROAD_84	108656	PGMEA	0.00E+00	0.00E+00
ROAD_84	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_84	108952	Phenol	0.00E+00	0.00E+00
ROAD_84	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_84	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_84	115071	Propylene	0.00E+00	0.00E+00
ROAD_84	129000	Pyrene	0.00E+00	0.00E+00
ROAD_84	7782492	Selenium	0.00E+00	0.00E+00
ROAD_84	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_84	100425	Styrene	0.00E+00	9.11E-05
ROAD_84	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_84	108883	Toluene	0.00E+00	0.00E+00
ROAD_84	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_84	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_84	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_84	7440666	Zinc	0.00E+00	0.00E+00
ROAD_84	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_85	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_85	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_85	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_85	540841	2,2,4TriMePentn	0.00E+00	1.07E-05

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_85	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_85	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_85	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_85	107028	Acrolein	0.00E+00	0.00E+00
ROAD_85	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_85	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_85	120127	Anthracene	0.00E+00	0.00E+00
ROAD_85	7440360	Antimony	0.00E+00	0.00E+00
ROAD_85	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_85	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_85	50328	B[a]P	0.00E+00	0.00E+00
ROAD_85	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_85	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_85	71432	Benzene	0.00E+00	0.00E+00
ROAD_85	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_85	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_85	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_85	7440473	Chromium	0.00E+00	0.00E+00
ROAD_85	218019	Chrysene	0.00E+00	0.00E+00
ROAD_85	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_85	7440508	Copper	0.00E+00	0.00E+00
ROAD_85	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_85	98828	Cumene	0.00E+00	0.00E+00
ROAD_85	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_85	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_85	111773	DEGME	0.00E+00	0.00E+00
ROAD_85	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_85	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_85	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_85	86737	Fluorene	0.00E+00	0.00E+00
ROAD_85	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_85	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_85	7647010	HCl	0.00E+00	0.00E+00
ROAD_85	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_85	110543	Hexane	0.00E+00	1.07E-04
ROAD_85	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_85	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_85	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_85	7439921	Lead	0.00E+00	0.00E+00
ROAD_85	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_85	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_85	78933	MEK	0.00E+00	0.00E+00
ROAD_85	7439976	Mercury	0.00E+00	0.00E+00
ROAD_85	108101	MIBK	0.00E+00	0.00E+00
ROAD_85	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_85	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_85	7664417	NH3	0.00E+00	0.00E+00
ROAD_85	7440020	Nickel	0.00E+00	0.00E+00
ROAD_85	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_85	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_85	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_85	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_85	1336363	PCBs	0.00E+00	0.00E+00
ROAD_85	98566	PCBTF	0.00E+00	0.00E+00
ROAD_85	107982	PGME	0.00E+00	0.00E+00
ROAD_85	108656	PGMEA	0.00E+00	0.00E+00
ROAD_85	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_85	108952	Phenol	0.00E+00	0.00E+00
ROAD_85	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_85	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_85	115071	Propylene	0.00E+00	0.00E+00
ROAD_85	129000	Pyrene	0.00E+00	0.00E+00
ROAD_85	7782492	Selenium	0.00E+00	0.00E+00
ROAD_85	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_85	100425	Styrene	0.00E+00	9.11E-05
ROAD_85	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_85	108883	Toluene	0.00E+00	0.00E+00
ROAD_85	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_85	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_85	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_85	7440666	Zinc	0.00E+00	0.00E+00
ROAD_85	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_86	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_86	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_86	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_86	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_86	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_86	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_86	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_86	107028	Acrolein	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_86	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_86	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_86	120127	Anthracene	0.00E+00	0.00E+00
ROAD_86	7440360	Antimony	0.00E+00	0.00E+00
ROAD_86	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_86	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_86	50328	B[a]P	0.00E+00	0.00E+00
ROAD_86	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_86	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_86	71432	Benzene	0.00E+00	0.00E+00
ROAD_86	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_86	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_86	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_86	7440473	Chromium	0.00E+00	0.00E+00
ROAD_86	218019	Chrysene	0.00E+00	0.00E+00
ROAD_86	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_86	7440508	Copper	0.00E+00	0.00E+00
ROAD_86	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_86	98828	Cumene	0.00E+00	0.00E+00
ROAD_86	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_86	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_86	111773	DEGME	0.00E+00	0.00E+00
ROAD_86	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_86	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_86	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_86	86737	Fluorene	0.00E+00	0.00E+00
ROAD_86	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_86	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_86	7647010	HCl	0.00E+00	0.00E+00
ROAD_86	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_86	110543	Hexane	0.00E+00	1.07E-04
ROAD_86	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_86	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_86	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_86	7439921	Lead	0.00E+00	0.00E+00
ROAD_86	7439965	Manganese	0.00E+00	0.00E+00
ROAD_86	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_86	78933	MEK	0.00E+00	0.00E+00
ROAD_86	7439976	Mercury	0.00E+00	0.00E+00
ROAD_86	108101	MIBK	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_86	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_86	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_86	7664417	NH3	0.00E+00	0.00E+00
ROAD_86	7440020	Nickel	0.00E+00	0.00E+00
ROAD_86	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_86	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_86	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_86	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_86	1336363	PCBs	0.00E+00	0.00E+00
ROAD_86	98566	PCBTF	0.00E+00	0.00E+00
ROAD_86	107982	PGME	0.00E+00	0.00E+00
ROAD_86	108656	PGMEA	0.00E+00	0.00E+00
ROAD_86	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_86	108952	Phenol	0.00E+00	0.00E+00
ROAD_86	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_86	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_86	115071	Propylene	0.00E+00	0.00E+00
ROAD_86	129000	Pyrene	0.00E+00	0.00E+00
ROAD_86	7782492	Selenium	0.00E+00	0.00E+00
ROAD_86	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_86	100425	Styrene	0.00E+00	9.11E-05
ROAD_86	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_86	108883	Toluene	0.00E+00	0.00E+00
ROAD_86	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_86	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_86	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_86	7440666	Zinc	0.00E+00	0.00E+00
ROAD_86	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_87	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_87	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_87	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_87	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_87	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_87	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_87	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_87	107028	Acrolein	0.00E+00	0.00E+00
ROAD_87	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_87	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_87	120127	Anthracene	0.00E+00	0.00E+00
ROAD_87	7440360	Antimony	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_87	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_87	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_87	50328	B[a]P	0.00E+00	0.00E+00
ROAD_87	205992	B[b]fluoranthen	0.00E+00	0.00E+00
ROAD_87	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_87	71432	Benzene	0.00E+00	0.00E+00
ROAD_87	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_87	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_87	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_87	7440473	Chromium	0.00E+00	0.00E+00
ROAD_87	218019	Chrysene	0.00E+00	0.00E+00
ROAD_87	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_87	7440508	Copper	0.00E+00	0.00E+00
ROAD_87	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_87	98828	Cumene	0.00E+00	0.00E+00
ROAD_87	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_87	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_87	111773	DEGME	0.00E+00	0.00E+00
ROAD_87	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_87	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_87	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_87	86737	Fluorene	0.00E+00	0.00E+00
ROAD_87	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_87	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_87	7647010	HCl	0.00E+00	0.00E+00
ROAD_87	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_87	110543	Hexane	0.00E+00	1.07E-04
ROAD_87	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_87	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_87	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_87	7439921	Lead	0.00E+00	0.00E+00
ROAD_87	7439965	Manganese	0.00E+00	0.00E+00
ROAD_87	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_87	78933	MEK	0.00E+00	0.00E+00
ROAD_87	7439976	Mercury	0.00E+00	0.00E+00
ROAD_87	108101	MIBK	0.00E+00	0.00E+00
ROAD_87	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_87	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_87	7664417	NH3	0.00E+00	0.00E+00
ROAD_87	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_87	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_87	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_87	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_87	1150	PAHs-w/	0.00E+00	0.00E+00
ROAD_87	1336363	PCBs	0.00E+00	0.00E+00
ROAD_87	98566	PCBTF	0.00E+00	0.00E+00
ROAD_87	107982	PGME	0.00E+00	0.00E+00
ROAD_87	108656	PGMEA	0.00E+00	0.00E+00
ROAD_87	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_87	108952	Phenol	0.00E+00	0.00E+00
ROAD_87	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_87	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_87	115071	Propylene	0.00E+00	0.00E+00
ROAD_87	129000	Pyrene	0.00E+00	0.00E+00
ROAD_87	7782492	Selenium	0.00E+00	0.00E+00
ROAD_87	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_87	100425	Styrene	0.00E+00	9.11E-05
ROAD_87	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_87	108883	Toluene	0.00E+00	0.00E+00
ROAD_87	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_87	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_87	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_87	7440666	Zinc	0.00E+00	0.00E+00
ROAD_87	1314132	Zinc Oxide	0.00E+00	0.00E+00
ROAD_88	67641	[D] Acetone	0.00E+00	0.00E+00
ROAD_88	95636	1,2,4TriMeBenze	0.00E+00	0.00E+00
ROAD_88	106990	1,3-Butadiene	0.00E+00	0.00E+00
ROAD_88	540841	2,2,4TriMePentn	0.00E+00	1.07E-05
ROAD_88	83329	Acenaphthene	0.00E+00	0.00E+00
ROAD_88	208968	Acenaphthylene	0.00E+00	0.00E+00
ROAD_88	75070	Acetaldehyde	0.00E+00	0.00E+00
ROAD_88	107028	Acrolein	0.00E+00	0.00E+00
ROAD_88	1344281	Alumin Oxide	0.00E+00	0.00E+00
ROAD_88	7429905	Aluminum	0.00E+00	0.00E+00
ROAD_88	120127	Anthracene	0.00E+00	0.00E+00
ROAD_88	7440360	Antimony	0.00E+00	0.00E+00
ROAD_88	7440382	Arsenic	0.00E+00	0.00E+00
ROAD_88	56553	B[a]anthracene	0.00E+00	0.00E+00
ROAD_88	50328	B[a]P	0.00E+00	0.00E+00
ROAD_88	205992	B[b]fluoranthen	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_88	207089	B[k]fluoranthen	0.00E+00	0.00E+00
ROAD_88	71432	Benzene	0.00E+00	0.00E+00
ROAD_88	7440417	Beryllium	0.00E+00	0.00E+00
ROAD_88	7440439	Cadmium	0.00E+00	0.00E+00
ROAD_88	108907	Chlorobenzn	0.00E+00	0.00E+00
ROAD_88	7440473	Chromium	0.00E+00	0.00E+00
ROAD_88	218019	Chrysene	0.00E+00	0.00E+00
ROAD_88	7440484	Cobalt	0.00E+00	0.00E+00
ROAD_88	7440508	Copper	0.00E+00	0.00E+00
ROAD_88	18540299	Cr(VI)	0.00E+00	0.00E+00
ROAD_88	98828	Cumene	0.00E+00	0.00E+00
ROAD_88	110827	Cyclohexane	0.00E+00	7.68E-05
ROAD_88	53703	D[a,h]anthracen	0.00E+00	0.00E+00
ROAD_88	111773	DEGME	0.00E+00	0.00E+00
ROAD_88	9901	DieselExhPM	7.84E-02	0.00E+00
ROAD_88	100414	Ethyl Benzene	0.00E+00	5.76E-05
ROAD_88	206440	Fluoranthene	0.00E+00	0.00E+00
ROAD_88	86737	Fluorene	0.00E+00	0.00E+00
ROAD_88	1101	Fluorides&cmpds	0.00E+00	0.00E+00
ROAD_88	50000	Formaldehyde	0.00E+00	0.00E+00
ROAD_88	7647010	HCl	0.00E+00	0.00E+00
ROAD_88	822060	HexaMeDiisocyan	0.00E+00	0.00E+00
ROAD_88	110543	Hexane	0.00E+00	1.07E-04
ROAD_88	193395	In[1,2,3-cd]pyr	0.00E+00	0.00E+00
ROAD_88	1125	Isocyanates	0.00E+00	0.00E+00
ROAD_88	67630	Isopropyl Alcoh	0.00E+00	0.00E+00
ROAD_88	7439921	Lead	0.00E+00	0.00E+00
ROAD_88	7439965	Manganese	0.00E+00	0.00E+00
ROAD_88	101688	MeDiphenDiisocy	0.00E+00	0.00E+00
ROAD_88	78933	MEK	0.00E+00	0.00E+00
ROAD_88	7439976	Mercury	0.00E+00	0.00E+00
ROAD_88	108101	MIBK	0.00E+00	0.00E+00
ROAD_88	91203	Naphthalene	0.00E+00	0.00E+00
ROAD_88	71363	n-Butyl Alcohol	0.00E+00	0.00E+00
ROAD_88	7664417	NH3	0.00E+00	0.00E+00
ROAD_88	7440020	Nickel	0.00E+00	0.00E+00
ROAD_88	97563	o-Aminoazotolue	0.00E+00	0.00E+00
ROAD_88	95487	o-Cresol	0.00E+00	0.00E+00
ROAD_88	95476	o-Xylene	0.00E+00	0.00E+00
ROAD_88	1150	PAHs-w/	0.00E+00	0.00E+00

Austal USA Floating Dry Dock
Health Risk Assessment
Table 3. Source Emission Rates: Operations
April 2025

Austal Modeled Source Emission Rates: Operations

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
ROAD_88	1336363	PCBs	0.00E+00	0.00E+00
ROAD_88	98566	PCBTF	0.00E+00	0.00E+00
ROAD_88	107982	PGME	0.00E+00	0.00E+00
ROAD_88	108656	PGMEA	0.00E+00	0.00E+00
ROAD_88	85018	Phenanthrene	0.00E+00	0.00E+00
ROAD_88	108952	Phenol	0.00E+00	0.00E+00
ROAD_88	7723140	Phosphorus	0.00E+00	0.00E+00
ROAD_88	123386	Propionaldehyde	0.00E+00	0.00E+00
ROAD_88	115071	Propylene	0.00E+00	0.00E+00
ROAD_88	129000	Pyrene	0.00E+00	0.00E+00
ROAD_88	7782492	Selenium	0.00E+00	0.00E+00
ROAD_88	1175	Silica, Crystln	0.00E+00	0.00E+00
ROAD_88	100425	Styrene	0.00E+00	9.11E-05
ROAD_88	540885	t-Butyl acetate	0.00E+00	0.00E+00
ROAD_88	108883	Toluene	0.00E+00	0.00E+00
ROAD_88	25551137	TriMeBenzns	0.00E+00	0.00E+00
ROAD_88	7440622	Vanadium	0.00E+00	0.00E+00
ROAD_88	1330207	Xylenes	0.00E+00	0.00E+00
ROAD_88	7440666	Zinc	0.00E+00	0.00E+00
ROAD_88	1314132	Zinc Oxide	0.00E+00	0.00E+00

Notes:

lbs/yr = pound(s) per year

lbs/hr = pound(s) per hour

Austal USA Floating Dry Dock

Health Risk Assessment

Table 4. Health Risk Assessment Results: Operations (Permitted & Nonpermitted Sources)

April 2025

Health Risk Assessment Results

Risk Type	Risk Analysis	Receptor #	Easting X	Northing X	Risk/Hazard Index	Thresholds
Facility Wide Impacts						
Cancer	PMI	23	488,867.33	3,613,340.21	17.92	--
	MEIR	703	489,600.00	3,613,800.00	0.33	10
	MEIW	157	489,000.00	3,613,350.00	1.85	10
	Maximally Exposed Sensitive Receptor	3,369	490,037.71	3,614,126.15	0.18	10
Non-Cancer Chronic	PMI	23	488,867.33	3,613,340.21	0.80	--
	MEIR	703	489,600.00	3,613,800.00	0.01	1.0
	MEIW	157	489,000.00	3,613,350.00	0.17	1.0
	Maximally Exposed Sensitive Receptor	3,369	490,037.71	3,614,126.15	0.00	1.0
Non-Cancer Acute	PMI	165	488,800.00	3,613,375.00	1.63	--
	MEIR	992	489,700.00	3,613,800.00	0.19	1.0
	MEIW	139	488,900.00	3,613,300.00	0.91	1.0
	Maximally Exposed Sensitive Receptor	3,364	489,961.50	3,614,226.92	0.11	1.0

Note: Coordinates presented are UTM NAD83 Zone 11, meters

PMI = Point of Maximum Impact

MEIR = Maximumly Exposed Individual Resident

MEIW = Maximumly Exposed Individual Worker

Attachment 4
Construction Health Risk Assessment Details

Austal USA Floating Dry Dock

Health Risk Assessment

Table 1. Sensitive Receptors

April 2025

Austal Nearby Sensitive Receptors

Receptor Number	Receptor Description	X Coordinate	Y Coordinate
3,361	Sensitive	490,893.88	3,614,144.11
3,362	Sensitive	490,355.70	3,614,348.16
3,363	Sensitive	489,988.22	3,615,418.58
3,364	Sensitive	489,961.50	3,614,226.92
3,365	Sensitive	490,350.45	3,614,846.09
3,366	Sensitive	490,444.62	3,614,726.21
3,367	Sensitive	490,205.81	3,614,748.00
3,368	Sensitive	491,122.83	3,613,855.38
3,369	Sensitive	490,037.71	3,614,126.15
3,371	Sensitive	490,437.17	3,615,111.44
3,372	Sensitive	489,485.55	3,615,131.18
3,373	Sensitive	491,186.66	3,613,574.49
3,374	Sensitive	490,748.81	3,613,872.66
3,375	Sensitive	490,879.25	3,614,625.34

Note: Coordinates presented are UTM NAD83 Zone 11, meters

Austal USA Floating Dry Dock

Health Risk Assessment

Table 2. Nearest Residential Receptors

April 2025

Austal Nearby Residential Receptors

Receptor Number	Receptor Description	X Coordinate	Y Coordinate
677	Residential	489,650	3,613,750
703	Residential	489,600	3,613,800
992	Residential	489,700	3,613,800
1,022	Residential	490,100	3,614,000
1,036	Residential	489,800	3,614,100
1,056	Residential	489,800	3,614,200
5,383	Residential	489,937	3,614,018

Note: Coordinates presented are UTM NAD83 Zone 11, meters

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_1	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_1	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_1	107028	Acrolein	0.00E+00	1.30E-05
POINT_1	7440382	Arsenic	0.00E+00	0.00E+00
POINT_1	71432	Benzene	0.00E+00	3.40E-05
POINT_1	7440439	Cadmium	0.00E+00	0.00E+00
POINT_1	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_1	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_1	7440473	Chromium	0.00E+00	0.00E+00
POINT_1	7440508	Copper	0.00E+00	0.00E+00
POINT_1	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_1	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_1	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_1	110543	Hexane	0.00E+00	1.00E-06
POINT_1	7647010	HCl	0.00E+00	5.00E-06
POINT_1	7439921	Lead	0.00E+00	0.00E+00
POINT_1	7439965	Manganese	0.00E+00	0.00E+00
POINT_1	7439976	Mercury	0.00E+00	0.00E+00
POINT_1	91203	Naphthalene	0.00E+00	3.00E-06
POINT_1	7440020	Nickel	0.00E+00	0.00E+00
POINT_1	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_1	115071	Propylene	0.00E+00	1.20E-05
POINT_1	7782492	Selenium	0.00E+00	0.00E+00
POINT_1	108883	Toluene	0.00E+00	2.40E-05
POINT_1	1330207	Xylenes	0.00E+00	1.20E-05
POINT_1	7440666	Zinc	0.00E+00	1.00E-06
POINT_1	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_2	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_2	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_2	107028	Acrolein	0.00E+00	1.30E-05
POINT_2	7440382	Arsenic	0.00E+00	0.00E+00
POINT_2	71432	Benzene	0.00E+00	3.40E-05
POINT_2	7440439	Cadmium	0.00E+00	0.00E+00
POINT_2	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_2	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_2	7440473	Chromium	0.00E+00	0.00E+00
POINT_2	7440508	Copper	0.00E+00	0.00E+00
POINT_2	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_2	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_2	50000	Formaldehyde	0.00E+00	2.18E-04

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_2	110543	Hexane	0.00E+00	1.00E-06
POINT_2	7647010	HCl	0.00E+00	5.00E-06
POINT_2	7439921	Lead	0.00E+00	0.00E+00
POINT_2	7439965	Manganese	0.00E+00	0.00E+00
POINT_2	7439976	Mercury	0.00E+00	0.00E+00
POINT_2	91203	Naphthalene	0.00E+00	3.00E-06
POINT_2	7440020	Nickel	0.00E+00	0.00E+00
POINT_2	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_2	115071	Propylene	0.00E+00	1.20E-05
POINT_2	7782492	Selenium	0.00E+00	0.00E+00
POINT_2	108883	Toluene	0.00E+00	2.40E-05
POINT_2	1330207	Xylenes	0.00E+00	1.20E-05
POINT_2	7440666	Zinc	0.00E+00	1.00E-06
POINT_2	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_3	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_3	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_3	107028	Acrolein	0.00E+00	1.30E-05
POINT_3	7440382	Arsenic	0.00E+00	0.00E+00
POINT_3	71432	Benzene	0.00E+00	3.40E-05
POINT_3	7440439	Cadmium	0.00E+00	0.00E+00
POINT_3	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_3	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_3	7440473	Chromium	0.00E+00	0.00E+00
POINT_3	7440508	Copper	0.00E+00	0.00E+00
POINT_3	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_3	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_3	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_3	110543	Hexane	0.00E+00	1.00E-06
POINT_3	7647010	HCl	0.00E+00	5.00E-06
POINT_3	7439921	Lead	0.00E+00	0.00E+00
POINT_3	7439965	Manganese	0.00E+00	0.00E+00
POINT_3	7439976	Mercury	0.00E+00	0.00E+00
POINT_3	91203	Naphthalene	0.00E+00	3.00E-06
POINT_3	7440020	Nickel	0.00E+00	0.00E+00
POINT_3	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_3	115071	Propylene	0.00E+00	1.20E-05
POINT_3	7782492	Selenium	0.00E+00	0.00E+00
POINT_3	108883	Toluene	0.00E+00	2.40E-05
POINT_3	1330207	Xylenes	0.00E+00	1.20E-05
POINT_3	7440666	Zinc	0.00E+00	1.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_3	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_4	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_4	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_4	107028	Acrolein	0.00E+00	1.30E-05
POINT_4	7440382	Arsenic	0.00E+00	0.00E+00
POINT_4	71432	Benzene	0.00E+00	3.40E-05
POINT_4	7440439	Cadmium	0.00E+00	0.00E+00
POINT_4	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_4	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_4	7440473	Chromium	0.00E+00	0.00E+00
POINT_4	7440508	Copper	0.00E+00	0.00E+00
POINT_4	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_4	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_4	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_4	110543	Hexane	0.00E+00	1.00E-06
POINT_4	7647010	HCl	0.00E+00	5.00E-06
POINT_4	7439921	Lead	0.00E+00	0.00E+00
POINT_4	7439965	Manganese	0.00E+00	0.00E+00
POINT_4	7439976	Mercury	0.00E+00	0.00E+00
POINT_4	91203	Naphthalene	0.00E+00	3.00E-06
POINT_4	7440020	Nickel	0.00E+00	0.00E+00
POINT_4	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_4	115071	Propylene	0.00E+00	1.20E-05
POINT_4	7782492	Selenium	0.00E+00	0.00E+00
POINT_4	108883	Toluene	0.00E+00	2.40E-05
POINT_4	1330207	Xylenes	0.00E+00	1.20E-05
POINT_4	7440666	Zinc	0.00E+00	1.00E-06
POINT_4	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_5	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_5	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_5	107028	Acrolein	0.00E+00	1.30E-05
POINT_5	7440382	Arsenic	0.00E+00	0.00E+00
POINT_5	71432	Benzene	0.00E+00	3.40E-05
POINT_5	7440439	Cadmium	0.00E+00	0.00E+00
POINT_5	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_5	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_5	7440473	Chromium	0.00E+00	0.00E+00
POINT_5	7440508	Copper	0.00E+00	0.00E+00
POINT_5	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_5	100414	Ethyl Benzene	0.00E+00	4.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_5	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_5	110543	Hexane	0.00E+00	1.00E-06
POINT_5	7647010	HCl	0.00E+00	5.00E-06
POINT_5	7439921	Lead	0.00E+00	0.00E+00
POINT_5	7439965	Manganese	0.00E+00	0.00E+00
POINT_5	7439976	Mercury	0.00E+00	0.00E+00
POINT_5	91203	Naphthalene	0.00E+00	3.00E-06
POINT_5	7440020	Nickel	0.00E+00	0.00E+00
POINT_5	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_5	115071	Propylene	0.00E+00	1.20E-05
POINT_5	7782492	Selenium	0.00E+00	0.00E+00
POINT_5	108883	Toluene	0.00E+00	2.40E-05
POINT_5	1330207	Xylenes	0.00E+00	1.20E-05
POINT_5	7440666	Zinc	0.00E+00	1.00E-06
POINT_5	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_6	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_6	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_6	107028	Acrolein	0.00E+00	1.30E-05
POINT_6	7440382	Arsenic	0.00E+00	0.00E+00
POINT_6	71432	Benzene	0.00E+00	3.40E-05
POINT_6	7440439	Cadmium	0.00E+00	0.00E+00
POINT_6	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_6	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_6	7440473	Chromium	0.00E+00	0.00E+00
POINT_6	7440508	Copper	0.00E+00	0.00E+00
POINT_6	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_6	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_6	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_6	110543	Hexane	0.00E+00	1.00E-06
POINT_6	7647010	HCl	0.00E+00	5.00E-06
POINT_6	7439921	Lead	0.00E+00	0.00E+00
POINT_6	7439965	Manganese	0.00E+00	0.00E+00
POINT_6	7439976	Mercury	0.00E+00	0.00E+00
POINT_6	91203	Naphthalene	0.00E+00	3.00E-06
POINT_6	7440020	Nickel	0.00E+00	0.00E+00
POINT_6	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_6	115071	Propylene	0.00E+00	1.20E-05
POINT_6	7782492	Selenium	0.00E+00	0.00E+00
POINT_6	108883	Toluene	0.00E+00	2.40E-05
POINT_6	1330207	Xylenes	0.00E+00	1.20E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_6	7440666	Zinc	0.00E+00	1.00E-06
POINT_6	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_7	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_7	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_7	107028	Acrolein	0.00E+00	1.30E-05
POINT_7	7440382	Arsenic	0.00E+00	0.00E+00
POINT_7	71432	Benzene	0.00E+00	3.40E-05
POINT_7	7440439	Cadmium	0.00E+00	0.00E+00
POINT_7	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_7	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_7	7440473	Chromium	0.00E+00	0.00E+00
POINT_7	7440508	Copper	0.00E+00	0.00E+00
POINT_7	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_7	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_7	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_7	110543	Hexane	0.00E+00	1.00E-06
POINT_7	7647010	HCl	0.00E+00	5.00E-06
POINT_7	7439921	Lead	0.00E+00	0.00E+00
POINT_7	7439965	Manganese	0.00E+00	0.00E+00
POINT_7	7439976	Mercury	0.00E+00	0.00E+00
POINT_7	91203	Naphthalene	0.00E+00	3.00E-06
POINT_7	7440020	Nickel	0.00E+00	0.00E+00
POINT_7	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_7	115071	Propylene	0.00E+00	1.20E-05
POINT_7	7782492	Selenium	0.00E+00	0.00E+00
POINT_7	108883	Toluene	0.00E+00	2.40E-05
POINT_7	1330207	Xylenes	0.00E+00	1.20E-05
POINT_7	7440666	Zinc	0.00E+00	1.00E-06
POINT_7	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_8	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_8	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_8	107028	Acrolein	0.00E+00	1.30E-05
POINT_8	7440382	Arsenic	0.00E+00	0.00E+00
POINT_8	71432	Benzene	0.00E+00	3.40E-05
POINT_8	7440439	Cadmium	0.00E+00	0.00E+00
POINT_8	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_8	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_8	7440473	Chromium	0.00E+00	0.00E+00
POINT_8	7440508	Copper	0.00E+00	0.00E+00
POINT_8	9901	DieselExhPM	9.85E-02	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_8	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_8	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_8	110543	Hexane	0.00E+00	1.00E-06
POINT_8	7647010	HCl	0.00E+00	5.00E-06
POINT_8	7439921	Lead	0.00E+00	0.00E+00
POINT_8	7439965	Manganese	0.00E+00	0.00E+00
POINT_8	7439976	Mercury	0.00E+00	0.00E+00
POINT_8	91203	Naphthalene	0.00E+00	3.00E-06
POINT_8	7440020	Nickel	0.00E+00	0.00E+00
POINT_8	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_8	115071	Propylene	0.00E+00	1.20E-05
POINT_8	7782492	Selenium	0.00E+00	0.00E+00
POINT_8	108883	Toluene	0.00E+00	2.40E-05
POINT_8	1330207	Xylenes	0.00E+00	1.20E-05
POINT_8	7440666	Zinc	0.00E+00	1.00E-06
POINT_8	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_9	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_9	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_9	107028	Acrolein	0.00E+00	1.30E-05
POINT_9	7440382	Arsenic	0.00E+00	0.00E+00
POINT_9	71432	Benzene	0.00E+00	3.40E-05
POINT_9	7440439	Cadmium	0.00E+00	0.00E+00
POINT_9	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_9	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_9	7440473	Chromium	0.00E+00	0.00E+00
POINT_9	7440508	Copper	0.00E+00	0.00E+00
POINT_9	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_9	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_9	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_9	110543	Hexane	0.00E+00	1.00E-06
POINT_9	7647010	HCl	0.00E+00	5.00E-06
POINT_9	7439921	Lead	0.00E+00	0.00E+00
POINT_9	7439965	Manganese	0.00E+00	0.00E+00
POINT_9	7439976	Mercury	0.00E+00	0.00E+00
POINT_9	91203	Naphthalene	0.00E+00	3.00E-06
POINT_9	7440020	Nickel	0.00E+00	0.00E+00
POINT_9	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_9	115071	Propylene	0.00E+00	1.20E-05
POINT_9	7782492	Selenium	0.00E+00	0.00E+00
POINT_9	108883	Toluene	0.00E+00	2.40E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_9	1330207	Xylenes	0.00E+00	1.20E-05
POINT_9	7440666	Zinc	0.00E+00	1.00E-06
POINT_9	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_10	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_10	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_10	107028	Acrolein	0.00E+00	1.30E-05
POINT_10	7440382	Arsenic	0.00E+00	0.00E+00
POINT_10	71432	Benzene	0.00E+00	3.40E-05
POINT_10	7440439	Cadmium	0.00E+00	0.00E+00
POINT_10	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_10	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_10	7440473	Chromium	0.00E+00	0.00E+00
POINT_10	7440508	Copper	0.00E+00	0.00E+00
POINT_10	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_10	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_10	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_10	110543	Hexane	0.00E+00	1.00E-06
POINT_10	7647010	HCl	0.00E+00	5.00E-06
POINT_10	7439921	Lead	0.00E+00	0.00E+00
POINT_10	7439965	Manganese	0.00E+00	0.00E+00
POINT_10	7439976	Mercury	0.00E+00	0.00E+00
POINT_10	91203	Naphthalene	0.00E+00	3.00E-06
POINT_10	7440020	Nickel	0.00E+00	0.00E+00
POINT_10	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_10	115071	Propylene	0.00E+00	1.20E-05
POINT_10	7782492	Selenium	0.00E+00	0.00E+00
POINT_10	108883	Toluene	0.00E+00	2.40E-05
POINT_10	1330207	Xylenes	0.00E+00	1.20E-05
POINT_10	7440666	Zinc	0.00E+00	1.00E-06
POINT_10	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_11	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_11	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_11	107028	Acrolein	0.00E+00	1.30E-05
POINT_11	7440382	Arsenic	0.00E+00	0.00E+00
POINT_11	71432	Benzene	0.00E+00	3.40E-05
POINT_11	7440439	Cadmium	0.00E+00	0.00E+00
POINT_11	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_11	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_11	7440473	Chromium	0.00E+00	0.00E+00
POINT_11	7440508	Copper	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_11	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_11	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_11	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_11	110543	Hexane	0.00E+00	1.00E-06
POINT_11	7647010	HCl	0.00E+00	5.00E-06
POINT_11	7439921	Lead	0.00E+00	0.00E+00
POINT_11	7439965	Manganese	0.00E+00	0.00E+00
POINT_11	7439976	Mercury	0.00E+00	0.00E+00
POINT_11	91203	Naphthalene	0.00E+00	3.00E-06
POINT_11	7440020	Nickel	0.00E+00	0.00E+00
POINT_11	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_11	115071	Propylene	0.00E+00	1.20E-05
POINT_11	7782492	Selenium	0.00E+00	0.00E+00
POINT_11	108883	Toluene	0.00E+00	2.40E-05
POINT_11	1330207	Xylenes	0.00E+00	1.20E-05
POINT_11	7440666	Zinc	0.00E+00	1.00E-06
POINT_11	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_12	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_12	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_12	107028	Acrolein	0.00E+00	1.30E-05
POINT_12	7440382	Arsenic	0.00E+00	0.00E+00
POINT_12	71432	Benzene	0.00E+00	3.40E-05
POINT_12	7440439	Cadmium	0.00E+00	0.00E+00
POINT_12	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_12	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_12	7440473	Chromium	0.00E+00	0.00E+00
POINT_12	7440508	Copper	0.00E+00	0.00E+00
POINT_12	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_12	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_12	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_12	110543	Hexane	0.00E+00	1.00E-06
POINT_12	7647010	HCl	0.00E+00	5.00E-06
POINT_12	7439921	Lead	0.00E+00	0.00E+00
POINT_12	7439965	Manganese	0.00E+00	0.00E+00
POINT_12	7439976	Mercury	0.00E+00	0.00E+00
POINT_12	91203	Naphthalene	0.00E+00	3.00E-06
POINT_12	7440020	Nickel	0.00E+00	0.00E+00
POINT_12	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_12	115071	Propylene	0.00E+00	1.20E-05
POINT_12	7782492	Selenium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_12	108883	Toluene	0.00E+00	2.40E-05
POINT_12	1330207	Xylenes	0.00E+00	1.20E-05
POINT_12	7440666	Zinc	0.00E+00	1.00E-06
POINT_12	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_13	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_13	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_13	107028	Acrolein	0.00E+00	1.30E-05
POINT_13	7440382	Arsenic	0.00E+00	0.00E+00
POINT_13	71432	Benzene	0.00E+00	3.40E-05
POINT_13	7440439	Cadmium	0.00E+00	0.00E+00
POINT_13	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_13	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_13	7440473	Chromium	0.00E+00	0.00E+00
POINT_13	7440508	Copper	0.00E+00	0.00E+00
POINT_13	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_13	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_13	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_13	110543	Hexane	0.00E+00	1.00E-06
POINT_13	7647010	HCl	0.00E+00	5.00E-06
POINT_13	7439921	Lead	0.00E+00	0.00E+00
POINT_13	7439965	Manganese	0.00E+00	0.00E+00
POINT_13	7439976	Mercury	0.00E+00	0.00E+00
POINT_13	91203	Naphthalene	0.00E+00	3.00E-06
POINT_13	7440020	Nickel	0.00E+00	0.00E+00
POINT_13	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_13	115071	Propylene	0.00E+00	1.20E-05
POINT_13	7782492	Selenium	0.00E+00	0.00E+00
POINT_13	108883	Toluene	0.00E+00	2.40E-05
POINT_13	1330207	Xylenes	0.00E+00	1.20E-05
POINT_13	7440666	Zinc	0.00E+00	1.00E-06
POINT_13	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_14	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_14	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_14	107028	Acrolein	0.00E+00	1.30E-05
POINT_14	7440382	Arsenic	0.00E+00	0.00E+00
POINT_14	71432	Benzene	0.00E+00	3.40E-05
POINT_14	7440439	Cadmium	0.00E+00	0.00E+00
POINT_14	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_14	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_14	7440473	Chromium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_14	7440508	Copper	0.00E+00	0.00E+00
POINT_14	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_14	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_14	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_14	110543	Hexane	0.00E+00	1.00E-06
POINT_14	7647010	HCl	0.00E+00	5.00E-06
POINT_14	7439921	Lead	0.00E+00	0.00E+00
POINT_14	7439965	Manganese	0.00E+00	0.00E+00
POINT_14	7439976	Mercury	0.00E+00	0.00E+00
POINT_14	91203	Naphthalene	0.00E+00	3.00E-06
POINT_14	7440020	Nickel	0.00E+00	0.00E+00
POINT_14	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_14	115071	Propylene	0.00E+00	1.20E-05
POINT_14	7782492	Selenium	0.00E+00	0.00E+00
POINT_14	108883	Toluene	0.00E+00	2.40E-05
POINT_14	1330207	Xylenes	0.00E+00	1.20E-05
POINT_14	7440666	Zinc	0.00E+00	1.00E-06
POINT_14	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_15	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_15	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_15	107028	Acrolein	0.00E+00	1.30E-05
POINT_15	7440382	Arsenic	0.00E+00	0.00E+00
POINT_15	71432	Benzene	0.00E+00	3.40E-05
POINT_15	7440439	Cadmium	0.00E+00	0.00E+00
POINT_15	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_15	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_15	7440473	Chromium	0.00E+00	0.00E+00
POINT_15	7440508	Copper	0.00E+00	0.00E+00
POINT_15	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_15	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_15	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_15	110543	Hexane	0.00E+00	1.00E-06
POINT_15	7647010	HCl	0.00E+00	5.00E-06
POINT_15	7439921	Lead	0.00E+00	0.00E+00
POINT_15	7439965	Manganese	0.00E+00	0.00E+00
POINT_15	7439976	Mercury	0.00E+00	0.00E+00
POINT_15	91203	Naphthalene	0.00E+00	3.00E-06
POINT_15	7440020	Nickel	0.00E+00	0.00E+00
POINT_15	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_15	115071	Propylene	0.00E+00	1.20E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_15	7782492	Selenium	0.00E+00	0.00E+00
POINT_15	108883	Toluene	0.00E+00	2.40E-05
POINT_15	1330207	Xylenes	0.00E+00	1.20E-05
POINT_15	7440666	Zinc	0.00E+00	1.00E-06
POINT_15	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_16	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_16	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_16	107028	Acrolein	0.00E+00	1.30E-05
POINT_16	7440382	Arsenic	0.00E+00	0.00E+00
POINT_16	71432	Benzene	0.00E+00	3.40E-05
POINT_16	7440439	Cadmium	0.00E+00	0.00E+00
POINT_16	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_16	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_16	7440473	Chromium	0.00E+00	0.00E+00
POINT_16	7440508	Copper	0.00E+00	0.00E+00
POINT_16	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_16	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_16	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_16	110543	Hexane	0.00E+00	1.00E-06
POINT_16	7647010	HCl	0.00E+00	5.00E-06
POINT_16	7439921	Lead	0.00E+00	0.00E+00
POINT_16	7439965	Manganese	0.00E+00	0.00E+00
POINT_16	7439976	Mercury	0.00E+00	0.00E+00
POINT_16	91203	Naphthalene	0.00E+00	3.00E-06
POINT_16	7440020	Nickel	0.00E+00	0.00E+00
POINT_16	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_16	115071	Propylene	0.00E+00	1.20E-05
POINT_16	7782492	Selenium	0.00E+00	0.00E+00
POINT_16	108883	Toluene	0.00E+00	2.40E-05
POINT_16	1330207	Xylenes	0.00E+00	1.20E-05
POINT_16	7440666	Zinc	0.00E+00	1.00E-06
POINT_16	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_17	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_17	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_17	107028	Acrolein	0.00E+00	1.30E-05
POINT_17	7440382	Arsenic	0.00E+00	0.00E+00
POINT_17	71432	Benzene	0.00E+00	3.40E-05
POINT_17	7440439	Cadmium	0.00E+00	0.00E+00
POINT_17	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_17	18540299	Cr(VI)	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_17	7440473	Chromium	0.00E+00	0.00E+00
POINT_17	7440508	Copper	0.00E+00	0.00E+00
POINT_17	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_17	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_17	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_17	110543	Hexane	0.00E+00	1.00E-06
POINT_17	7647010	HCl	0.00E+00	5.00E-06
POINT_17	7439921	Lead	0.00E+00	0.00E+00
POINT_17	7439965	Manganese	0.00E+00	0.00E+00
POINT_17	7439976	Mercury	0.00E+00	0.00E+00
POINT_17	91203	Naphthalene	0.00E+00	3.00E-06
POINT_17	7440020	Nickel	0.00E+00	0.00E+00
POINT_17	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_17	115071	Propylene	0.00E+00	1.20E-05
POINT_17	7782492	Selenium	0.00E+00	0.00E+00
POINT_17	108883	Toluene	0.00E+00	2.40E-05
POINT_17	1330207	Xylenes	0.00E+00	1.20E-05
POINT_17	7440666	Zinc	0.00E+00	1.00E-06
POINT_17	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_18	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_18	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_18	107028	Acrolein	0.00E+00	1.30E-05
POINT_18	7440382	Arsenic	0.00E+00	0.00E+00
POINT_18	71432	Benzene	0.00E+00	3.40E-05
POINT_18	7440439	Cadmium	0.00E+00	0.00E+00
POINT_18	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_18	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_18	7440473	Chromium	0.00E+00	0.00E+00
POINT_18	7440508	Copper	0.00E+00	0.00E+00
POINT_18	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_18	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_18	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_18	110543	Hexane	0.00E+00	1.00E-06
POINT_18	7647010	HCl	0.00E+00	5.00E-06
POINT_18	7439921	Lead	0.00E+00	0.00E+00
POINT_18	7439965	Manganese	0.00E+00	0.00E+00
POINT_18	7439976	Mercury	0.00E+00	0.00E+00
POINT_18	91203	Naphthalene	0.00E+00	3.00E-06
POINT_18	7440020	Nickel	0.00E+00	0.00E+00
POINT_18	1150	PAHs-w/	0.00E+00	1.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_18	115071	Propylene	0.00E+00	1.20E-05
POINT_18	7782492	Selenium	0.00E+00	0.00E+00
POINT_18	108883	Toluene	0.00E+00	2.40E-05
POINT_18	1330207	Xylenes	0.00E+00	1.20E-05
POINT_18	7440666	Zinc	0.00E+00	1.00E-06
POINT_18	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_19	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_19	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_19	107028	Acrolein	0.00E+00	1.30E-05
POINT_19	7440382	Arsenic	0.00E+00	0.00E+00
POINT_19	71432	Benzene	0.00E+00	3.40E-05
POINT_19	7440439	Cadmium	0.00E+00	0.00E+00
POINT_19	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_19	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_19	7440473	Chromium	0.00E+00	0.00E+00
POINT_19	7440508	Copper	0.00E+00	0.00E+00
POINT_19	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_19	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_19	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_19	110543	Hexane	0.00E+00	1.00E-06
POINT_19	7647010	HCl	0.00E+00	5.00E-06
POINT_19	7439921	Lead	0.00E+00	0.00E+00
POINT_19	7439965	Manganese	0.00E+00	0.00E+00
POINT_19	7439976	Mercury	0.00E+00	0.00E+00
POINT_19	91203	Naphthalene	0.00E+00	3.00E-06
POINT_19	7440020	Nickel	0.00E+00	0.00E+00
POINT_19	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_19	115071	Propylene	0.00E+00	1.20E-05
POINT_19	7782492	Selenium	0.00E+00	0.00E+00
POINT_19	108883	Toluene	0.00E+00	2.40E-05
POINT_19	1330207	Xylenes	0.00E+00	1.20E-05
POINT_19	7440666	Zinc	0.00E+00	1.00E-06
POINT_19	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_20	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_20	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_20	107028	Acrolein	0.00E+00	1.30E-05
POINT_20	7440382	Arsenic	0.00E+00	0.00E+00
POINT_20	71432	Benzene	0.00E+00	3.40E-05
POINT_20	7440439	Cadmium	0.00E+00	0.00E+00
POINT_20	108907	Chlorobenzn	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_20	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_20	7440473	Chromium	0.00E+00	0.00E+00
POINT_20	7440508	Copper	0.00E+00	0.00E+00
POINT_20	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_20	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_20	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_20	110543	Hexane	0.00E+00	1.00E-06
POINT_20	7647010	HCl	0.00E+00	5.00E-06
POINT_20	7439921	Lead	0.00E+00	0.00E+00
POINT_20	7439965	Manganese	0.00E+00	0.00E+00
POINT_20	7439976	Mercury	0.00E+00	0.00E+00
POINT_20	91203	Naphthalene	0.00E+00	3.00E-06
POINT_20	7440020	Nickel	0.00E+00	0.00E+00
POINT_20	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_20	115071	Propylene	0.00E+00	1.20E-05
POINT_20	7782492	Selenium	0.00E+00	0.00E+00
POINT_20	108883	Toluene	0.00E+00	2.40E-05
POINT_20	1330207	Xylenes	0.00E+00	1.20E-05
POINT_20	7440666	Zinc	0.00E+00	1.00E-06
POINT_20	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_21	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_21	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_21	107028	Acrolein	0.00E+00	1.30E-05
POINT_21	7440382	Arsenic	0.00E+00	0.00E+00
POINT_21	71432	Benzene	0.00E+00	3.40E-05
POINT_21	7440439	Cadmium	0.00E+00	0.00E+00
POINT_21	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_21	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_21	7440473	Chromium	0.00E+00	0.00E+00
POINT_21	7440508	Copper	0.00E+00	0.00E+00
POINT_21	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_21	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_21	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_21	110543	Hexane	0.00E+00	1.00E-06
POINT_21	7647010	HCl	0.00E+00	5.00E-06
POINT_21	7439921	Lead	0.00E+00	0.00E+00
POINT_21	7439965	Manganese	0.00E+00	0.00E+00
POINT_21	7439976	Mercury	0.00E+00	0.00E+00
POINT_21	91203	Naphthalene	0.00E+00	3.00E-06
POINT_21	7440020	Nickel	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_21	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_21	115071	Propylene	0.00E+00	1.20E-05
POINT_21	7782492	Selenium	0.00E+00	0.00E+00
POINT_21	108883	Toluene	0.00E+00	2.40E-05
POINT_21	1330207	Xylenes	0.00E+00	1.20E-05
POINT_21	7440666	Zinc	0.00E+00	1.00E-06
POINT_21	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_22	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_22	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_22	107028	Acrolein	0.00E+00	1.30E-05
POINT_22	7440382	Arsenic	0.00E+00	0.00E+00
POINT_22	71432	Benzene	0.00E+00	3.40E-05
POINT_22	7440439	Cadmium	0.00E+00	0.00E+00
POINT_22	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_22	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_22	7440473	Chromium	0.00E+00	0.00E+00
POINT_22	7440508	Copper	0.00E+00	0.00E+00
POINT_22	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_22	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_22	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_22	110543	Hexane	0.00E+00	1.00E-06
POINT_22	7647010	HCl	0.00E+00	5.00E-06
POINT_22	7439921	Lead	0.00E+00	0.00E+00
POINT_22	7439965	Manganese	0.00E+00	0.00E+00
POINT_22	7439976	Mercury	0.00E+00	0.00E+00
POINT_22	91203	Naphthalene	0.00E+00	3.00E-06
POINT_22	7440020	Nickel	0.00E+00	0.00E+00
POINT_22	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_22	115071	Propylene	0.00E+00	1.20E-05
POINT_22	7782492	Selenium	0.00E+00	0.00E+00
POINT_22	108883	Toluene	0.00E+00	2.40E-05
POINT_22	1330207	Xylenes	0.00E+00	1.20E-05
POINT_22	7440666	Zinc	0.00E+00	1.00E-06
POINT_22	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_23	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_23	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_23	107028	Acrolein	0.00E+00	1.30E-05
POINT_23	7440382	Arsenic	0.00E+00	0.00E+00
POINT_23	71432	Benzene	0.00E+00	3.40E-05
POINT_23	7440439	Cadmium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_23	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_23	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_23	7440473	Chromium	0.00E+00	0.00E+00
POINT_23	7440508	Copper	0.00E+00	0.00E+00
POINT_23	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_23	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_23	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_23	110543	Hexane	0.00E+00	1.00E-06
POINT_23	7647010	HCl	0.00E+00	5.00E-06
POINT_23	7439921	Lead	0.00E+00	0.00E+00
POINT_23	7439965	Manganese	0.00E+00	0.00E+00
POINT_23	7439976	Mercury	0.00E+00	0.00E+00
POINT_23	91203	Naphthalene	0.00E+00	3.00E-06
POINT_23	7440020	Nickel	0.00E+00	0.00E+00
POINT_23	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_23	115071	Propylene	0.00E+00	1.20E-05
POINT_23	7782492	Selenium	0.00E+00	0.00E+00
POINT_23	108883	Toluene	0.00E+00	2.40E-05
POINT_23	1330207	Xylenes	0.00E+00	1.20E-05
POINT_23	7440666	Zinc	0.00E+00	1.00E-06
POINT_23	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_24	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_24	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_24	107028	Acrolein	0.00E+00	1.30E-05
POINT_24	7440382	Arsenic	0.00E+00	0.00E+00
POINT_24	71432	Benzene	0.00E+00	3.40E-05
POINT_24	7440439	Cadmium	0.00E+00	0.00E+00
POINT_24	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_24	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_24	7440473	Chromium	0.00E+00	0.00E+00
POINT_24	7440508	Copper	0.00E+00	0.00E+00
POINT_24	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_24	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_24	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_24	110543	Hexane	0.00E+00	1.00E-06
POINT_24	7647010	HCl	0.00E+00	5.00E-06
POINT_24	7439921	Lead	0.00E+00	0.00E+00
POINT_24	7439965	Manganese	0.00E+00	0.00E+00
POINT_24	7439976	Mercury	0.00E+00	0.00E+00
POINT_24	91203	Naphthalene	0.00E+00	3.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_24	7440020	Nickel	0.00E+00	0.00E+00
POINT_24	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_24	115071	Propylene	0.00E+00	1.20E-05
POINT_24	7782492	Selenium	0.00E+00	0.00E+00
POINT_24	108883	Toluene	0.00E+00	2.40E-05
POINT_24	1330207	Xylenes	0.00E+00	1.20E-05
POINT_24	7440666	Zinc	0.00E+00	1.00E-06
POINT_24	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_25	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_25	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_25	107028	Acrolein	0.00E+00	1.30E-05
POINT_25	7440382	Arsenic	0.00E+00	0.00E+00
POINT_25	71432	Benzene	0.00E+00	3.40E-05
POINT_25	7440439	Cadmium	0.00E+00	0.00E+00
POINT_25	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_25	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_25	7440473	Chromium	0.00E+00	0.00E+00
POINT_25	7440508	Copper	0.00E+00	0.00E+00
POINT_25	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_25	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_25	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_25	110543	Hexane	0.00E+00	1.00E-06
POINT_25	7647010	HCl	0.00E+00	5.00E-06
POINT_25	7439921	Lead	0.00E+00	0.00E+00
POINT_25	7439965	Manganese	0.00E+00	0.00E+00
POINT_25	7439976	Mercury	0.00E+00	0.00E+00
POINT_25	91203	Naphthalene	0.00E+00	3.00E-06
POINT_25	7440020	Nickel	0.00E+00	0.00E+00
POINT_25	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_25	115071	Propylene	0.00E+00	1.20E-05
POINT_25	7782492	Selenium	0.00E+00	0.00E+00
POINT_25	108883	Toluene	0.00E+00	2.40E-05
POINT_25	1330207	Xylenes	0.00E+00	1.20E-05
POINT_25	7440666	Zinc	0.00E+00	1.00E-06
POINT_25	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_26	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_26	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_26	107028	Acrolein	0.00E+00	1.30E-05
POINT_26	7440382	Arsenic	0.00E+00	0.00E+00
POINT_26	71432	Benzene	0.00E+00	3.40E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_26	7440439	Cadmium	0.00E+00	0.00E+00
POINT_26	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_26	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_26	7440473	Chromium	0.00E+00	0.00E+00
POINT_26	7440508	Copper	0.00E+00	0.00E+00
POINT_26	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_26	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_26	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_26	110543	Hexane	0.00E+00	1.00E-06
POINT_26	7647010	HCl	0.00E+00	5.00E-06
POINT_26	7439921	Lead	0.00E+00	0.00E+00
POINT_26	7439965	Manganese	0.00E+00	0.00E+00
POINT_26	7439976	Mercury	0.00E+00	0.00E+00
POINT_26	91203	Naphthalene	0.00E+00	3.00E-06
POINT_26	7440020	Nickel	0.00E+00	0.00E+00
POINT_26	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_26	115071	Propylene	0.00E+00	1.20E-05
POINT_26	7782492	Selenium	0.00E+00	0.00E+00
POINT_26	108883	Toluene	0.00E+00	2.40E-05
POINT_26	1330207	Xylenes	0.00E+00	1.20E-05
POINT_26	7440666	Zinc	0.00E+00	1.00E-06
POINT_26	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_27	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_27	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_27	107028	Acrolein	0.00E+00	1.30E-05
POINT_27	7440382	Arsenic	0.00E+00	0.00E+00
POINT_27	71432	Benzene	0.00E+00	3.40E-05
POINT_27	7440439	Cadmium	0.00E+00	0.00E+00
POINT_27	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_27	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_27	7440473	Chromium	0.00E+00	0.00E+00
POINT_27	7440508	Copper	0.00E+00	0.00E+00
POINT_27	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_27	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_27	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_27	110543	Hexane	0.00E+00	1.00E-06
POINT_27	7647010	HCl	0.00E+00	5.00E-06
POINT_27	7439921	Lead	0.00E+00	0.00E+00
POINT_27	7439965	Manganese	0.00E+00	0.00E+00
POINT_27	7439976	Mercury	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_27	91203	Naphthalene	0.00E+00	3.00E-06
POINT_27	7440020	Nickel	0.00E+00	0.00E+00
POINT_27	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_27	115071	Propylene	0.00E+00	1.20E-05
POINT_27	7782492	Selenium	0.00E+00	0.00E+00
POINT_27	108883	Toluene	0.00E+00	2.40E-05
POINT_27	1330207	Xylenes	0.00E+00	1.20E-05
POINT_27	7440666	Zinc	0.00E+00	1.00E-06
POINT_27	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_28	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_28	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_28	107028	Acrolein	0.00E+00	1.30E-05
POINT_28	7440382	Arsenic	0.00E+00	0.00E+00
POINT_28	71432	Benzene	0.00E+00	3.40E-05
POINT_28	7440439	Cadmium	0.00E+00	0.00E+00
POINT_28	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_28	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_28	7440473	Chromium	0.00E+00	0.00E+00
POINT_28	7440508	Copper	0.00E+00	0.00E+00
POINT_28	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_28	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_28	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_28	110543	Hexane	0.00E+00	1.00E-06
POINT_28	7647010	HCl	0.00E+00	5.00E-06
POINT_28	7439921	Lead	0.00E+00	0.00E+00
POINT_28	7439965	Manganese	0.00E+00	0.00E+00
POINT_28	7439976	Mercury	0.00E+00	0.00E+00
POINT_28	91203	Naphthalene	0.00E+00	3.00E-06
POINT_28	7440020	Nickel	0.00E+00	0.00E+00
POINT_28	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_28	115071	Propylene	0.00E+00	1.20E-05
POINT_28	7782492	Selenium	0.00E+00	0.00E+00
POINT_28	108883	Toluene	0.00E+00	2.40E-05
POINT_28	1330207	Xylenes	0.00E+00	1.20E-05
POINT_28	7440666	Zinc	0.00E+00	1.00E-06
POINT_28	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_29	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_29	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_29	107028	Acrolein	0.00E+00	1.30E-05
POINT_29	7440382	Arsenic	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_29	71432	Benzene	0.00E+00	3.40E-05
POINT_29	7440439	Cadmium	0.00E+00	0.00E+00
POINT_29	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_29	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_29	7440473	Chromium	0.00E+00	0.00E+00
POINT_29	7440508	Copper	0.00E+00	0.00E+00
POINT_29	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_29	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_29	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_29	110543	Hexane	0.00E+00	1.00E-06
POINT_29	7647010	HCl	0.00E+00	5.00E-06
POINT_29	7439921	Lead	0.00E+00	0.00E+00
POINT_29	7439965	Manganese	0.00E+00	0.00E+00
POINT_29	7439976	Mercury	0.00E+00	0.00E+00
POINT_29	91203	Naphthalene	0.00E+00	3.00E-06
POINT_29	7440020	Nickel	0.00E+00	0.00E+00
POINT_29	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_29	115071	Propylene	0.00E+00	1.20E-05
POINT_29	7782492	Selenium	0.00E+00	0.00E+00
POINT_29	108883	Toluene	0.00E+00	2.40E-05
POINT_29	1330207	Xylenes	0.00E+00	1.20E-05
POINT_29	7440666	Zinc	0.00E+00	1.00E-06
POINT_29	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_30	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_30	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_30	107028	Acrolein	0.00E+00	1.30E-05
POINT_30	7440382	Arsenic	0.00E+00	0.00E+00
POINT_30	71432	Benzene	0.00E+00	3.40E-05
POINT_30	7440439	Cadmium	0.00E+00	0.00E+00
POINT_30	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_30	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_30	7440473	Chromium	0.00E+00	0.00E+00
POINT_30	7440508	Copper	0.00E+00	0.00E+00
POINT_30	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_30	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_30	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_30	110543	Hexane	0.00E+00	1.00E-06
POINT_30	7647010	HCl	0.00E+00	5.00E-06
POINT_30	7439921	Lead	0.00E+00	0.00E+00
POINT_30	7439965	Manganese	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_30	7439976	Mercury	0.00E+00	0.00E+00
POINT_30	91203	Naphthalene	0.00E+00	3.00E-06
POINT_30	7440020	Nickel	0.00E+00	0.00E+00
POINT_30	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_30	115071	Propylene	0.00E+00	1.20E-05
POINT_30	7782492	Selenium	0.00E+00	0.00E+00
POINT_30	108883	Toluene	0.00E+00	2.40E-05
POINT_30	1330207	Xylenes	0.00E+00	1.20E-05
POINT_30	7440666	Zinc	0.00E+00	1.00E-06
POINT_30	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_31	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_31	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_31	107028	Acrolein	0.00E+00	1.30E-05
POINT_31	7440382	Arsenic	0.00E+00	0.00E+00
POINT_31	71432	Benzene	0.00E+00	3.40E-05
POINT_31	7440439	Cadmium	0.00E+00	0.00E+00
POINT_31	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_31	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_31	7440473	Chromium	0.00E+00	0.00E+00
POINT_31	7440508	Copper	0.00E+00	0.00E+00
POINT_31	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_31	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_31	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_31	110543	Hexane	0.00E+00	1.00E-06
POINT_31	7647010	HCl	0.00E+00	5.00E-06
POINT_31	7439921	Lead	0.00E+00	0.00E+00
POINT_31	7439965	Manganese	0.00E+00	0.00E+00
POINT_31	7439976	Mercury	0.00E+00	0.00E+00
POINT_31	91203	Naphthalene	0.00E+00	3.00E-06
POINT_31	7440020	Nickel	0.00E+00	0.00E+00
POINT_31	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_31	115071	Propylene	0.00E+00	1.20E-05
POINT_31	7782492	Selenium	0.00E+00	0.00E+00
POINT_31	108883	Toluene	0.00E+00	2.40E-05
POINT_31	1330207	Xylenes	0.00E+00	1.20E-05
POINT_31	7440666	Zinc	0.00E+00	1.00E-06
POINT_31	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_32	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_32	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_32	107028	Acrolein	0.00E+00	1.30E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_32	7440382	Arsenic	0.00E+00	0.00E+00
POINT_32	71432	Benzene	0.00E+00	3.40E-05
POINT_32	7440439	Cadmium	0.00E+00	0.00E+00
POINT_32	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_32	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_32	7440473	Chromium	0.00E+00	0.00E+00
POINT_32	7440508	Copper	0.00E+00	0.00E+00
POINT_32	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_32	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_32	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_32	110543	Hexane	0.00E+00	1.00E-06
POINT_32	7647010	HCl	0.00E+00	5.00E-06
POINT_32	7439921	Lead	0.00E+00	0.00E+00
POINT_32	7439965	Manganese	0.00E+00	0.00E+00
POINT_32	7439976	Mercury	0.00E+00	0.00E+00
POINT_32	91203	Naphthalene	0.00E+00	3.00E-06
POINT_32	7440020	Nickel	0.00E+00	0.00E+00
POINT_32	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_32	115071	Propylene	0.00E+00	1.20E-05
POINT_32	7782492	Selenium	0.00E+00	0.00E+00
POINT_32	108883	Toluene	0.00E+00	2.40E-05
POINT_32	1330207	Xylenes	0.00E+00	1.20E-05
POINT_32	7440666	Zinc	0.00E+00	1.00E-06
POINT_32	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_33	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_33	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_33	107028	Acrolein	0.00E+00	1.30E-05
POINT_33	7440382	Arsenic	0.00E+00	0.00E+00
POINT_33	71432	Benzene	0.00E+00	3.40E-05
POINT_33	7440439	Cadmium	0.00E+00	0.00E+00
POINT_33	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_33	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_33	7440473	Chromium	0.00E+00	0.00E+00
POINT_33	7440508	Copper	0.00E+00	0.00E+00
POINT_33	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_33	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_33	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_33	110543	Hexane	0.00E+00	1.00E-06
POINT_33	7647010	HCl	0.00E+00	5.00E-06
POINT_33	7439921	Lead	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_33	7439965	Manganese	0.00E+00	0.00E+00
POINT_33	7439976	Mercury	0.00E+00	0.00E+00
POINT_33	91203	Naphthalene	0.00E+00	3.00E-06
POINT_33	7440020	Nickel	0.00E+00	0.00E+00
POINT_33	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_33	115071	Propylene	0.00E+00	1.20E-05
POINT_33	7782492	Selenium	0.00E+00	0.00E+00
POINT_33	108883	Toluene	0.00E+00	2.40E-05
POINT_33	1330207	Xylenes	0.00E+00	1.20E-05
POINT_33	7440666	Zinc	0.00E+00	1.00E-06
POINT_33	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_34	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_34	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_34	107028	Acrolein	0.00E+00	1.30E-05
POINT_34	7440382	Arsenic	0.00E+00	0.00E+00
POINT_34	71432	Benzene	0.00E+00	3.40E-05
POINT_34	7440439	Cadmium	0.00E+00	0.00E+00
POINT_34	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_34	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_34	7440473	Chromium	0.00E+00	0.00E+00
POINT_34	7440508	Copper	0.00E+00	0.00E+00
POINT_34	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_34	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_34	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_34	110543	Hexane	0.00E+00	1.00E-06
POINT_34	7647010	HCl	0.00E+00	5.00E-06
POINT_34	7439921	Lead	0.00E+00	0.00E+00
POINT_34	7439965	Manganese	0.00E+00	0.00E+00
POINT_34	7439976	Mercury	0.00E+00	0.00E+00
POINT_34	91203	Naphthalene	0.00E+00	3.00E-06
POINT_34	7440020	Nickel	0.00E+00	0.00E+00
POINT_34	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_34	115071	Propylene	0.00E+00	1.20E-05
POINT_34	7782492	Selenium	0.00E+00	0.00E+00
POINT_34	108883	Toluene	0.00E+00	2.40E-05
POINT_34	1330207	Xylenes	0.00E+00	1.20E-05
POINT_34	7440666	Zinc	0.00E+00	1.00E-06
POINT_34	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_35	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_35	75070	Acetaldehyde	0.00E+00	8.30E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_35	107028	Acrolein	0.00E+00	1.30E-05
POINT_35	7440382	Arsenic	0.00E+00	0.00E+00
POINT_35	71432	Benzene	0.00E+00	3.40E-05
POINT_35	7440439	Cadmium	0.00E+00	0.00E+00
POINT_35	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_35	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_35	7440473	Chromium	0.00E+00	0.00E+00
POINT_35	7440508	Copper	0.00E+00	0.00E+00
POINT_35	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_35	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_35	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_35	110543	Hexane	0.00E+00	1.00E-06
POINT_35	7647010	HCl	0.00E+00	5.00E-06
POINT_35	7439921	Lead	0.00E+00	0.00E+00
POINT_35	7439965	Manganese	0.00E+00	0.00E+00
POINT_35	7439976	Mercury	0.00E+00	0.00E+00
POINT_35	91203	Naphthalene	0.00E+00	3.00E-06
POINT_35	7440020	Nickel	0.00E+00	0.00E+00
POINT_35	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_35	115071	Propylene	0.00E+00	1.20E-05
POINT_35	7782492	Selenium	0.00E+00	0.00E+00
POINT_35	108883	Toluene	0.00E+00	2.40E-05
POINT_35	1330207	Xylenes	0.00E+00	1.20E-05
POINT_35	7440666	Zinc	0.00E+00	1.00E-06
POINT_35	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_36	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_36	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_36	107028	Acrolein	0.00E+00	1.30E-05
POINT_36	7440382	Arsenic	0.00E+00	0.00E+00
POINT_36	71432	Benzene	0.00E+00	3.40E-05
POINT_36	7440439	Cadmium	0.00E+00	0.00E+00
POINT_36	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_36	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_36	7440473	Chromium	0.00E+00	0.00E+00
POINT_36	7440508	Copper	0.00E+00	0.00E+00
POINT_36	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_36	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_36	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_36	110543	Hexane	0.00E+00	1.00E-06
POINT_36	7647010	HCl	0.00E+00	5.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_36	7439921	Lead	0.00E+00	0.00E+00
POINT_36	7439965	Manganese	0.00E+00	0.00E+00
POINT_36	7439976	Mercury	0.00E+00	0.00E+00
POINT_36	91203	Naphthalene	0.00E+00	3.00E-06
POINT_36	7440020	Nickel	0.00E+00	0.00E+00
POINT_36	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_36	115071	Propylene	0.00E+00	1.20E-05
POINT_36	7782492	Selenium	0.00E+00	0.00E+00
POINT_36	108883	Toluene	0.00E+00	2.40E-05
POINT_36	1330207	Xylenes	0.00E+00	1.20E-05
POINT_36	7440666	Zinc	0.00E+00	1.00E-06
POINT_36	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_37	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_37	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_37	107028	Acrolein	0.00E+00	1.30E-05
POINT_37	7440382	Arsenic	0.00E+00	0.00E+00
POINT_37	71432	Benzene	0.00E+00	3.40E-05
POINT_37	7440439	Cadmium	0.00E+00	0.00E+00
POINT_37	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_37	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_37	7440473	Chromium	0.00E+00	0.00E+00
POINT_37	7440508	Copper	0.00E+00	0.00E+00
POINT_37	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_37	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_37	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_37	110543	Hexane	0.00E+00	1.00E-06
POINT_37	7647010	HCl	0.00E+00	5.00E-06
POINT_37	7439921	Lead	0.00E+00	0.00E+00
POINT_37	7439965	Manganese	0.00E+00	0.00E+00
POINT_37	7439976	Mercury	0.00E+00	0.00E+00
POINT_37	91203	Naphthalene	0.00E+00	3.00E-06
POINT_37	7440020	Nickel	0.00E+00	0.00E+00
POINT_37	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_37	115071	Propylene	0.00E+00	1.20E-05
POINT_37	7782492	Selenium	0.00E+00	0.00E+00
POINT_37	108883	Toluene	0.00E+00	2.40E-05
POINT_37	1330207	Xylenes	0.00E+00	1.20E-05
POINT_37	7440666	Zinc	0.00E+00	1.00E-06
POINT_37	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_38	106990	1,3-Butadiene	0.00E+00	7.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_38	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_38	107028	Acrolein	0.00E+00	1.30E-05
POINT_38	7440382	Arsenic	0.00E+00	0.00E+00
POINT_38	71432	Benzene	0.00E+00	3.40E-05
POINT_38	7440439	Cadmium	0.00E+00	0.00E+00
POINT_38	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_38	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_38	7440473	Chromium	0.00E+00	0.00E+00
POINT_38	7440508	Copper	0.00E+00	0.00E+00
POINT_38	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_38	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_38	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_38	110543	Hexane	0.00E+00	1.00E-06
POINT_38	7647010	HCl	0.00E+00	5.00E-06
POINT_38	7439921	Lead	0.00E+00	0.00E+00
POINT_38	7439965	Manganese	0.00E+00	0.00E+00
POINT_38	7439976	Mercury	0.00E+00	0.00E+00
POINT_38	91203	Naphthalene	0.00E+00	3.00E-06
POINT_38	7440020	Nickel	0.00E+00	0.00E+00
POINT_38	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_38	115071	Propylene	0.00E+00	1.20E-05
POINT_38	7782492	Selenium	0.00E+00	0.00E+00
POINT_38	108883	Toluene	0.00E+00	2.40E-05
POINT_38	1330207	Xylenes	0.00E+00	1.20E-05
POINT_38	7440666	Zinc	0.00E+00	1.00E-06
POINT_38	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_39	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_39	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_39	107028	Acrolein	0.00E+00	1.30E-05
POINT_39	7440382	Arsenic	0.00E+00	0.00E+00
POINT_39	71432	Benzene	0.00E+00	3.40E-05
POINT_39	7440439	Cadmium	0.00E+00	0.00E+00
POINT_39	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_39	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_39	7440473	Chromium	0.00E+00	0.00E+00
POINT_39	7440508	Copper	0.00E+00	0.00E+00
POINT_39	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_39	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_39	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_39	110543	Hexane	0.00E+00	1.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_39	7647010	HCl	0.00E+00	5.00E-06
POINT_39	7439921	Lead	0.00E+00	0.00E+00
POINT_39	7439965	Manganese	0.00E+00	0.00E+00
POINT_39	7439976	Mercury	0.00E+00	0.00E+00
POINT_39	91203	Naphthalene	0.00E+00	3.00E-06
POINT_39	7440020	Nickel	0.00E+00	0.00E+00
POINT_39	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_39	115071	Propylene	0.00E+00	1.20E-05
POINT_39	7782492	Selenium	0.00E+00	0.00E+00
POINT_39	108883	Toluene	0.00E+00	2.40E-05
POINT_39	1330207	Xylenes	0.00E+00	1.20E-05
POINT_39	7440666	Zinc	0.00E+00	1.00E-06
POINT_39	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_40	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_40	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_40	107028	Acrolein	0.00E+00	1.30E-05
POINT_40	7440382	Arsenic	0.00E+00	0.00E+00
POINT_40	71432	Benzene	0.00E+00	3.40E-05
POINT_40	7440439	Cadmium	0.00E+00	0.00E+00
POINT_40	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_40	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_40	7440473	Chromium	0.00E+00	0.00E+00
POINT_40	7440508	Copper	0.00E+00	0.00E+00
POINT_40	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_40	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_40	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_40	110543	Hexane	0.00E+00	1.00E-06
POINT_40	7647010	HCl	0.00E+00	5.00E-06
POINT_40	7439921	Lead	0.00E+00	0.00E+00
POINT_40	7439965	Manganese	0.00E+00	0.00E+00
POINT_40	7439976	Mercury	0.00E+00	0.00E+00
POINT_40	91203	Naphthalene	0.00E+00	3.00E-06
POINT_40	7440020	Nickel	0.00E+00	0.00E+00
POINT_40	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_40	115071	Propylene	0.00E+00	1.20E-05
POINT_40	7782492	Selenium	0.00E+00	0.00E+00
POINT_40	108883	Toluene	0.00E+00	2.40E-05
POINT_40	1330207	Xylenes	0.00E+00	1.20E-05
POINT_40	7440666	Zinc	0.00E+00	1.00E-06
POINT_40	540841	2,2,4TriMePentn	0.00E+00	5.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_41	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_41	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_41	107028	Acrolein	0.00E+00	1.30E-05
POINT_41	7440382	Arsenic	0.00E+00	0.00E+00
POINT_41	71432	Benzene	0.00E+00	3.40E-05
POINT_41	7440439	Cadmium	0.00E+00	0.00E+00
POINT_41	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_41	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_41	7440473	Chromium	0.00E+00	0.00E+00
POINT_41	7440508	Copper	0.00E+00	0.00E+00
POINT_41	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_41	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_41	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_41	110543	Hexane	0.00E+00	1.00E-06
POINT_41	7647010	HCl	0.00E+00	5.00E-06
POINT_41	7439921	Lead	0.00E+00	0.00E+00
POINT_41	7439965	Manganese	0.00E+00	0.00E+00
POINT_41	7439976	Mercury	0.00E+00	0.00E+00
POINT_41	91203	Naphthalene	0.00E+00	3.00E-06
POINT_41	7440020	Nickel	0.00E+00	0.00E+00
POINT_41	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_41	115071	Propylene	0.00E+00	1.20E-05
POINT_41	7782492	Selenium	0.00E+00	0.00E+00
POINT_41	108883	Toluene	0.00E+00	2.40E-05
POINT_41	1330207	Xylenes	0.00E+00	1.20E-05
POINT_41	7440666	Zinc	0.00E+00	1.00E-06
POINT_41	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_42	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_42	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_42	107028	Acrolein	0.00E+00	1.30E-05
POINT_42	7440382	Arsenic	0.00E+00	0.00E+00
POINT_42	71432	Benzene	0.00E+00	3.40E-05
POINT_42	7440439	Cadmium	0.00E+00	0.00E+00
POINT_42	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_42	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_42	7440473	Chromium	0.00E+00	0.00E+00
POINT_42	7440508	Copper	0.00E+00	0.00E+00
POINT_42	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_42	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_42	50000	Formaldehyde	0.00E+00	2.18E-04

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_42	110543	Hexane	0.00E+00	1.00E-06
POINT_42	7647010	HCl	0.00E+00	5.00E-06
POINT_42	7439921	Lead	0.00E+00	0.00E+00
POINT_42	7439965	Manganese	0.00E+00	0.00E+00
POINT_42	7439976	Mercury	0.00E+00	0.00E+00
POINT_42	91203	Naphthalene	0.00E+00	3.00E-06
POINT_42	7440020	Nickel	0.00E+00	0.00E+00
POINT_42	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_42	115071	Propylene	0.00E+00	1.20E-05
POINT_42	7782492	Selenium	0.00E+00	0.00E+00
POINT_42	108883	Toluene	0.00E+00	2.40E-05
POINT_42	1330207	Xylenes	0.00E+00	1.20E-05
POINT_42	7440666	Zinc	0.00E+00	1.00E-06
POINT_42	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_43	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_43	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_43	107028	Acrolein	0.00E+00	1.30E-05
POINT_43	7440382	Arsenic	0.00E+00	0.00E+00
POINT_43	71432	Benzene	0.00E+00	3.40E-05
POINT_43	7440439	Cadmium	0.00E+00	0.00E+00
POINT_43	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_43	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_43	7440473	Chromium	0.00E+00	0.00E+00
POINT_43	7440508	Copper	0.00E+00	0.00E+00
POINT_43	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_43	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_43	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_43	110543	Hexane	0.00E+00	1.00E-06
POINT_43	7647010	HCl	0.00E+00	5.00E-06
POINT_43	7439921	Lead	0.00E+00	0.00E+00
POINT_43	7439965	Manganese	0.00E+00	0.00E+00
POINT_43	7439976	Mercury	0.00E+00	0.00E+00
POINT_43	91203	Naphthalene	0.00E+00	3.00E-06
POINT_43	7440020	Nickel	0.00E+00	0.00E+00
POINT_43	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_43	115071	Propylene	0.00E+00	1.20E-05
POINT_43	7782492	Selenium	0.00E+00	0.00E+00
POINT_43	108883	Toluene	0.00E+00	2.40E-05
POINT_43	1330207	Xylenes	0.00E+00	1.20E-05
POINT_43	7440666	Zinc	0.00E+00	1.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_43	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_44	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_44	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_44	107028	Acrolein	0.00E+00	1.30E-05
POINT_44	7440382	Arsenic	0.00E+00	0.00E+00
POINT_44	71432	Benzene	0.00E+00	3.40E-05
POINT_44	7440439	Cadmium	0.00E+00	0.00E+00
POINT_44	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_44	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_44	7440473	Chromium	0.00E+00	0.00E+00
POINT_44	7440508	Copper	0.00E+00	0.00E+00
POINT_44	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_44	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_44	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_44	110543	Hexane	0.00E+00	1.00E-06
POINT_44	7647010	HCl	0.00E+00	5.00E-06
POINT_44	7439921	Lead	0.00E+00	0.00E+00
POINT_44	7439965	Manganese	0.00E+00	0.00E+00
POINT_44	7439976	Mercury	0.00E+00	0.00E+00
POINT_44	91203	Naphthalene	0.00E+00	3.00E-06
POINT_44	7440020	Nickel	0.00E+00	0.00E+00
POINT_44	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_44	115071	Propylene	0.00E+00	1.20E-05
POINT_44	7782492	Selenium	0.00E+00	0.00E+00
POINT_44	108883	Toluene	0.00E+00	2.40E-05
POINT_44	1330207	Xylenes	0.00E+00	1.20E-05
POINT_44	7440666	Zinc	0.00E+00	1.00E-06
POINT_44	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_45	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_45	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_45	107028	Acrolein	0.00E+00	1.30E-05
POINT_45	7440382	Arsenic	0.00E+00	0.00E+00
POINT_45	71432	Benzene	0.00E+00	3.40E-05
POINT_45	7440439	Cadmium	0.00E+00	0.00E+00
POINT_45	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_45	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_45	7440473	Chromium	0.00E+00	0.00E+00
POINT_45	7440508	Copper	0.00E+00	0.00E+00
POINT_45	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_45	100414	Ethyl Benzene	0.00E+00	4.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_45	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_45	110543	Hexane	0.00E+00	1.00E-06
POINT_45	7647010	HCl	0.00E+00	5.00E-06
POINT_45	7439921	Lead	0.00E+00	0.00E+00
POINT_45	7439965	Manganese	0.00E+00	0.00E+00
POINT_45	7439976	Mercury	0.00E+00	0.00E+00
POINT_45	91203	Naphthalene	0.00E+00	3.00E-06
POINT_45	7440020	Nickel	0.00E+00	0.00E+00
POINT_45	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_45	115071	Propylene	0.00E+00	1.20E-05
POINT_45	7782492	Selenium	0.00E+00	0.00E+00
POINT_45	108883	Toluene	0.00E+00	2.40E-05
POINT_45	1330207	Xylenes	0.00E+00	1.20E-05
POINT_45	7440666	Zinc	0.00E+00	1.00E-06
POINT_45	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_46	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_46	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_46	107028	Acrolein	0.00E+00	1.30E-05
POINT_46	7440382	Arsenic	0.00E+00	0.00E+00
POINT_46	71432	Benzene	0.00E+00	3.40E-05
POINT_46	7440439	Cadmium	0.00E+00	0.00E+00
POINT_46	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_46	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_46	7440473	Chromium	0.00E+00	0.00E+00
POINT_46	7440508	Copper	0.00E+00	0.00E+00
POINT_46	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_46	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_46	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_46	110543	Hexane	0.00E+00	1.00E-06
POINT_46	7647010	HCl	0.00E+00	5.00E-06
POINT_46	7439921	Lead	0.00E+00	0.00E+00
POINT_46	7439965	Manganese	0.00E+00	0.00E+00
POINT_46	7439976	Mercury	0.00E+00	0.00E+00
POINT_46	91203	Naphthalene	0.00E+00	3.00E-06
POINT_46	7440020	Nickel	0.00E+00	0.00E+00
POINT_46	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_46	115071	Propylene	0.00E+00	1.20E-05
POINT_46	7782492	Selenium	0.00E+00	0.00E+00
POINT_46	108883	Toluene	0.00E+00	2.40E-05
POINT_46	1330207	Xylenes	0.00E+00	1.20E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_46	7440666	Zinc	0.00E+00	1.00E-06
POINT_46	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_47	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_47	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_47	107028	Acrolein	0.00E+00	1.30E-05
POINT_47	7440382	Arsenic	0.00E+00	0.00E+00
POINT_47	71432	Benzene	0.00E+00	3.40E-05
POINT_47	7440439	Cadmium	0.00E+00	0.00E+00
POINT_47	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_47	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_47	7440473	Chromium	0.00E+00	0.00E+00
POINT_47	7440508	Copper	0.00E+00	0.00E+00
POINT_47	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_47	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_47	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_47	110543	Hexane	0.00E+00	1.00E-06
POINT_47	7647010	HCl	0.00E+00	5.00E-06
POINT_47	7439921	Lead	0.00E+00	0.00E+00
POINT_47	7439965	Manganese	0.00E+00	0.00E+00
POINT_47	7439976	Mercury	0.00E+00	0.00E+00
POINT_47	91203	Naphthalene	0.00E+00	3.00E-06
POINT_47	7440020	Nickel	0.00E+00	0.00E+00
POINT_47	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_47	115071	Propylene	0.00E+00	1.20E-05
POINT_47	7782492	Selenium	0.00E+00	0.00E+00
POINT_47	108883	Toluene	0.00E+00	2.40E-05
POINT_47	1330207	Xylenes	0.00E+00	1.20E-05
POINT_47	7440666	Zinc	0.00E+00	1.00E-06
POINT_47	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_48	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_48	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_48	107028	Acrolein	0.00E+00	1.30E-05
POINT_48	7440382	Arsenic	0.00E+00	0.00E+00
POINT_48	71432	Benzene	0.00E+00	3.40E-05
POINT_48	7440439	Cadmium	0.00E+00	0.00E+00
POINT_48	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_48	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_48	7440473	Chromium	0.00E+00	0.00E+00
POINT_48	7440508	Copper	0.00E+00	0.00E+00
POINT_48	9901	DieselExhPM	9.85E-02	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_48	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_48	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_48	110543	Hexane	0.00E+00	1.00E-06
POINT_48	7647010	HCl	0.00E+00	5.00E-06
POINT_48	7439921	Lead	0.00E+00	0.00E+00
POINT_48	7439965	Manganese	0.00E+00	0.00E+00
POINT_48	7439976	Mercury	0.00E+00	0.00E+00
POINT_48	91203	Naphthalene	0.00E+00	3.00E-06
POINT_48	7440020	Nickel	0.00E+00	0.00E+00
POINT_48	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_48	115071	Propylene	0.00E+00	1.20E-05
POINT_48	7782492	Selenium	0.00E+00	0.00E+00
POINT_48	108883	Toluene	0.00E+00	2.40E-05
POINT_48	1330207	Xylenes	0.00E+00	1.20E-05
POINT_48	7440666	Zinc	0.00E+00	1.00E-06
POINT_48	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_49	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_49	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_49	107028	Acrolein	0.00E+00	1.30E-05
POINT_49	7440382	Arsenic	0.00E+00	0.00E+00
POINT_49	71432	Benzene	0.00E+00	3.40E-05
POINT_49	7440439	Cadmium	0.00E+00	0.00E+00
POINT_49	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_49	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_49	7440473	Chromium	0.00E+00	0.00E+00
POINT_49	7440508	Copper	0.00E+00	0.00E+00
POINT_49	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_49	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_49	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_49	110543	Hexane	0.00E+00	1.00E-06
POINT_49	7647010	HCl	0.00E+00	5.00E-06
POINT_49	7439921	Lead	0.00E+00	0.00E+00
POINT_49	7439965	Manganese	0.00E+00	0.00E+00
POINT_49	7439976	Mercury	0.00E+00	0.00E+00
POINT_49	91203	Naphthalene	0.00E+00	3.00E-06
POINT_49	7440020	Nickel	0.00E+00	0.00E+00
POINT_49	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_49	115071	Propylene	0.00E+00	1.20E-05
POINT_49	7782492	Selenium	0.00E+00	0.00E+00
POINT_49	108883	Toluene	0.00E+00	2.40E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_49	1330207	Xylenes	0.00E+00	1.20E-05
POINT_49	7440666	Zinc	0.00E+00	1.00E-06
POINT_49	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_50	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_50	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_50	107028	Acrolein	0.00E+00	1.30E-05
POINT_50	7440382	Arsenic	0.00E+00	0.00E+00
POINT_50	71432	Benzene	0.00E+00	3.40E-05
POINT_50	7440439	Cadmium	0.00E+00	0.00E+00
POINT_50	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_50	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_50	7440473	Chromium	0.00E+00	0.00E+00
POINT_50	7440508	Copper	0.00E+00	0.00E+00
POINT_50	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_50	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_50	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_50	110543	Hexane	0.00E+00	1.00E-06
POINT_50	7647010	HCl	0.00E+00	5.00E-06
POINT_50	7439921	Lead	0.00E+00	0.00E+00
POINT_50	7439965	Manganese	0.00E+00	0.00E+00
POINT_50	7439976	Mercury	0.00E+00	0.00E+00
POINT_50	91203	Naphthalene	0.00E+00	3.00E-06
POINT_50	7440020	Nickel	0.00E+00	0.00E+00
POINT_50	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_50	115071	Propylene	0.00E+00	1.20E-05
POINT_50	7782492	Selenium	0.00E+00	0.00E+00
POINT_50	108883	Toluene	0.00E+00	2.40E-05
POINT_50	1330207	Xylenes	0.00E+00	1.20E-05
POINT_50	7440666	Zinc	0.00E+00	1.00E-06
POINT_50	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_51	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_51	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_51	107028	Acrolein	0.00E+00	1.30E-05
POINT_51	7440382	Arsenic	0.00E+00	0.00E+00
POINT_51	71432	Benzene	0.00E+00	3.40E-05
POINT_51	7440439	Cadmium	0.00E+00	0.00E+00
POINT_51	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_51	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_51	7440473	Chromium	0.00E+00	0.00E+00
POINT_51	7440508	Copper	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_51	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_51	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_51	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_51	110543	Hexane	0.00E+00	1.00E-06
POINT_51	7647010	HCl	0.00E+00	5.00E-06
POINT_51	7439921	Lead	0.00E+00	0.00E+00
POINT_51	7439965	Manganese	0.00E+00	0.00E+00
POINT_51	7439976	Mercury	0.00E+00	0.00E+00
POINT_51	91203	Naphthalene	0.00E+00	3.00E-06
POINT_51	7440020	Nickel	0.00E+00	0.00E+00
POINT_51	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_51	115071	Propylene	0.00E+00	1.20E-05
POINT_51	7782492	Selenium	0.00E+00	0.00E+00
POINT_51	108883	Toluene	0.00E+00	2.40E-05
POINT_51	1330207	Xylenes	0.00E+00	1.20E-05
POINT_51	7440666	Zinc	0.00E+00	1.00E-06
POINT_51	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_52	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_52	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_52	107028	Acrolein	0.00E+00	1.30E-05
POINT_52	7440382	Arsenic	0.00E+00	0.00E+00
POINT_52	71432	Benzene	0.00E+00	3.40E-05
POINT_52	7440439	Cadmium	0.00E+00	0.00E+00
POINT_52	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_52	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_52	7440473	Chromium	0.00E+00	0.00E+00
POINT_52	7440508	Copper	0.00E+00	0.00E+00
POINT_52	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_52	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_52	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_52	110543	Hexane	0.00E+00	1.00E-06
POINT_52	7647010	HCl	0.00E+00	5.00E-06
POINT_52	7439921	Lead	0.00E+00	0.00E+00
POINT_52	7439965	Manganese	0.00E+00	0.00E+00
POINT_52	7439976	Mercury	0.00E+00	0.00E+00
POINT_52	91203	Naphthalene	0.00E+00	3.00E-06
POINT_52	7440020	Nickel	0.00E+00	0.00E+00
POINT_52	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_52	115071	Propylene	0.00E+00	1.20E-05
POINT_52	7782492	Selenium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_52	108883	Toluene	0.00E+00	2.40E-05
POINT_52	1330207	Xylenes	0.00E+00	1.20E-05
POINT_52	7440666	Zinc	0.00E+00	1.00E-06
POINT_52	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_53	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_53	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_53	107028	Acrolein	0.00E+00	1.30E-05
POINT_53	7440382	Arsenic	0.00E+00	0.00E+00
POINT_53	71432	Benzene	0.00E+00	3.40E-05
POINT_53	7440439	Cadmium	0.00E+00	0.00E+00
POINT_53	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_53	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_53	7440473	Chromium	0.00E+00	0.00E+00
POINT_53	7440508	Copper	0.00E+00	0.00E+00
POINT_53	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_53	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_53	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_53	110543	Hexane	0.00E+00	1.00E-06
POINT_53	7647010	HCl	0.00E+00	5.00E-06
POINT_53	7439921	Lead	0.00E+00	0.00E+00
POINT_53	7439965	Manganese	0.00E+00	0.00E+00
POINT_53	7439976	Mercury	0.00E+00	0.00E+00
POINT_53	91203	Naphthalene	0.00E+00	3.00E-06
POINT_53	7440020	Nickel	0.00E+00	0.00E+00
POINT_53	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_53	115071	Propylene	0.00E+00	1.20E-05
POINT_53	7782492	Selenium	0.00E+00	0.00E+00
POINT_53	108883	Toluene	0.00E+00	2.40E-05
POINT_53	1330207	Xylenes	0.00E+00	1.20E-05
POINT_53	7440666	Zinc	0.00E+00	1.00E-06
POINT_53	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_54	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_54	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_54	107028	Acrolein	0.00E+00	1.30E-05
POINT_54	7440382	Arsenic	0.00E+00	0.00E+00
POINT_54	71432	Benzene	0.00E+00	3.40E-05
POINT_54	7440439	Cadmium	0.00E+00	0.00E+00
POINT_54	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_54	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_54	7440473	Chromium	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_54	7440508	Copper	0.00E+00	0.00E+00
POINT_54	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_54	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_54	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_54	110543	Hexane	0.00E+00	1.00E-06
POINT_54	7647010	HCl	0.00E+00	5.00E-06
POINT_54	7439921	Lead	0.00E+00	0.00E+00
POINT_54	7439965	Manganese	0.00E+00	0.00E+00
POINT_54	7439976	Mercury	0.00E+00	0.00E+00
POINT_54	91203	Naphthalene	0.00E+00	3.00E-06
POINT_54	7440020	Nickel	0.00E+00	0.00E+00
POINT_54	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_54	115071	Propylene	0.00E+00	1.20E-05
POINT_54	7782492	Selenium	0.00E+00	0.00E+00
POINT_54	108883	Toluene	0.00E+00	2.40E-05
POINT_54	1330207	Xylenes	0.00E+00	1.20E-05
POINT_54	7440666	Zinc	0.00E+00	1.00E-06
POINT_54	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_55	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_55	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_55	107028	Acrolein	0.00E+00	1.30E-05
POINT_55	7440382	Arsenic	0.00E+00	0.00E+00
POINT_55	71432	Benzene	0.00E+00	3.40E-05
POINT_55	7440439	Cadmium	0.00E+00	0.00E+00
POINT_55	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_55	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_55	7440473	Chromium	0.00E+00	0.00E+00
POINT_55	7440508	Copper	0.00E+00	0.00E+00
POINT_55	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_55	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_55	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_55	110543	Hexane	0.00E+00	1.00E-06
POINT_55	7647010	HCl	0.00E+00	5.00E-06
POINT_55	7439921	Lead	0.00E+00	0.00E+00
POINT_55	7439965	Manganese	0.00E+00	0.00E+00
POINT_55	7439976	Mercury	0.00E+00	0.00E+00
POINT_55	91203	Naphthalene	0.00E+00	3.00E-06
POINT_55	7440020	Nickel	0.00E+00	0.00E+00
POINT_55	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_55	115071	Propylene	0.00E+00	1.20E-05

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_55	7782492	Selenium	0.00E+00	0.00E+00
POINT_55	108883	Toluene	0.00E+00	2.40E-05
POINT_55	1330207	Xylenes	0.00E+00	1.20E-05
POINT_55	7440666	Zinc	0.00E+00	1.00E-06
POINT_55	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_56	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_56	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_56	107028	Acrolein	0.00E+00	1.30E-05
POINT_56	7440382	Arsenic	0.00E+00	0.00E+00
POINT_56	71432	Benzene	0.00E+00	3.40E-05
POINT_56	7440439	Cadmium	0.00E+00	0.00E+00
POINT_56	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_56	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_56	7440473	Chromium	0.00E+00	0.00E+00
POINT_56	7440508	Copper	0.00E+00	0.00E+00
POINT_56	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_56	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_56	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_56	110543	Hexane	0.00E+00	1.00E-06
POINT_56	7647010	HCl	0.00E+00	5.00E-06
POINT_56	7439921	Lead	0.00E+00	0.00E+00
POINT_56	7439965	Manganese	0.00E+00	0.00E+00
POINT_56	7439976	Mercury	0.00E+00	0.00E+00
POINT_56	91203	Naphthalene	0.00E+00	3.00E-06
POINT_56	7440020	Nickel	0.00E+00	0.00E+00
POINT_56	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_56	115071	Propylene	0.00E+00	1.20E-05
POINT_56	7782492	Selenium	0.00E+00	0.00E+00
POINT_56	108883	Toluene	0.00E+00	2.40E-05
POINT_56	1330207	Xylenes	0.00E+00	1.20E-05
POINT_56	7440666	Zinc	0.00E+00	1.00E-06
POINT_56	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_57	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_57	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_57	107028	Acrolein	0.00E+00	1.30E-05
POINT_57	7440382	Arsenic	0.00E+00	0.00E+00
POINT_57	71432	Benzene	0.00E+00	3.40E-05
POINT_57	7440439	Cadmium	0.00E+00	0.00E+00
POINT_57	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_57	18540299	Cr(VI)	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_57	7440473	Chromium	0.00E+00	0.00E+00
POINT_57	7440508	Copper	0.00E+00	0.00E+00
POINT_57	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_57	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_57	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_57	110543	Hexane	0.00E+00	1.00E-06
POINT_57	7647010	HCl	0.00E+00	5.00E-06
POINT_57	7439921	Lead	0.00E+00	0.00E+00
POINT_57	7439965	Manganese	0.00E+00	0.00E+00
POINT_57	7439976	Mercury	0.00E+00	0.00E+00
POINT_57	91203	Naphthalene	0.00E+00	3.00E-06
POINT_57	7440020	Nickel	0.00E+00	0.00E+00
POINT_57	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_57	115071	Propylene	0.00E+00	1.20E-05
POINT_57	7782492	Selenium	0.00E+00	0.00E+00
POINT_57	108883	Toluene	0.00E+00	2.40E-05
POINT_57	1330207	Xylenes	0.00E+00	1.20E-05
POINT_57	7440666	Zinc	0.00E+00	1.00E-06
POINT_57	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_58	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_58	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_58	107028	Acrolein	0.00E+00	1.30E-05
POINT_58	7440382	Arsenic	0.00E+00	0.00E+00
POINT_58	71432	Benzene	0.00E+00	3.40E-05
POINT_58	7440439	Cadmium	0.00E+00	0.00E+00
POINT_58	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_58	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_58	7440473	Chromium	0.00E+00	0.00E+00
POINT_58	7440508	Copper	0.00E+00	0.00E+00
POINT_58	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_58	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_58	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_58	110543	Hexane	0.00E+00	1.00E-06
POINT_58	7647010	HCl	0.00E+00	5.00E-06
POINT_58	7439921	Lead	0.00E+00	0.00E+00
POINT_58	7439965	Manganese	0.00E+00	0.00E+00
POINT_58	7439976	Mercury	0.00E+00	0.00E+00
POINT_58	91203	Naphthalene	0.00E+00	3.00E-06
POINT_58	7440020	Nickel	0.00E+00	0.00E+00
POINT_58	1150	PAHs-w/	0.00E+00	1.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_58	115071	Propylene	0.00E+00	1.20E-05
POINT_58	7782492	Selenium	0.00E+00	0.00E+00
POINT_58	108883	Toluene	0.00E+00	2.40E-05
POINT_58	1330207	Xylenes	0.00E+00	1.20E-05
POINT_58	7440666	Zinc	0.00E+00	1.00E-06
POINT_58	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_59	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_59	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_59	107028	Acrolein	0.00E+00	1.30E-05
POINT_59	7440382	Arsenic	0.00E+00	0.00E+00
POINT_59	71432	Benzene	0.00E+00	3.40E-05
POINT_59	7440439	Cadmium	0.00E+00	0.00E+00
POINT_59	108907	Chlorobenzn	0.00E+00	0.00E+00
POINT_59	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_59	7440473	Chromium	0.00E+00	0.00E+00
POINT_59	7440508	Copper	0.00E+00	0.00E+00
POINT_59	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_59	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_59	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_59	110543	Hexane	0.00E+00	1.00E-06
POINT_59	7647010	HCl	0.00E+00	5.00E-06
POINT_59	7439921	Lead	0.00E+00	0.00E+00
POINT_59	7439965	Manganese	0.00E+00	0.00E+00
POINT_59	7439976	Mercury	0.00E+00	0.00E+00
POINT_59	91203	Naphthalene	0.00E+00	3.00E-06
POINT_59	7440020	Nickel	0.00E+00	0.00E+00
POINT_59	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_59	115071	Propylene	0.00E+00	1.20E-05
POINT_59	7782492	Selenium	0.00E+00	0.00E+00
POINT_59	108883	Toluene	0.00E+00	2.40E-05
POINT_59	1330207	Xylenes	0.00E+00	1.20E-05
POINT_59	7440666	Zinc	0.00E+00	1.00E-06
POINT_59	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
POINT_60	106990	1,3-Butadiene	0.00E+00	7.00E-06
POINT_60	75070	Acetaldehyde	0.00E+00	8.30E-05
POINT_60	107028	Acrolein	0.00E+00	1.30E-05
POINT_60	7440382	Arsenic	0.00E+00	0.00E+00
POINT_60	71432	Benzene	0.00E+00	3.40E-05
POINT_60	7440439	Cadmium	0.00E+00	0.00E+00
POINT_60	108907	Chlorobenzn	0.00E+00	0.00E+00

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
POINT_60	18540299	Cr(VI)	0.00E+00	0.00E+00
POINT_60	7440473	Chromium	0.00E+00	0.00E+00
POINT_60	7440508	Copper	0.00E+00	0.00E+00
POINT_60	9901	DieselExhPM	9.85E-02	0.00E+00
POINT_60	100414	Ethyl Benzene	0.00E+00	4.00E-06
POINT_60	50000	Formaldehyde	0.00E+00	2.18E-04
POINT_60	110543	Hexane	0.00E+00	1.00E-06
POINT_60	7647010	HCl	0.00E+00	5.00E-06
POINT_60	7439921	Lead	0.00E+00	0.00E+00
POINT_60	7439965	Manganese	0.00E+00	0.00E+00
POINT_60	7439976	Mercury	0.00E+00	0.00E+00
POINT_60	91203	Naphthalene	0.00E+00	3.00E-06
POINT_60	7440020	Nickel	0.00E+00	0.00E+00
POINT_60	1150	PAHs-w/	0.00E+00	1.00E-06
POINT_60	115071	Propylene	0.00E+00	1.20E-05
POINT_60	7782492	Selenium	0.00E+00	0.00E+00
POINT_60	108883	Toluene	0.00E+00	2.40E-05
POINT_60	1330207	Xylenes	0.00E+00	1.20E-05
POINT_60	7440666	Zinc	0.00E+00	1.00E-06
POINT_60	540841	2,2,4TriMePentn	0.00E+00	5.00E-06
WELD	106990	1,3-Butadiene	0.00E+00	0.00E+00
WELD	75070	Acetaldehyde	0.00E+00	0.00E+00
WELD	107028	Acrolein	0.00E+00	0.00E+00
WELD	7440382	Arsenic	0.00E+00	0.00E+00
WELD	71432	Benzene	0.00E+00	0.00E+00
WELD	7440439	Cadmium	0.00E+00	0.00E+00
WELD	108907	Chlorobenzn	0.00E+00	0.00E+00
WELD	18540299	Cr(VI)	2.32E-03	4.00E-06
WELD	7440473	Chromium	1.37E-03	2.00E-06
WELD	7440508	Copper	3.68E-03	7.00E-06
WELD	9901	DieselExhPM	0.00E+00	0.00E+00
WELD	100414	Ethyl Benzene	0.00E+00	0.00E+00
WELD	50000	Formaldehyde	0.00E+00	0.00E+00
WELD	110543	Hexane	0.00E+00	0.00E+00
WELD	7647010	HCl	0.00E+00	0.00E+00
WELD	7439921	Lead	3.68E-03	7.00E-06
WELD	7439965	Manganese	4.27E-03	8.00E-06
WELD	7439976	Mercury	0.00E+00	0.00E+00
WELD	91203	Naphthalene	0.00E+00	0.00E+00
WELD	7440020	Nickel	3.68E-03	7.00E-06

Austal USA Floating Dry Dock

Health Risk Assessment

Table 3. Source Emission Rates: Operations

April 2025

Austal Modeled Source Emission Rates: Construction

Source ID [a]	CAS Number	Pollutant Name	Annual Emissions (lbs/yr)	Hourly Emissions (lbs/hr)
WELD	1150	PAHs-w/	0.00E+00	0.00E+00
WELD	115071	Propylene	0.00E+00	0.00E+00
WELD	7782492	Selenium	0.00E+00	0.00E+00
WELD	108883	Toluene	0.00E+00	0.00E+00
WELD	1330207	Xylenes	0.00E+00	0.00E+00
WELD	7440666	Zinc	3.68E-03	7.00E-06
WELD	540841	2,2,4TriMePentn	0.00E+00	0.00E+00

Notes:

lbs/yr = pound(s) per year

lbs/hr = pound(s) per hour

[a] For purposes of cancer risk modeling, the annual construction emissions (lb/year) were annualized over 30 years for residental exposure and 25 years for worker exposure.

Austal USA Floating Dry Dock

Health Risk Assessment

Table 4. Health Risk Assessment Results

April 2025

Health Risk Assessment Results - Construction

Risk Type	Risk Analysis	Receptor #	Easting	Northing	Risk	Thresholds
Construction						
Cancer	PMI	1	488,911.43	3,613,504.61	11.15	--
	MEIR	992	489,700.00	3,613,800.00	0.05	10
	MEIW	227	488,925.00	3,613,550.00	0.64	10
	Maximally Exposed Sensitive Receptor	3,361	490,893.88	3,614,144.11	0.09	10
Non-Cancer Chronic	PMI	1	488,911.43	3,613,504.61	0.10	--
	MEIR	992	489,700.00	3,613,800.00	0.00	1.0
	MEIW	227	488,925.00	3,613,550.00	0.02	1.0
	Maximally Exposed Sensitive Receptor	3,361	490,893.88	3,614,144.11	0.00	1.0
Non-Cancer Acute	PMI	1	488,911.43	3,613,504.61	0.02	--
	MEIR	703	489,600.00	3,613,800.00	0.00	1.0
	MEIW	1	488,911.43	3,613,504.61	0.02	1.0
	Maximally Exposed Sensitive Receptor	3,364	489,961.50	3,614,226.92	0.00	1.0

Note: Coordinates presented are UTM NAD83 Zone 11, meters

PMI = point of maximum impact

MEIR = maximum exposed individual resident

MEIW = maximum exposed individual worker

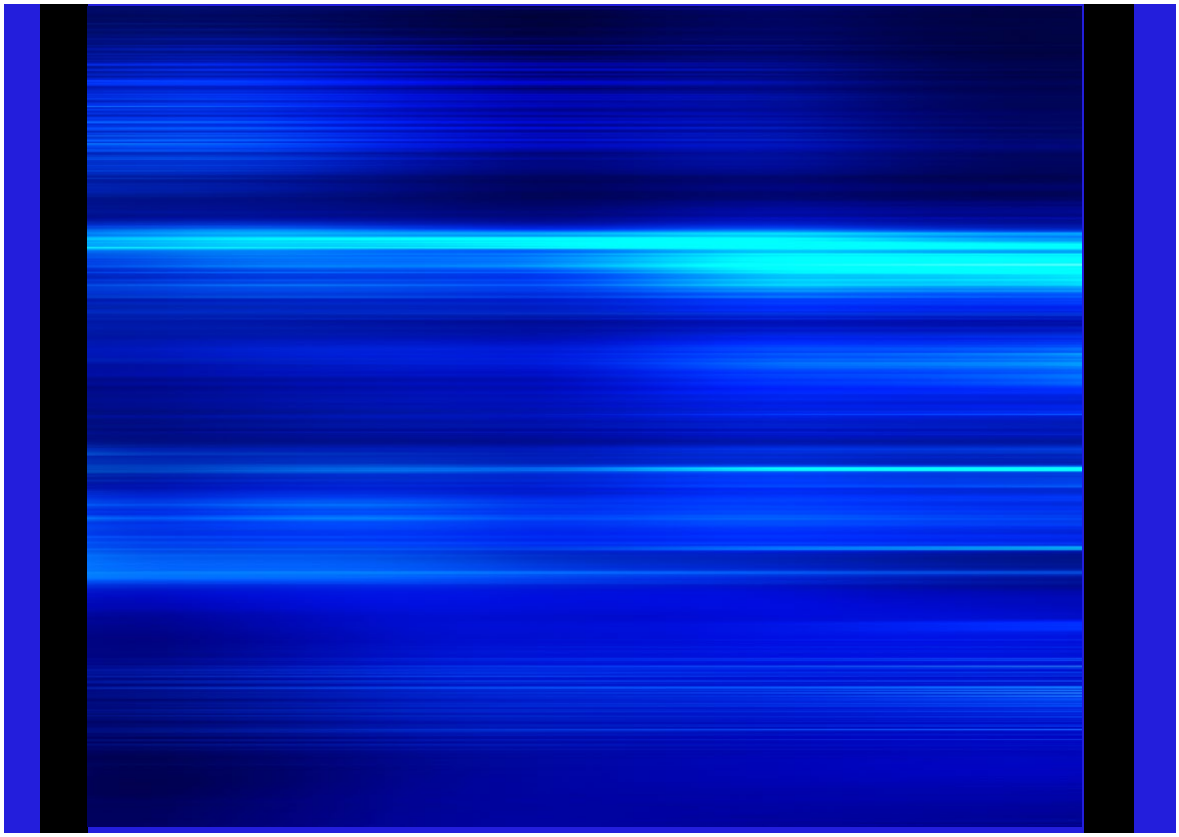
Attachment 5
Approved Protocol

Air Dispersion Modeling and Health Risk Assessment Protocol for Austal USA

Revision No: 1

Austal USA Floating Dry Dock Project
Austal USA

September 27, 2024



Contents

Acronyms and Abbreviations iii
1. Project Overview 1-1
2. Area and Facility Classification 2-1
3. Project and Facility Description 3-1
3.1 Emissions Sources 3-1
4. Dispersion Modeling Methodology 4-1
4.1 Dispersion Model 4-1
4.2 Operational Source Characterization 4-1
4.2.1 Maritime Vessels 4-1
4.2.2 Adhesive Use 4-1
4.2.3 Marine Coating and Solvent Use 4-2
4.2.4 Abrasive Blasting Operations 4-2
4.2.5 Welding Operations 4-3
4.2.6 Emergency Diesel Engines 4-3
4.3 Construction Source Characterization 4-4
4.4 Building Downwash 4-4
4.5 Ambient Air Boundary 4-4
4.6 Rural Versus Urban Option 4-6
4.7 Meteorological Data 4-6
4.8 Receptors 4-8
4.9 Oxides of Nitrogen Modeling Methodology and Chemistry 4-8
5. Criteria Pollutant Background Concentrations 5-1
6. Impacts Analysis 6-1
6.1 Criteria Pollutants 6-1
6.2 Operational Toxic Air Contaminants 6-2
6.2.1 Health Risk Assessment for Operational TAC Emissions 6-2
6.2.2 Carcinogenic (Cancer) Risk 6-3
6.2.3 Noncarcinogenic Chronic Exposure 6-3
6.2.4 Noncarcinogenic Acute Exposure 6-3
6.3 Exposure Pathways 6-3
6.4 Construction Toxic Air Contaminants 6-4
6.5 Class I Area Analyses 6-4
7. References 7-1

Tables

Table 2-1. SDAB Attainment Status 2-1
Table 4-1. Land Uses in the Proposed Project Area 4-6
Table 5-1. Criteria Pollutant Background Concentrations 5-1
Table 6-1. Summary of Criteria Pollutant Air Quality Standards 6-1
Table 6-2. Summary of HARP2 Exposure Pathways 6-4

Figures

Figure 1-1. Project Location 1-2
Figure 4-1. Project Ambient Air Boundary 4-5
Figure 4-2. Windrose for the 2020 to 2022 Meteorological Data for Sherman Elementary School 4-7

Acronyms and Abbreviations

µg/m^3	microgram(s) per cubic meter
AERMAP	AERMOD Terrain Preprocessor
AERMET	AERMOD Meteorological Processor
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AQIA	Air Quality Impact Analysis
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	*Code of Federal Regulations*
CO	carbon monoxide
DPM	diesel particulate matter
EPA	U.S. Environmental Protection Agency
FDD	floating dry dock
GEP	good engineering practice
HAP	hazardous air pollutant
HARP	Hotspots Analysis and Reporting Program
HIA	acute hazard index
HIC	chronic hazard index
Hp	horsepower
HRA	health risk assessment
Km	kilometer(s)
kW	kilowatt(s)
ID	identification
MEIR	maximally exposed individual resident
MEIW	maximally exposed individual worker
MESR	maximally exposed sensitive receptor
MET	meteorological data
MGBW	Marine Group Boat Works
N/A	not applicable

NAAQS	National Ambient Air Quality Standards
NBSD	Naval Base San Diego
Navy	U.S. Department of the Navy
NLCD	National Land Cover Database
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
O_3	ozone
OEHHA	California Office of Environmental Health Hazard Assessment
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
PM_{10}	particulate matter less than 10 micrometers in diameter
PMI	point of maximum impact
Port	Port of San Diego
Ppb	part(s) per billion
Ppm	part(s) per million
PRIME	plume rise model enhancement
REL	reference exposure level
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDS	safety data sheet
SIL	significant impact level
SO_2	sulfur dioxide
SO_X	oxides of sulfur
TAC	toxic air contaminant
VOC	volatile organic compound

1. Project Overview

Austal USA is a U.S. government and commercial contractor that specializes in the repair and maintenance of ships for the U.S. Department of the Navy (Navy), other governmental entities, and commercial customers.

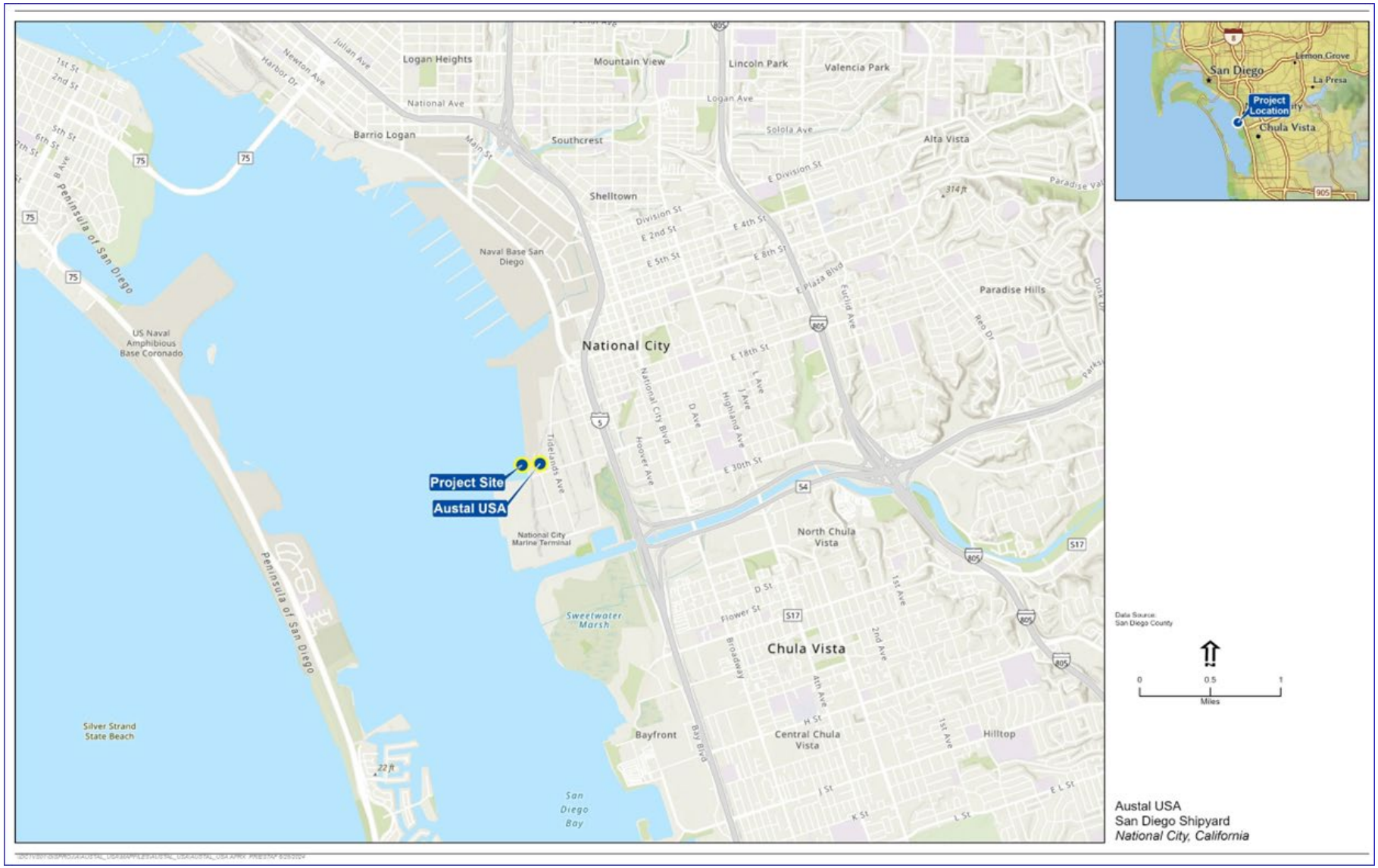
The proposed project would provide governmental and commercial customers, including the Navy, with ship repair and maintenance capabilities. Within this existing facility, the proposed project would be operated by Austal USA and would be located within the Naval Base San Diego (NBSD) property under a 66-year commercial lease agreement.

The Austal USA Floating Dry Dock Project (proposed project) is located at 1313 Bay Marina Drive, in National City, California 91950. The proposed project location is immediately south of and adjacent to NBSD 32nd Street Naval Station, and immediately north of and adjacent to the Port of San Diego's National City Marine Terminal in San Diego Bay, San Diego County, California (Figure 1-1).

This protocol follows guidance from the California Air Resources Board (CARB), the San Diego Air Pollution Control District (SDAPCD), and California's Office of Environmental Health Hazard Assessment (OEHHA) for air quality dispersion modeling and health risk assessments (HRAs).

A virtual meeting was held with Austal, Jacobs, and SDAPCD personnel on August 27, 2024, to discuss the proposed project's construction and operation, potential air emissions, and the recommended approaches for an air quality impact analysis (AQIA) and HRA. This protocol for air dispersion modeling and HRA has been prepared to outline the proposed approach for further evaluation of project-related emissions and their potential impacts, for SDAPCD review and comment. Results of these studies will be documented in an Air Quality Dispersion Modeling and Health Risk Assessment (HRA) Report, and findings will be summarized in the Draft Environmental Impact Report being prepared for the Austal USA Floating Dry Dock (FDD) Project.

Figure 1-1. Project Location



2. Area and Facility Classification

The project site is in the San Diego Air Basin (SDAB), which encompasses all of San Diego County and is under the jurisdiction of the SDAPCD.

Air quality monitoring data measured over time are used to evaluate an area's compliance with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Areas with air quality better than an established standard are classified as being in "attainment" for that pollutant and standard. If the measured pollutant concentrations meet or exceeds a standard, the area is classified as a "nonattainment" area for that pollutant. The severity of the nonattainment designation can vary from moderate to extreme. If data are not available or sufficient to determine whether a standard is exceeded in an area, the area is designated as "unclassified."

Table 2-1 presents the attainment/nonattainment status of the SDAB with respect to the NAAQS and CAAQS for each regulated criteria air pollutant. Criteria pollutants include ozone (O_3), carbon monoxide (CO), oxides of nitrogen (NO_x) as nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM) less than 10 micrometers in aerodynamic diameter (PM_{10}), PM less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5}$), and lead. San Diego County has been designated by U.S. Environmental Protection Agency (EPA) to be a severe nonattainment area for 8-hour O_3 under the 2008 and 2015 NAAQS (EPA 2021, SDAPCD n.d.). In addition, the area is nonattainment for the CAAQS for O_3, PM_{10}, and $PM_{2.5}$ (SDAPCD n.d.). San Diego County is classified as attainment/unclassified for all other NAAQS and CAAQS.

Table 2-1. SDAB Attainment Status

Pollutant	Averaging Time	Federal Status	State Status
O_3	1-hour	Unclassified/Attainment	Nonattainment
	8-hour	Nonattainment (Severe 15)	Nonattainment
CO	All	Unclassified/Attainment	Unclassified/Attainment
NO_2	All	Unclassified/Attainment	Unclassified/Attainment
SO_2	All	Unclassified/Attainment	Unclassified/Attainment
PM_{10}	All	Unclassified/Attainment	Nonattainment
$PM_{2.5}$	All	Unclassified/Attainment	Nonattainment
Lead	All	Unclassified/Attainment	Unclassified/Attainment

The SDAPCD has not adopted quantitative thresholds for the evaluation of the significance of air quality impacts under the California Environmental Quality Act (CEQA). However, SDAPCD does recognize screening-level thresholds for AQIA as published in San Diego County's *Guidelines for Determining Significance for Air Quality* (San Diego County 2007). The San Diego County screening-level thresholds are largely based on the AQIA trigger levels for criteria air pollutant emissions from new or modified stationary sources in SDAPCD Rules 20.2 and 20.3. If these incremental levels for stationary sources are exceeded, an AQIA must be performed conducted for the source. SDAPCD Rule 20.2, which outlines these trigger levels, states that any project that results in an emissions increase equal to or greater than any of these levels must perform an AQIA to show that no NAAQS or CAAQS will be violated by the proposed project. (SDAPCD 2019). For projects with stationary-source emissions that are below these criteria, no AQIA is typically required, and project level emissions are presumed to be less than significant.

Emissions estimates prepared to support the Initial Study indicate that the estimated hourly and annual project emissions of criteria air pollutants would not exceed the applicable SDAPCD thresholds of significance. However, daily emissions from project operations would exceed the applicable SDAPCD threshold of significance for VOCs. Solvent and marine coating application represent the most significant source of these emissions.

Proposed project activities would result in emissions of toxic air contaminants (TACs) during construction and operation. The project has the potential to result in exposure to TAC emissions and health risks at workplaces, residences, and sensitive receptors in the project area. This protocol for air quality dispersion modeling and HRA has been prepared to outline the proposed approach for further evaluation of project-related emissions and their potential impacts.

3. Project and Facility Description

The Austal USA Floating Dry Dock Project (proposed project) is located at 1313 Bay Marina Drive, in National City, California 91950. The proposed project location is immediately south of and adjacent to the NBSD 32nd Street Naval Station, and immediately north of and adjacent to the Port of San Diego's National City Marine Terminal in San Diego Bay, San Diego County, California.

Austal USA's existing facility comprises 16.05 acres of tidelands property, which contains 9.56 acres of land and 6.49 acres of water and consists of areas leased from the Port of San Diego (Port) and from the Navy. Austal USA obtained possession of the facility on December 15, 2021. At that time, facility operations by the previous tenant Marine Group Boat Works (MGBW) included new construction, maintenance, repair, and alterations (warehousing, storing, welding, blasting, painting, etc.) of yachts, commercial, and Navy marine vessels. Service and repair work by MGBW on yachts and commercial marine vessels ceased in January 2022. Current operations at the Austal USA facility include minor metal fabrication to support vessels at NBSD. Ship components are brought onsite from NBSD for activities such as aluminum welding, grinding, and painting, and are returned when work is completed. These activities occur in the operations building. Current operations also include vessel repair and maintenance activities at the South Pier.

The Navy has identified a projected shortfall of dry dock space at NBSD. The objective of the proposed project is to help the Navy address this shortfall by adding a new FDD to support operations at a location adjacent to the NBSD. Austal USA has also informed the SDAPCD that the proposed project would support Navy and government vessels in accordance with Department of Defense Standard Practice MIL-STD 1625D, Department of Defense Standard Practice: Safety Certification Program for Drydocking Facilities and Shipbuilding Ways for U.S. Navy Ships (DoD 2009). Standard Practice MIL-STD 1625D is a required safety standard certification for dry docking facilities for Navy ships. This standard applies to the proposed project, because Austal USA is a Navy contractor. The proposed project would provide full docking availabilities for vessels up to 500 feet long.

The evaluation of the proposed project will include emissions from construction and emissions from operational activities once the proposed project is complete. Operational activities at the new dry dock will include welding, blasting, and painting for maintenance, repair, and alterations of Navy and commercial marine vessels.

3.1 Emissions Sources

Operational emission sources include the following source types:

- Maritime vessels (tugboats)
- Adhesive use
- Marine coating and solvent use
- Abrasive blasting operations
- Welding operations
- Portable and stationary emergency diesel engines

Emission sources associated with construction of the proposed project include mobile sources, such as construction equipment, haul trucks, and worker commute vehicles.

4. Dispersion Modeling Methodology

4.1 Dispersion Model

The American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) (Version 23132) will be used for the air quality dispersion modeling as recommended by SDAPCD for CEQA and HRA analyses, and in the EPA Appendix W, Guideline on Air Quality Models (EPA 2017).

AERMOD is a steady-state Gaussian plume model that simulates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. This model is recommended for short-range (less than 50 kilometers [km]) dispersion from the source. The model incorporates the plume rise model enhancement (PRIME) algorithm for modeling building downwash. AERMOD is designed to accept input data prepared by two specific preprocessor programs, AERMOD Meteorological Processer (AERMET) and AERMOD Terrain Preprocessor (AERMAP). AERMOD will be run with the following options:

- Direction-specific building downwash
- Regulatory default options unless otherwise specified in this protocol
- Rural dispersion characteristics
- Actual receptor elevations and hill height scales obtained from AERMAP (Version 18081)

4.2 Operational Source Characterization

Operation of the proposed sources would result in emissions to the atmosphere of both criteria pollutants and TACs. Criteria pollutant emissions would consist primarily of NO_X, CO, VOCs, oxides of sulfur (SO_X), PM_{10}, and $PM_{2.5}$. TACs would include non-condensable gases and toxic PM species. The following subsections describe how emissions calculations will be finalized for each source type, and how emissions from these sources will be modeled. Data used in the characterization of these operational sources and their release parameters for modeling will be included in the Air Quality Dispersion Modeling and Health Risk Assessment (HRA) Report.

4.2.1 Maritime Vessels

Up to two 1,000-horsepower (hp) diesel-powered tugboats will be used to guide vessels into and out of the FDD. Emission calculations for this maritime transit will assume 4 hours of operation per year for each of the two 1,000-hp tugboats (four vessels serviced at the FDD per year, each moved in and out of the FDD by the two 1,000-hp tugboats, each tugboat operating for approximately 1 hour per movement). Emissions from maritime transit using tugboats will be calculated using emission factors from CARB's Port Emissions Inventory Guidance, Appendix H.

Based on the expected operation of these tugboats, emissions from these sources will be modeled as an area source within AERMOD. Operations of the tugboats are expected to occur around the FDD and piers, with a consistent emission release height.

4.2.2 Adhesive Use

Use of adhesives for ship repair is expected to occur inside vessels, outside and within the FDD, piers within enclosures, around the FDD and piers and within an onsite building within the facility boundary. Emissions from adhesives will be based on usage rates and material composition data from SDSs.

Adhesive use will be modeled as a volume source within AERMOD. The dimensions of the volume source will be determined based on primary use of adhesives on the FDD, piers, and within an onsite building. For adhesives used within confines of a vessel, enclosure or building, the dimensions of the volume source will be defined by the size of the contained area in the vessel, enclosure, or building. For adhesives used

external to the vessel in the FDD, the dimensions of the volume source will be defined by the initial application area of the adhesive. If adhesives are applied external to the vessel, but within an enclosed area, the dimensions of the volume source will be defined by the physical dimensions of the enclosure. A series of adjacent volume sources along the length of the vessel or FDD may be modeled for this source type.

Per the *User's Guide for the AMS/EPA Regulatory Model (AERMOD)* (EPA 2023), the initial lateral dimension of a volume source will be the length of the side divided by 4.3, while volume sources that are located on a structure but elevated will be defined by the length of the side divided by 2.15. The initial vertical dimension of a volume source will be the height of the release area divided by 2.15. The volume sources modeled for adhesive use outside of a building will be limited to 25 meters by 25 meters (vertical by lateral initial dimensions). The release height of the volume source will be half the height of the containing structure/vessel or the general height of the application of adhesive.

4.2.3 Marine Coating and Solvent Use

Use of marine coatings and solvents for ship repair is expected to occur inside vessels, outside and within the FDD, piers within enclosures, and within an onsite building. Emissions from marine coatings and solvents will be based on usage rates and material composition data from SDSs.

Marine coatings and solvents will be modeled as a volume source within AERMOD. The dimensions of the volume source will be determined based on primary use of marine coatings and solvents on the FDD, piers, and within an onsite building. For marine coatings and solvents used within confines of a vessel or an enclosure, the dimensions of the volume source will be defined by the size of the contained area in the vessel or enclosure. For marine coatings and solvents used external to the vessel in the FDD, the dimensions of the volume source will be defined by the initial application area of the marine coatings and solvents. If marine coatings and solvents are applied external to the vessel, but within an enclosed area, the dimensions of the volume source will be defined by the physical dimensions of the enclosure. A series of adjacent volume sources along the length of the vessel or FDD may be modeled for this source type.

Per the User's Guide for the AMS/EPA Regulatory Model (AERMOD) (EPA 2023), the initial lateral dimension of a volume source will be the length of the side divided by 4.3, while volume sources that are located on a structure but elevated will be defined by the length of the side divided by 2.15. The initial vertical dimension of a volume source will be the height of the release area (either the height of the containing structure or the general height of the application plume of marine coatings and solvents) divided by 2.15. The volume sources modeled for coating and solvent use outside of a building will be limited to 25 meters by 25 meters (vertical by lateral initial dimensions). The release height of the volume source will be half the height of the containing structure/vessel or the general height of the application of marine coatings and solvents.

4.2.4 Abrasive Blasting Operations

Abrasive blasting is expected to occur inside vessels, outside and within the FDD, piers within enclosures, around the FDD and piers and within an onsite building within the facility boundary. Operational rates and SDAPCD default emission factors will be used to estimate emissions for abrasive blasting.

Abrasive blasting operations will be modeled as a volume source within AERMOD. The dimensions of the volume source will be determined based on primary location of abrasive blasting on the FDD, piers, and within an onsite building. For abrasive blasting that occurs within confines of a vessel or an enclosure, the dimensions of the volume source will be defined by the size of the contained area in the vessel or enclosure. For abrasive blasting occurring external to the vessel in the FDD, the dimensions of the volume source will be defined by the initial abrasive blasting height. If abrasive blasting occurs external to the vessel, but within an enclosed area, the dimensions of the volume source will be defined by the physical dimensions of the enclosure. A series of adjacent volume sources along the length of the vessel or FDD may be modeled for this source type.

Per the User's Guide for the AMS/EPA Regulatory Model (AERMOD) (EPA 2023), the initial lateral dimension of a volume source will be the length of the side divided by 4.3, while volume sources that are located on a structure but elevated will be defined by the length of the side divided by 2.15. The initial vertical dimension of a volume source will be the height of the release area (either the height of the containing structure or the general height of the application plume of abrasive blasting material) divided by 2.15. Ventilation and dust collection are expected for these operations and will be taken into consideration during emissions estimation and air dispersion modeling. The release height of the volume source will be half the height of the containing structure/vessel or the general height of the blasting operations.

4.2.5 Welding Operations

Welding rods, wires, and fillers are expected to be used for aluminum and steel ship repair at the proposed Austal facility. Operational rates and SDAPCD default emission factors will be used to estimate emissions for welding operations. These welding operations at the facility are expected to occur within an operations building onsite, on the proposed FDD, and on piers.

Welding operations will be modeled as a volume source within AERMOD. The dimensions of the volume source will be determined based on welding operations on the FDD, piers, and within an onsite building. For welding operations within confines of a vessel or an enclosure, the dimensions of the volume source will be defined by the size of the contained area in the vessel or enclosure. For welding operations occurring external to the vessel in the FDD, the dimensions of the volume source will be defined by the initial operations area. If welding operations occur external to the vessel, but within an enclosed area, the dimensions of the volume source will be defined by the physical dimensions of the enclosure. A series of adjacent volume sources along the length of the vessel or FDD may be modeled for this source type.

Per the User's Guide for the AMS/EPA Regulatory Model (AERMOD) (EPA 2023), the initial lateral dimension of a volume source will be the length of the side divided by 4.3, while volume sources that are located on a structure but elevated will be defined by the length of the side divided by 2.15. The initial vertical dimension of a volume source will be the height of the release area (either the height of the containing structure or the general height of the application plume of marine coatings and solvents) divided by 2.15. The volume sources modeled for welding operations outside of a building will be limited to 25 meters by 25 meters (vertical by lateral initial dimensions). The release height of the volume source will be half the height of the containing structure/vessel or the general height of the welding operations.

4.2.6 Emergency Diesel Engines

Two 597-kilowatt (kW) emergency diesel generators will be installed and operated at the FDD to provide backup power for the dry dock if electrical power is interrupted. In addition to these two engines, the facility plans to operate portable fire pumps and diesel engines, including emergency generators. This equipment is generally expected to be brought onsite on a temporary basis as a precautionary measure to respond to fires and other emergencies that could occur during ship repair, maintenance, and construction activities.

Emissions estimates for combustion of diesel fuel in onsite emergency engines will be based on expected operation, EPA tier-certified emission rates, and speciated toxic air contaminant emission factors from SDAPCD guidance. These units will be modeled as point sources in the air quality dispersion model. Emergency diesel engine stack diameter, height, flow rate, temperature, and location will be based on either manufacturer specification or industry standards for other similar-sized equipment. For the portable emergency engines, the source location within the model will be the location at the facility representing the "worst-case" scenario for modeled concentrations.

4.3 Construction Source Characterization

Construction emissions would include emissions from welding operations and mobile sources such as diesel construction equipment, haul trucks, and worker commute vehicles. Estimated emissions from welding operations during construction will be modeled as volume sources. Dimensions of these volume sources will be estimated using the same methodology as Section 4.2.5.

Estimated emissions from the mobile sources will be evenly distributed over the construction area and modeled as a grid of point sources with horizontal stack release locations spaced approximately 25 meters apart over the entire construction area. The horizontal release type is an AERMOD option (which negates mechanical plume rise). This conservative approach is proposed because it is unknown whether all construction equipment will have vertically oriented exhaust stacks. Data used in the characterization of these construction sources and their release parameters for modeling will be included in the Air Quality Dispersion Modeling and Health Risk Assessment (HRA) Report.

4.4 Building Downwash

Building influences on the air dispersion of emissions from point source stacks will be calculated by incorporating the EPA Building Profile Input Program for use with the PRIME algorithm (BPIP-PRIME). Stack heights, building locations, and building dimensions will be obtained from the most currently available architectural plans and onsite measurements. Stacks located on or adjacent to buildings will be given the base elevations of said buildings. Point sources located on the FDD will include representative external structures on the vessel or on the FDD that may expose exhaust plumes to downwash effects. A list of the buildings and their coordinates will be included in the Air Quality Dispersion Modeling and Health Risk Assessment (HRA) Report.

As part of this analysis, a good engineering practice (GEP) stack height screening will be performed to determine which stack height will be used in the modeling. The GEP stack height is defined as the height in which the plume dispersion from the stack is not influenced by building downwash. This GEP stack height is calculated as the lesser of the following two criteria:

- 65 meters
- The sum of the maximum building height for which the stack is in the area of influence plus 1.5 times the lesser of the building height or projected building width

The stack heights used in the dispersion modeling will account for the GEP stack height, if necessary, while actual stack height will be used for the HRA.

4.5 Ambient Air Boundary

The ambient air boundary is defined by the property line that surrounds the Austal-leased property within which non-authorized personnel access is precluded. Figure 4-1 includes the ambient air boundary for this proposed project, which is inclusive of the Port and Navy leased areas.

Figure 4-1. Project Ambient Air Boundary



4.6 Rural Versus Urban Option

The land use surrounding the facility has been evaluated for classification as either urban or rural. A land use analysis was performed following the Auer land use methodology (Auer 1978) using the most recent available land use data. This data set classified land use for individual 30- by 30-meter cells into 15 primary land use categories for the proposed Austal facility. Of the 15 land use categories in the 2016 National Land Cover Database (NLCD) data set, the following two categories are considered urban for dispersion modeling purposes:

- Developed, Medium Intensity (NLCD Code 23)—This classification includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for approximately 20 percent of the total cover.
- Developed, High Intensity (NLCD Code 24)—This classification includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses, and commercial/industrial spaces. Impervious surfaces account for 27 percent of the total cover.

As shown in Table 4-1, less than 50 percent of land use surrounding the facility would be classified in categories 23 and 24. Per SDAPCD guidance (SDAPCD 2022), projects located along the coastline should select rural dispersion coefficients. The proposed project is located right on the coast, with 44.5 percent open water surrounding the project site and prevailing winds from the west and southwest. Therefore, the rural dispersion coefficients will be selected for this analysis.

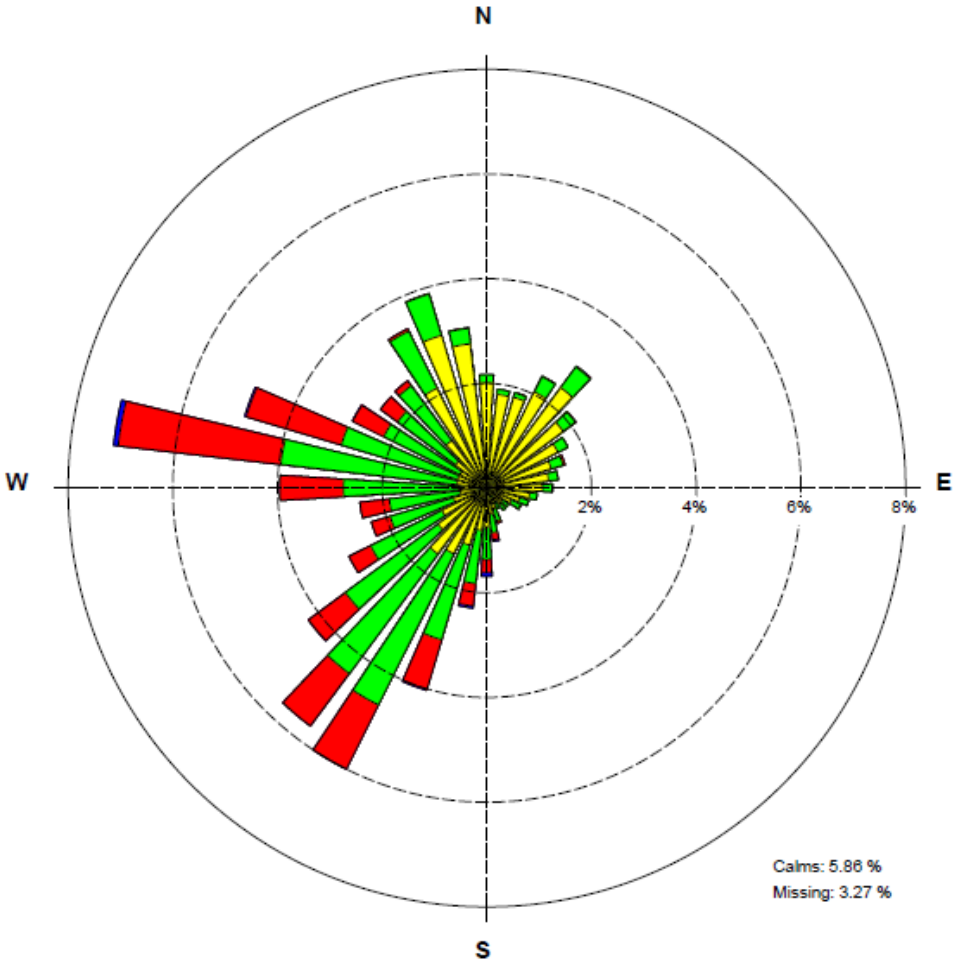
Table 4-1. Land Uses in the Proposed Project Area

Land Use Color	Land Use Code ID No.	Land Use Description	Cell Count	% Land Category
	11	Open Water	13,994	44.53%
	21	Developed, Open Space	398	1.27%
	22	Developed, Low Intensity	956	3.04%
	23	Developed, Medium Intensity	6,188	19.69%
	24	Developed, High Intensity	8,548	27.20%
	31	Barren Land	170	0.14%
	52	Shrub/Scrub	44	1.24%
	71	Grasslands/Herbaceous	390	4.69%
	82	Cultivated Crops	1	0.00%
	90	Woody Wetlands	10	0.03%
	95	Emergent Herbaceous Wetlands	726	2.31%

4.7 Meteorological Data

Three years of AERMET-processed meteorological (MET) data were provided by SDAPCD personnel via email on September 4, 2024. The 3 years of data were processed by SDAPCD with AERMET Version 23132 for 2020 through 2022. The representative MET data provided by SDAPCD are from Sherman Elementary School (Air Quality Station Number 06-073-1026). This monitor is located approximately 6 km northwest of the proposed Austal facility. Wind speeds and directions for this data set are presented in the wind rose on Figure 4-2.

Figure 4-2. Windrose for the 2020 to 2022 Meteorological Data for Sherman Elementary School



4.8 Receptors

The ambient air boundary will be defined by the fence line surrounding the facility. The selection of receptors in AERMOD will be as follows:

- Discrete receptors every 25 meters around the ambient air boundary (that is, fence line)
- 25-meter spacing from the fence line to 50 meters from grid origin
- 50-meter spacing from beyond 50 meters to 500 meters from the fence line
- 100-meter spacing from beyond 500 meters to 1,000 meters from the fence line
- 250-meter spacing from beyond 1,000 meters to 5,000 meters from the fence line
- 500-meter spacing from beyond 5,000 meters to 10,000 meters from the fence line

All receptors and source locations will be expressed in the Universal Transverse Mercator North American Datum 1983 (NAD 83), Zone 11 coordinate system. If modeling results show significant impacts at the outer edge of the finely spaced grid, then the fine spaced grid will be extended accordingly to ensure that the area of maximum modeled impacts is captured. U.S. Geological Survey National Elevation Dataset terrain data will be used in conjunction with the AERMAP preprocessor (Version 18081) to determine receptor elevations and terrain maxima.

Sensitive receptors within a 2-km radius of the facility, to be evaluated as part of the HRA, will be included in the air dispersion model. Sensitive receptors are those who are especially susceptible to health impacts from exposure to TACs and include children, elderly, and the ill (SDAPCD 2022).

4.9 Oxides of Nitrogen Modeling Methodology and Chemistry

The Guideline on Air Quality Models, Appendix W to 40 *Code of Federal Regulations* (CFR) Part 51 (EPA 2017), recommends a tiered screening approach to characterize the conversion of total NO_X from the proposed source to NO_2. A Tier 1 approach assumes a 100 percent conversion of total NO_X to NO_2 and is typically overly conservative. The Tier 2 approach allows for the use of the Ambient Ratio Method 2 (ARM2). The Tier 1 and Tier 2 options do not require agency approval.

For this analysis, the Tier 2 approach was selected using the ARM2 model with a default in-stack ratio of 0.5 and a default out-of-stack ratio of 0.9. The in-stack ratio may be revised based upon updated engineering data and will be reflected in the final modeling report.

Additionally, emergency diesel engines in this analysis will operate 200 hours per year or less, and therefore can be classified as intermittent sources because of having less than 500 hours per year of operation according to EPA (EPA 2011). As a result, the annual average hourly emission rate for each engine will be used for the 1-hour averaging period NO_2 modeling analysis, consistent with EPA's *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard Memorandum* (EPA 2011).

5. Criteria Pollutant Background Concentrations

When necessary, ambient background concentrations will be added to model results for comparison to the NAAQS and CAAQS. Background concentration values for all pollutant averaging times were obtained from EPA's AirData website (EPA 2024) for years 2021 to 2023. The following sites were used for the 2021–2023 period background concentrations:

- Monitor Location: 533 First Street, El Cajon, California (Site ID: 60731022)
- Monitor Location: 84 E. 'J' St., Chula Vista, California (Site ID: 60730001)
- Monitor Location: 450b 24th Street, San Diego, California (Site ID: 60731026)

Background design values for each criteria pollutant for NAAQS and CAAQS comparison are shown in Table 5-1.

Table 5-1. Criteria Pollutant Background Concentrations

Pollutant	Averaging Period	Value Chosen	2021	2022	2023	Design Value	Units	Concentration (µg/m³)[d]
CO[a]	1-hour	NAAQS: Second Max	1.2	1.3	1.1	1.3	ppm	1,489
		CAAQS: First Max	1.2	1.4	1.1	1.4	ppm	1,604
	8-hour	NAAQS: Second Max	1	1	0.8	1	ppm	1,146
		CAAQS: First Max	1.1	1.1	0.9	1.1	ppm	1,260
SO_2[a]	1-hour	NAAQS: 99th Percentile	1	1	1	1	ppb	2.62
		CAAQS: First Max	1.6	0.8	0.7	1.6	ppb	4.19
	3-hour	NAAQS: First Max	1.6	0.8	0.7	1.6	ppb	4.19
	24-hour	CAAQS: Frist Max	0.3	0.3	0.3	0.3	ppb	0.79
PM_{10}[b]	24-hour	CAAQS: First Max	46	38	51	51	µg/m³	45
	24-hour	NAAQS: Second Max	44	38	51	51	µg/m³	51
$PM_{2.5}$[c]	24-hour	NAAQS: 98th Percentile	24	15	20	20	µg/m³	20
	Annual	NAAQS/CAAQS: Annual Mean	9.7	8.8	9.0	9.2	µg/m³	9.2
NO_2[c]	1-hour	NAAQS: 98th Percentile	45	46	48	46.33	ppb	87.19
		CAAQS: First Max	54	54	54	54	ppb	101.6
	Annual	NAAQS/CAAQS: Annual Mean	9.23	10.51	9.8	10.51	ppb	19.78

[a] Monitor Location: 533 First Street, El Cajon, California (Site ID: 60731022)

[b] Monitor Location: 84 E. 'J' St., Chula Vista, California (Site ID: 60730001)

[c] Monitor Location: 450b 24th Street, San Diego, California (Site ID: 60731026)

[d] For conversion of ppm and ppb to µg/m³, standard conditions assumed (25 degrees Celsius and 760 millimeters of mercury)

Notes:

µg/m3 = microgram(s) per cubic meter

N/A = not applicable
ppb = part(s) per billion
ppm = part(s) per million

6. Impacts Analysis

6.1 Criteria Pollutants

Modeled concentrations of criteria pollutants emitted by the proposed Austal facility will be compared to the applicable significant impact level (SIL) shown in Table 6-1. If the predicted concentrations are not significant (that is, if they are less than the SIL), the modeling is complete for that pollutant and averaging period and compliance with the NAAQS and CAAQS is demonstrated by not causing or contributing to a violation. If impacts are above the SIL, a cumulative modeling analysis would be required. SDAPCD would be contacted and a data request for neighboring facilities would be submitted.

The results of the project impact analysis, and, if necessary, the cumulative modeling impact analyses will be combined with respective background data, where appropriate, and compared to the NAAQS and CAAQS shown in Table 6-1.

Table 6-1. Summary of Criteria Pollutant Air Quality Standards

Pollutant	Averaging Period	SIL (µg/m^3)	NAAQS (µg/m^3)	CAAQS (µg/m^3)
CO	1-hour	2,000[a]	40,000[c]	22,900[c]
	8-hour	500[a]	10,000[d]	10,000[d]
NO_2	1-hour	7.5[b]	188[e]	338.65[a]
	Annual	1[a]	100[f]	56.44[f]
$PM_{2.5}$	24-hour	1.2[b]	35[g]	--
	Annual	0.13[b]	9[h]	12[f]
PM_{10}	24-hour	5[a]	150[i]	50[a]
	Annual	--	--	20[f]
SO_2	1-hour	7.9[b]	196[j]	655[a]
	3-hour	25[a]	1,300[k]	--
	24-hour	--	--	105[a]

SIL Sources: 40 CFR 51.165(b)(2); Guidance Concerning the Implementation of the 1-hour NO2 NAAQS for the PSD Program (epa.gov); Supplement to the Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program; Guidance for Implementation of the 1-hour SO2 NAAQS Under PSD (epa.gov)

NAAQS/CAAQS Source: https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf

-- = Not applicable

[a] Design value is the maximum modeled concentration over 3 years

[b] Design value is the maximum 3-year average concentration

[c] Highest of the second highest (H2H) 1-hour concentration

[d] Highest of the second highest (H2H) 8-hour concentration

[e] Highest of 3-year averages of the 98th percentile (H8H) of the annual distribution of maximum daily 1-hour concentrations

[f] Maximum annual average

[g] Annual 98th percentile daily maximum average; 3-year average of eighth high

[h] Highest of the 3-year average of annual concentrations

[i] Highest of the sixth highest (H6H) 24-hour modeled concentrations

[j] Highest of multi-year averages of the 99th percentile (H4H) of the annual distribution of maximum daily 1-hour concentrations

[k] Highest of the second highest (H2H) 3-hour concentration over the entire receptor network for each year modeled

6.2 Operational Toxic Air Contaminants

The most recent version of the Hotspots Analysis and Reporting Program modeling tool (HARP2) (Version 22118 [CARB 2022]), with the revised unit risk and cancer potency values, updated October 2023, will be used for the analysis of potential exposures and health risks associated with project-related TAC emissions. The updated sensitivity factors will be applied in accordance with the *Risk Management Guidance for Stationary Sources of Air Toxics* (CARB 2015).

The deposition rate modeled in HARP2 will be set to 0.02 meter per second for controlled sources per guidance from SDAPCD's *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments* (SDAPCD 2022).

6.2.1 Health Risk Assessment for Operational TAC Emissions

An HRA will be conducted to evaluate potential human health risks associated with exposure to pollutant concentrations resulting from net increases of project-related operational emissions of TACs. The HRA will be developed using air dispersion modeling of the project-related emissions and characterization of the resultant exposures and health risks using approved risk assessment methodology for both carcinogenic and noncarcinogenic risks from the California OEHHA (OEHHA 2015), CARB risk management guidance (CARB 2015), and SDAPCD's *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments* (SDAPCD 2022).

This HRA will follow four general steps to estimate health impacts:

1) Identification and quantification of project-related TAC emissions.
2) Evaluation of pollutant transport (using air dispersion modeling) to estimate ground-level TAC concentrations at each receptor location in the plotted receptor grid and at sensitive receptor locations.
3) Assessment of human exposures.
4) Use of a risk characterization model to estimate the potential health risks at each receptor location.

As recommended by the 2015 OEHHA, CARB Guidance and 2022 SDAPCD Supplemental Guidance, a Tier 1 assessment will be performed. The Tier 1 assessment is the most conservative of the four tier assessment methodologies identified in the OEHHA guidance and uses a standard point-estimate approach with standard OEHHA assumptions. The 2015 OEHHA guidance uses AERMOD-predicted pollutant concentrations, exposure assumptions, and approved health values (that is, pollutant-specific cancer potency values and reference exposure levels (RELs]) from OEHHA to predict potential health impacts. Health risk results will be presented in terms of the incremental increase in lifetime cancer risk, chronic hazard index (HIC), acute hazard index (HIA), and cancer burden.

Risk will be evaluated for each of the four receptor types:

- Point of maximum impact (PMI)
- Maximally exposed individual resident (MEIR)
- Maximally exposed individual worker (MEIW)
- Maximally exposed sensitive receptor (MESR)

Results of the HRA will be compared to the SDAPCD's recommended thresholds of significance (SDAPCD 2022):

- Incremental increase in cancer risk of 10 in 1 million individuals
- HIC of 1.0
- HIA of 1.0
- Cancer burden of 1.0

6.2.2 Carcinogenic (Cancer) Risk

Cancer risks will be evaluated based on the estimated annual project-related TAC emission rates, ground-level concentrations obtained from the dispersion modeling analysis, and values for inhalation cancer potency, oral slope factor, frequency and duration of exposure at the receptor, age-specific sensitivity factors, and breathing rates of the exposed persons from the HARP model. For carcinogens, the toxicity criterion, or health guidance value, is the cancer potency factor, which describes the potential risk of developing cancer per unit of average daily dose over a 70-year lifetime. Cancer risk results will be expressed as the incremental increase in lifetime cancer risk above baseline levels of risk, typically as a predicted number (of persons) per 1 million individuals.

Potential excess lifetime cancer risks for residential and sensitive receptors will be evaluated using the 30-year continuous exposure duration scenario and potential cancer risks for workers will be evaluated using the 25-year exposure duration (8 hours per day starting at age 16 years old) as recommended in the OEHHA guidelines (OEHHA 2015). Based on the OEHHA guidelines, the derived (adjusted) method in HARP2 will be used for the cancer risk evaluation, which uses the 95th percentile breathing rate from the third trimester to 2 years and the 80th percentile inhalation rate from 2 years to 70 years for residential cancer risk assessments (CARB 2015). The 30-year and 25-year exposure durations for residential and commercial/industrial receptors, respectively, are obtained from the OEHHA guidelines (OEHHA 2015).

6.2.3 Noncarcinogenic Chronic Exposure

Chronic toxicity is defined as adverse health effects from prolonged chemical exposure caused by chemicals accumulating in the body. To assess chronic noncancer exposures, annual TAC ground-level concentrations are compared with the RELs developed by OEHHA to obtain a HIC. The REL is a concentration in ambient air at, or below which, no adverse health effects are anticipated. Noncancer chronic health risks are calculated as 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 summed with the resulting totals expressed as HIs for each organ system. HIC values less than 1 are assumed to reflect pollutant exposure concentrations with no anticipated adverse health effects.

6.2.4 Noncarcinogenic Acute Exposure

Acute toxicity is defined as adverse health effects caused by a brief chemical exposure of no more than 24 hours. To assess acute noncancer exposures, 1-hour TAC ground-level concentrations are compared with the acute REL to obtain an acute HIA. Similar to assessing chronic noncancer health risks, acute noncancer health risks are calculated as 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 summed with the resulting totals expressed as HIs for each organ system. Again, HIA values less than 1 are assumed to reflect exposures with no anticipated adverse health effects.

6.3 Exposure Pathways

For this risk analysis, exposure pathways will be included for each risk scenario as specified in Table 6-2.

Table 6-2. Summary of HARP2 Exposure Pathways

Risk Analysis	Model Exposure Pathways	Intake Rate Percentile
Acute	Inhalation	N/A
Noncancer Chronic	Inhalation Soil Ingestion Dermal Absorption Mother's Milk	N/A
Cancer	Inhalation Soil Ingestion Dermal Absorption Mother's Milk	Risk Management Policy (RMP) Using the Derived Method

The fish pathway will not be enabled in HARP2 because the nearest body of water to the facility is the Pacific Ocean. As such, any quantification of exposures due to the fish pathway is likely to be highly speculative and inaccurate.

6.4 Construction Toxic Air Contaminants

A screening-level HRA will be performed for the project's construction emissions to evaluate potential impacts from TACs from construction activities including welding and mobile sources. Diesel particulate matter (DPM) will be evaluated in the HRA for construction equipment and vehicle emissions, and DPM emissions will be based upon estimated construction equipment combustion PM_{10} emissions as a surrogate.

A screening HRA will be conducted following the OEHHA's Air Toxics Hot Spots Program *Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015).

Cancer and noncancer chronic health risks at each receptor will be calculated by using equations from the Air Toxics Hot Spots Program *Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015) to convert the modeled ground-level DPM concentrations to health risk values. Cancer risk will be expressed as a numerical excess lifetime cancer risk per 1 million exposed individuals. The noncancer health effects associated with chronic exposures are expressed as HIC, which is the ratio of expected exposure levels to acceptable chronic RELs. RELs are concentrations of a chemical at or below which adverse noncancer health effects are not anticipated to occur for a specified exposure duration. At this time, there are no acute RELs developed for DPM (OEHHA 2015; and CARB 2022); therefore, speciated emissions of TACs from diesel fuel combustion in the construction equipment will be estimated to evaluate acute impacts from construction.

6.5 Class I Area Analyses

As described previously, the project is not expected to result in emission increases that would exceed Prevention of Significant Deterioration thresholds. Additionally, there are no federally designated Class I areas located within 50 km of the proposed project. Therefore, no visibility or Class I air quality-related values screening analyses will be conducted or required.

7. References

Auer, A.H. 1978. "Correlation of Land Use and Cover with Meteorological Anomalies." *Journal of Applied Meteorology*. No. 17. pp. 636-643.

California Air Resources Board (CARB). 2015. *Risk Management Guidance for Stationary Sources of Air Toxics.* California Air Pollution Control Officers Association. July.

California Air Resources Board (CARB). 2022. "HARP Air Dispersion Modeling and Risk Tool." April 28 release. https://ww2.arb.ca.gov/resources/documents/harp-air-dispersion-modeling-and-risk-tool.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Guidance Manual for Preparation of Health Risk Assessments.* Air, Community, and Environmental Research Branch. February.

Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB). 2022. *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values.* September.

San Diego Air Pollution Control District (SDAPCD). 2019. SDAPCD Rule 20.2 New Source Review for Non-Major Stationary Sources. June.

San Diego Air Pollution Control District (SDAPCD). 2022. *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments (HRAs)*. July.

San Diego Air Pollution Control District (SDAPCD). n.d. "Attainment Status." Accessed September 4, 2024. https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html#:~:text=An%20area%20is%20designated%20in%20attainment%20when%20it,effects%20on%20human%20health%20or%20the%20public%20welfare.

San Diego County. 2007. *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality*. Prepared by the Land Use and Environment Group, Department of Planning and Land Use. March. https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf.

U.S. Department of Defense (DoD). 2009. Standard Practice MIL-STD 1625D, Department of Defense Standard Practice: Safety Certification Program (SCP) for Drydocking Facilities and Shipbuilding Ways for US Navy Ships. August. http://everyspec.com/MIL-STD/MIL-STD-1600-1699/MIL-STD-1625D_28499/.

U.S. Environmental Protection Agency (EPA). 2011. *Memorandum: Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard.* March.

U.S. Environmental Protection Agency (EPA). 2017. *Appendix W of 40 CFR Part 51—Guideline on Air Quality Models (Revised)*. Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. January.

U.S. Environmental Protection Agency (EPA). 2021. Designation of Areas for Air Quality Planning Purposes; California; San Diego County Ozone Nonattainment Area; Reclassification to Severe. June.

U.S. Environmental Protection Agency (EPA). 2023. *User's Guide for the AMS/EPA Regulatory Model (AERMOD).* October.

U.S. Environmental Protection Agency (EPA). 2024. "Monitor Values Report." January 29. https://www.epa.gov/outdoor-air-quality-data/monitor-values-report.

Attachment 6
Memorandum – Toxics Best Available Control Technology Evaluation

Memorandum

Date: April 24, 2025

To: Mr. Hugo Bermudez, AUSTAL USA

From: Massie Hatch, M.S. Hatch Consulting

Subject: Toxics - Best Available Control Technology Evaluation - Revised

M. S. Hatch Consulting LLC has performed a Toxics Best Available Control Technology (T-BACT) evaluation for permit applications that are currently under San Diego Air Pollution Control District (SDAPCD) review. T-BACT may not be required for permitting purposes if the estimated increase in cancer risk due to the project is determined to be below SDAPCD Rule 1200 threshold of one in one million. If T-BACT is required, this memorandum documents that sources undergoing permitting would implement control measures or other strategies that would qualify as T-BACT. The T-BACT evaluation is also provided in support of the Environmental Impact Report (EIR) prepared for the project. The following permit applications are currently under review by SDAPCD and constitute a project as defined in SDAPCD Rule 1200.

- Facility-wide portable emergency internal combustion engines, APCD2023-APP-07842
- Two new floating dry dock (FDD) stationary emergency generator engines, APCD2023-APP-07843 and APCD2023-APP-07844
- Facility-wide portable marine coating and solvent usage operations, APCD2023-APP-07845
- Welding operations at the floating dry dock, the existing pier, and the shipyard welding shop, APCD2023-APP-07894
- Facility-wide abrasive blasting operations, APCD2024-APP-08447
- Facility-wide adhesive usage operations, APCD2024-APP-08445

In SDAPCD Rule 1200, T-BACT is defined as "the most effective emission limitation or emission control device or control technique which: (i) has been achieved in practice for that source or category of source; or (ii) is any other emissions limitation or control technique, including process and equipment changes of basic and control equipment and implementation of pollution prevention measures, found by the Air Pollution Control Officer to be technologically feasible for that source or category of source, or for a specific source."

The T-BACT evaluation concludes that the proposed emission limitations and control techniques for the emission units and processes subject to air permitting would meet T-BACT, as summarized herein.

- Austal has applied for a site-wide permit to operate emergency generators and fire pumps. This equipment is generally brought onsite on a temporary basis as a precautionary measure to respond to fires and other emergencies that could occur during ship repair and construction activities. It is anticipated that the permit will require that only Tier 4 Final engines be brought on board. Austal will comply with this requirement which would meet T-BACT for this source category.

- Austal is planning to install and operate a new floating dry dock to increase the facility's capacity to perform maintenance on U.S. Naval vessels. The new dry dock operations, including the electric cranes operations, will be shore-powered. However, the dry dock will be equipped with two diesel-fired emergency generators, integral to the dry dock design, to provide emergency standby power to the dry dock in case shore power is interrupted. The two new FDD stationary emergency generator engines are EPA-certified Marine Tier 3 compression-ignition engines with limited daily and annual operations which meet the applicable state and federal regulatory requirements for their class of vessel engines. Only ultra-low sulfur diesel fuel with a sulfur content of 0.0015% by weight (15 ppm) or less would be used. The two emergency engines are designed and installed as part of the dry dock's standard equipment. They are housed in a protected compartment to avoid water exposure. The compartment is a tight space with little to no room, and as currently configured, it is not feasible to access the engine exhaust systems to retrofit the engines with additional emission control equipment. Partial or complete dismantling of walls or structures would be required to access the engines. Repowering the dry dock with Tier 4 engines is also infeasible. It would require significant modification to the dry dock to preserve its structural integrity. The cost to replace two Tier 3 engines with Tier 4 engines would be significant ($1.3 million), including the procurement of the engines, structural modifications, regulatory compliance, and U.S. Government certification. The cost and project delays would affect Austal's ability to win and perform work, potentially reducing or eliminating the viability of Austal's business at the National City facility. Based on the above discussion, the proposed EPA-certified Marine Tier 3 diesel engines with limited daily and annual operations would meet T-BACT for this category of source.

- Austal has applied for a permit to operate a portable marine coating operation to perform work outdoors on the vessels, as needed, as part of the repair and maintenance process. The portable marine coating and solvent usage operations would comply the applicable SDAPCD rules and permit conditions, including material usage and emission limits. Using best management practices, compliant coatings and solvents would be applied by hand, brush, roller, and spray application. Compliance with the applicable rules and permit conditions (including usage/emission limit) meet T-BACT for this operation. In February 2025, Austal performed a Best Available Control Technology (BACT) analysis, including a top-down BACT analysis, in support of APCD2023-APP-007845. The BACT analysis

demonstrated that no add-on control technologies have been achieved in practice or demonstrated in the field for portable marine coating and solvent usage operations. Further, add-on control technologies such as thermal oxidizers, catalytic oxidizers, carbon adsorbers, absorbers or liquid scrubbers, and condensers are not technologically feasible due to the intermittent nature of the operations, low pollutant concentrations, and chemicals contained in some coatings (e.g., ketones) that could potentially damage the control equipment. Since no add-on controls are feasible for this operation, compliance with the applicable rules and permit conditions (including usage/emission limit) meet T-BACT for this operation.

- Austal has applied for a permit for its welding operation at the future floating dry dock, the existing pier, and the shipyard welding shop at the National City facility, in support of maintenance of U.S. Navy and other vessels. Capturing and controlling welding fumes from the welding shop and applying work practice standards to the outdoor welding on the vessels would meet T-BACT for this source category. In the welding shop, a combination of hood and curtain systems—with a capture efficiency of 98%—will be used to collect welding fumes. These fumes will be routed through a baghouse with High Efficiency Particulate Air (HEPA) filters, which provide a particulate control efficiency of 99.97 percent. This system would achieve an overall reduction in particulate TAC emissions of at least 97.97 percent. Currently, there are no feasible options to capture and control welding fumes from operations onboard a vessel while meeting the Occupational Safety and Health Association requirements and applicable fire safety codes. Austal would minimize TAC emissions from the outdoor welding operations on the vessels by applying work practice standards recommended by U.S. Environmental Protection Agency, as practicable, and in accordance with sound welding engineering principles while maintaining weld quality.

- Austal has applied for a permit to operate for facility-wide portable outdoor abrasive blasting operations at in support of repair/maintenance of U.S. Navy and other ships. The facility expects to blast, on an annual basis, a maximum of one aluminum ship underwater hull and tanks and one steel ship at the future floating dry dock, as well as one partial aluminum ship and one partial steel ship at the existing pier. The facility-wide abrasive blast operations would be performed either inside a vessel (e.g., blasting to clean inside the ship's tanks) or on the surface of the vessel, underwater hull, or flight deck. Only CARB-certified blast media or hydroblasting would be used. For the work inside the vessel, the dry abrasive blast operations would be contained, and the blast materials would be vacuumed by a system equipped with filters. This setup achieves a minimum particulate control efficiency of 97 percent. The dry blasting work on the vessel surface would be conducted under shrouding and the exhaust would be directed to a dust collector/filter system that achieves at least 97% control of particulate TACs. Additionally, vacuum

blasting will be utilized on non-skid flight decks, providing an additional particulate control efficiency of 99 percent.

- Austal has applied for a permit to operate for facility-wide portable adhesive operations. The portable adhesive operation would comply the applicable SDAPCD rules and permit conditions, including material usage and emission limits. Only compliant adhesives would be used. Austal is proposing to limit the volatile organic compounds (VOCs) emitted from this operation to 10 pounds per day, which would also effectively limit the TACs emitted from this operation. As such, this source category would meet T-BACT. Like portable marine coating and solvent usage operations, no add-on control technologies have been achieved in practice or demonstrated in the field for portable adhesive operations. Furthermore, add-on control technologies listed above are not technologically feasible due to the intermittent nature of the operations and low pollutant concentrations. Therefore, compliance with the applicable rules and permit conditions (including usage/emission limit) meet T-BACT for this source category.