
AB 2588 Air Toxics Emission Inventory Report

Prepared for:

University of California, Santa Barbara

Environmental Health & Safety, Building 525

Santa Barbara, California 93106

Contact: Nicholas Bruce

Prepared by:

DUDEK

621 Chapala Street

Santa Barbara, California 93101

Contact: Adam Poll

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1 Introduction

1.1 Background

The University of California, Santa Barbara (UCSB) is required, as notified by a Santa Barbara County Air Pollution Control District (SBCAPCD) letter dated March 29, 2019, to prepare this Air Toxics Emission Inventory Report (ATEIR) for reporting year 2018. The ATEIR provides toxic emissions calculations based on the approaches described in this Air Toxics Emissions Inventory Plan (ATEIP), conditionally approved by the SBCAPCD on March 1, 2021 and December 7, 2022. Source data in the ATEIP, along with emissions data in this ATEIR, will be used to estimate facility health risks using the California Air Resources Board Hotspots Analysis and Reporting Program (HARP2). The information provided in this report is based on SBCAPCD Guidelines for Preparing Air Toxics Emission Inventory Plans and Reports (SBCAPCD 2021), Permits to Operate (PTOs), and SBCAPCD rules and regulations.

1.2 Stationary Source Information

Stationary Source Name: University of California, Santa Barbara

Stationary Source Identification Number (SSID): 02795

Location: Office of Environmental Health & Safety, Building 565, Santa Barbara, California 93106

All facility names and facility identification numbers (FIDs) associated with the stationary source: 02795

Location (street address and UTM coordinates, including datum): Office of Environmental Health & Safety, Building 565, Santa Barbara, California 93106; (238036.80m E, 3812437.44m N); WGS84.

The boundary locations for the facility are provided in Appendix C. The property boundary coordinates will be used to set up the receptor grid for dispersion modeling.

Description of stationary source operations:

This facility consists of a university campus located in Santa Barbara, California. Natural gas-fired external combustion equipment is used for space heating and diesel-fired internal combustion engines are used for emergency backup power. There are also two gasoline-fueling stations, two paint spray booths, laboratory processes, and a hazardous waste collection center (HWCC). The facility and its emitting sources currently operate under SBCAPCD PTO 13725-R1 and Part 70 Operating Permit 13725.

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2 Emissions Summary

Table 1 provides an emission summary of the toxic air contaminants (TACs) emitted by UCSB in 2018, including the maximum hourly and total average annual emissions. Detailed emission calculations are included in Appendix A. The natural gas utility data for UCSB in 2018 is included in Appendix B. The 2018 2nd Semi-Annual Compliance Verification Report are included in Appendix C which includes the activity data for natural-gas fired boilers, emergency generators, gasoline dispensing facility, and surface coating. The activity data for the Hazardous Waste Collection Center is included in Appendix D.

Table 1. 2018 Toxic Air Contaminant Emissions Inventory

TAC Name	CAS #	Maximum Hourly Emissions (lb/hr)	Average Annual Emissions (lb/yr)
1,1,1-Trichloroethane	71556	2.09E-03	3.50E+00
1,1,2,2-Tetrachloroethane	79345	1.82E-04	1.66E-03
1,1,2-Trichloroethane (Vinyl trichloride)	79005	1.10E-04	1.00E-03
1,2,4-Trimethylbenzene	95636	2.34E-03	5.20E-02
1,2-Dichloropropane (Propylene dichloride)	57556	9.40E-05	8.55E-04
1,3-butadiene	106990	9.08E-02	7.86E-01
1,3-Dichloropropene	542756	9.18E-05	8.35E-04
Acetaldehyde	75070	3.27E-01	9.89E+00
Acetonitrile	75058	4.86E-02	7.95E+01
Acrolein	107028	3.32E-02	4.77E+00
Ammonia	7664417	1.23E+00	1.06E+01
Arsenic	7440382	6.80E-04	3.37E-01
Barium	7440393	1.28E-03	7.29E+00
Benzene	71432	1.74E-01	3.12E+01
Beryllium	7440417	3.48E-06	1.99E-02
Bromine	7726956	7.41E-04	1.25E+00
Cadmium	7440439	9.02E-04	1.83E+00
Carbon tetrachloride	56235	2.20E-03	3.47E+00
Chlorine	7782505	7.64E-04	1.70E-02
Chlorobenzene	108907	7.77E-05	6.52E-04
Chloroform	67663	9.79E-02	1.65E+02
Chromium (total)	7440473	6.40E-04	2.32E+00
Cobalt	7440484	2.44E-05	1.39E-01

Table 1. 2018 Toxic Air Contaminant Emissions Inventory

TAC Name	CAS #	Maximum Hourly Emissions (lb/hr)	Average Annual Emissions (lb/yr)
Copper	7440508	1.85E-03	1.42E+00
Dimethylformamide	68122	2.09E-03	3.57E+00
Dioxane, 1,4	123911	8.59E-03	1.44E+01
DPM	9901	7.20E+00	6.91E+01
Epichlorohydrin	106898	7.93E-05	1.34E-01
Ethyl Benzene	100414	1.29E-01	2.33E+01
Ethylene dibromide {EDB, 1,2-Dibromoethane}	106934	1.53E-04	1.39E-03
Ethylene dichloride	107062	8.13E-05	7.39E-04
Ethylene Glycol	107211	7.98E-02	1.43E+00
Formaldehyde	50000	8.36E-01	5.36E+01
Glutaraldehyde	111308	5.29E-04	9.27E-01
Hexane	110543	1.23E-02	1.05E+01
Hexavalent chromium	18540299	3.89E-05	3.26E-04
Hydrazine	7803578	4.74E-05	7.84E-02
Hydrochloric acid	7647010	2.54E-02	6.54E+01
Hydrofluoric acid	7664393	2.59E-03	4.66E+00
Hydrogen chloride	7647010	7.24E-02	6.07E-01
Isopropanol	67630	6.30E-02	1.12E+02
Lead	7439921	3.37E-03	8.56E-01
Manganese	7439965	1.32E-03	6.40E-01
Mercury	7439976	8.53E-04	4.38E-01
Methanol	67561	5.71E-01	9.03E+02
Methyl bromide	74839	7.44E-02	1.26E+02
Methyl Ethyl Ketone	78933	1.12E-04	2.48E-03
Methyl Tertiary Butyl Ether	1634044	8.22E-01	5.13E+01
Methylene chloride	75092	3.43E-01	5.79E+02
Molybdenum	7439987	3.19E-04	1.82E+00
m-Xylene	108383	8.27E-03	1.84E-01
Naphthalene	91203	8.80E-03	5.74E-01
n-Hexane	110543	4.67E-03	3.79E+00
Nickel	7440020	2.13E-03	3.49E+00
o-Xylene	95476	2.88E-03	6.40E-02
PAHs	1151	1.51E-02	2.93E-01
Phosgene	75445	2.45E-04	4.14E-01
Propylene	115071	3.94E-01	1.21E+03

Table 1. 2018 Toxic Air Contaminant Emissions Inventory

TAC Name	CAS #	Maximum Hourly Emissions (lb/hr)	Average Annual Emissions (lb/yr)
Pyridine	110861	1.70E-03	2.91E+00
Selenium	7782492	8.62E-04	4.70E-02
Silica	7631869	3.21E-03	2.81E+00
Styrene	100425	3.27E-04	6.14E-03
t-butyl alcohol	75650	5.42E-02	9.17E+01
Tetrachloroethylene	127184	3.89E-04	6.57E-01
Toluene	108883	6.90E-01	1.43E+02
Trichloroethylene	79016	6.34E-04	1.07E+00
Triethylamine	121448	2.22E-03	3.82E+00
Vanadium	7440622	6.68E-04	3.81E+00
Vinyl chloride	75014	5.17E-05	4.70E-04
Xylenes	1330207	2.07E-01	6.30E+01
Zinc	7440666	1.71E-02	4.81E+01
Total	-	1.37E+01	3.93E+03

3 References

SBCAPCD (Santa Barbara County Air Pollution Control District). 2021. *Guidelines for Preparing Air Toxics Emission Inventory Plans and Reports*. August. Accessed March 2023. <https://www.ourair.org/wp-content/uploads/Guidelines-for-Preparing-ATEIPs-and-ATEIRs-in-Santa-Barbara-County.pdf>.

Appendix A

2018 Toxic Air Contaminant Emission Calculations

Appendix B

Natural Gas Utility Data for 2018

Appendix C

2018 2nd Semi-Annual Compliance Verification Report

Appendix D

Hazardous Waste Collection Center 2018 Activity Data