

**West Virginia  
Department of Environmental Protection**

**Huntington Alloys Public Meeting**

July 30, 2024



# Introduction

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West Virginia Department of Environmental Protection

Division of Air Quality



# What is the Purpose of this Meeting?

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- WVDEP/WVBPH to provide information and answer questions about U.S. EPA's new data indicating potential health concerns related to nickel air emissions from the Huntington Alloys/Special Metals facility in Huntington.
- Hear potential concerns and suggestions from community members.
- Inform of potential next steps.
- Develop contacts within the community for future communications and meetings.



# AirToxScreen

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- U.S. EPA's high-level screening tool for all toxic air pollutants in the country.
- Purpose is to identify areas and communities for closer investigation.
- Uses simplistic assumptions:
  - Modeled weather data (vs. actual data)
  - Emissions come from one or two points
  - Assumes a person breathes the air in the area every day for 70 years
  - Assumes that year's data is constant for 70 years



# AirToxScreen

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- Areas of Concern are identified as having a 100 (or greater)-in-1 million lifetime cancer risk.
- A lifetime cancer risk of "N"-in-1 million (where "N" is a number) means that, for every 1 million people who are continuously exposed to a certain level of a pollutant over 70 years, "N" people may develop cancer. For example, a 1-in-1 million risk means that one person may develop cancer for every 1 million people exposed. A 10-in-1 million risk means 10 people may develop cancer per 1 million exposed, etc. These risks are on top of any other cancer risks from other sources.
- 100 in 1 million is equivalent to 1 in 10,000.



## Examples of Lifetime Risk

- 1 in 2 Risk of being diagnosed with cancer (male)
- 1 in 3 Risk of being diagnosed with cancer (female)
- 1 in 101 Risk of death by car accident
- 1 in 102 Risk of death by falling
- 1 in 1,024 Risk of drowning
- 1 in 2,745 Risk of death by choking on food
- 1 in 15,300 Risk of being struck by lightning
- 1 in 69,016 Risk of death by dog attack

Source for death statistics: National Safety Council estimates based on data from National Center for Health Statistics—Mortality Data for 2020

# AirToxScreen Limitations

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- Applies best to larger areas, not specific places.
- Applies best to groups, not to specific people.
- Includes risk estimates that are uncertain.
- Results only apply to the analysis year.

<https://www.epa.gov/AirToxScreen/airtoxscreen-limitations>



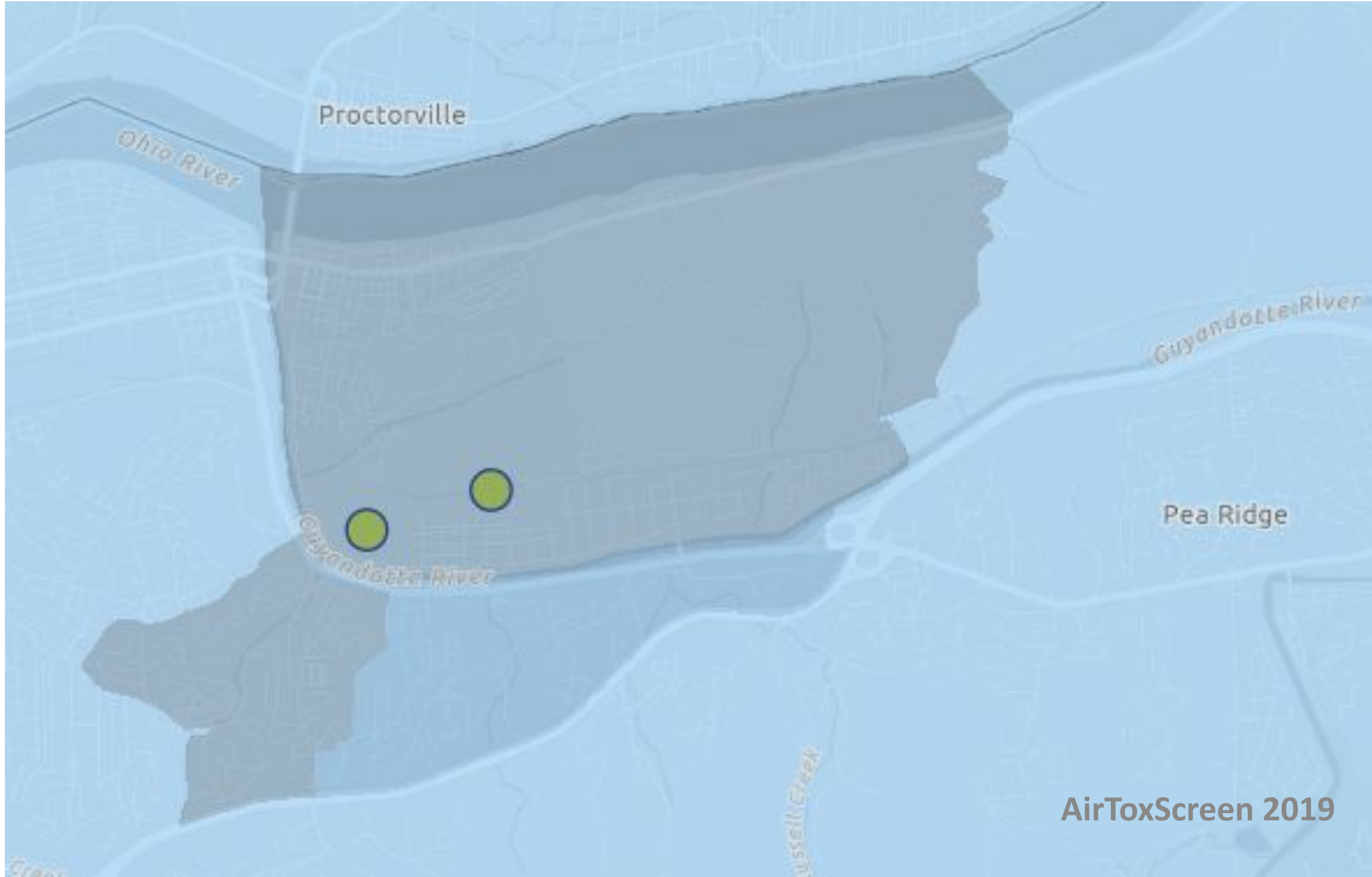
# AirToxScreen 2017-2019

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- The first three versions of AirToxScreen (2017, 2018, & 2019) calculated potential lifetime risk by census tract.
- The average census tract in West Virginia contains approximately 3,600 people.







Proctorville

Ohio River

Guyandotte River

Guyandotte River

Pea Ridge

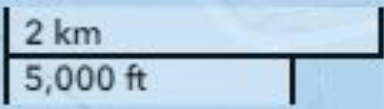
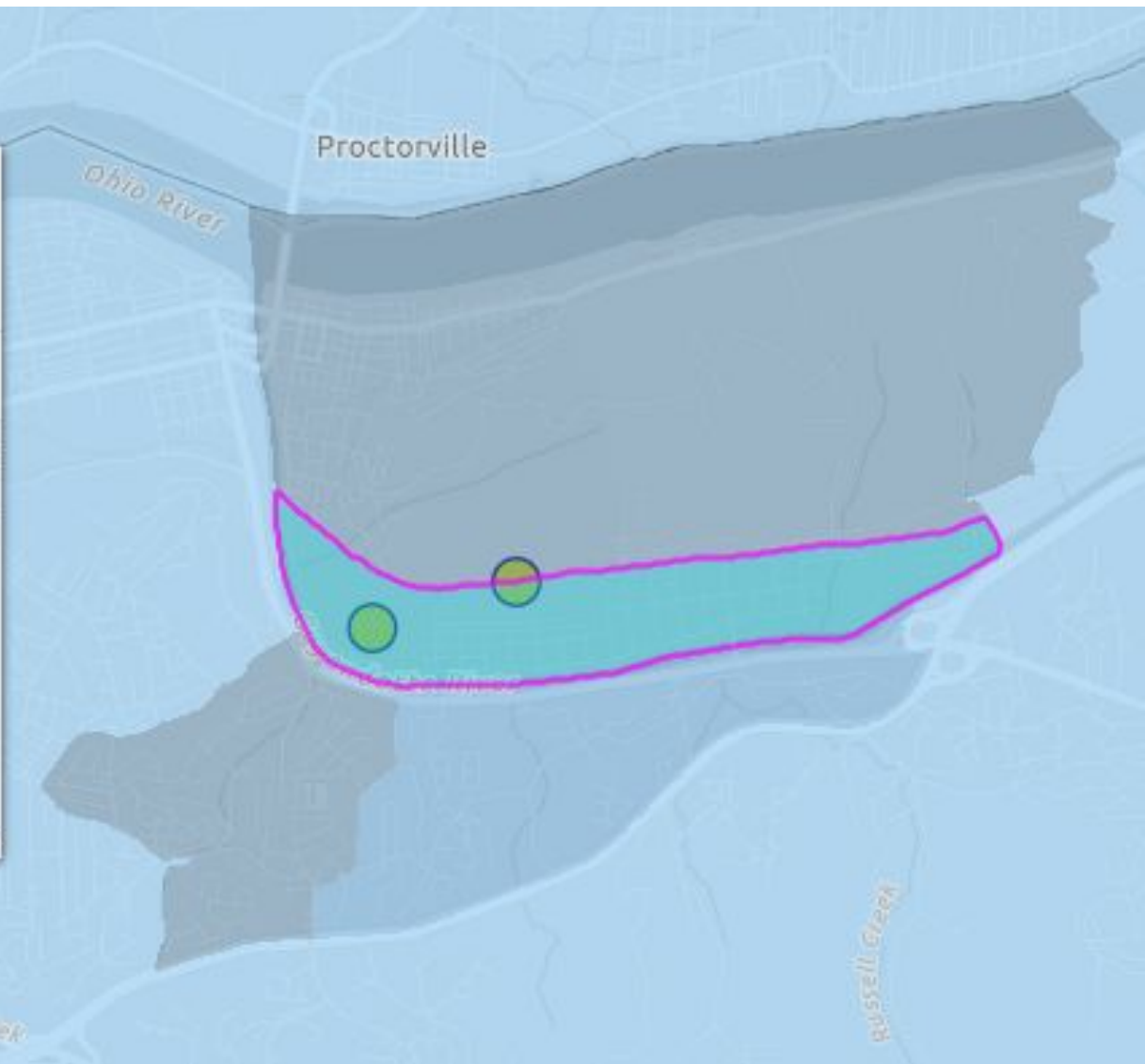
AirToxScreen 2019



**Cabell County, WV**  
**Tract ID: 54011000101**

Zoom to Pan

|                                 |              |
|---------------------------------|--------------|
| Population (2010)               | 1,723        |
| Area (m2)                       | 2,067,881    |
| EPA Region                      | EPA Region 3 |
| Total Risk (in a million)       | 80           |
| 1,1,2-Trichloroethane Risk (per | 0.000109     |

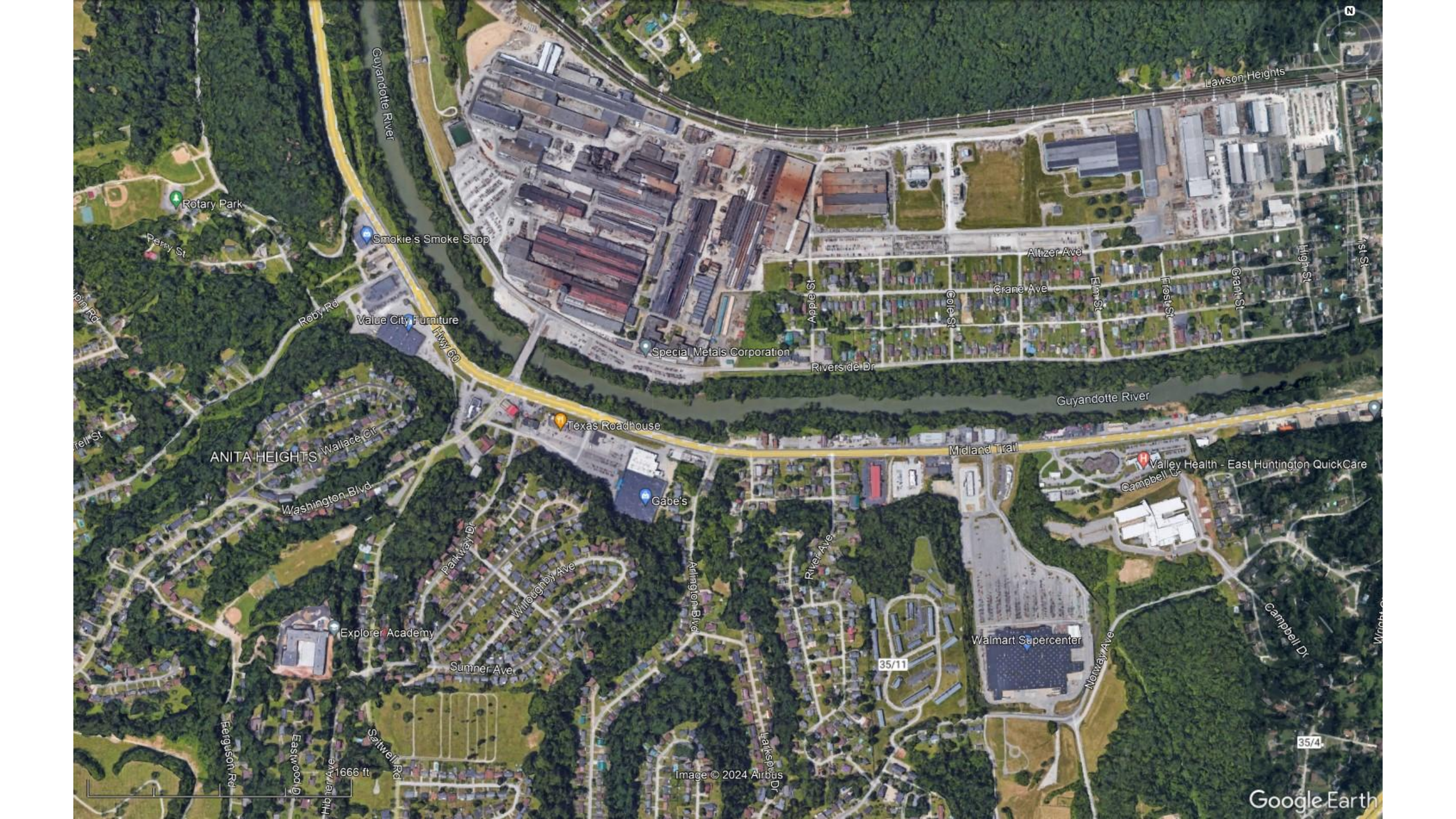


# AirToxScreen 2020

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- For latest version of AirToxScreen (2020), EPA switched from census tracts to census **blocks**.
- In West Virginia, a census block averages 13 people.





N

Lawson Heights

Guyandotte River

Rotary Park

Perry St

Smokie's Smoke Shop

Value City Furniture

Roby Rd

Hwy 60

Special Metals Corporation

Apple St

Cole St

Crane Ave

Altizer Ave

Elm St

Frost St

Grant St

High St

1st St

Riverside Dr

Guyandotte River

Texas Roadhouse

ANITA HEIGHTS

Wallace Ct

Washington Blvd

Gabe's

Midland Trail

Valley Health - East Huntington QuickCare

Campbell Dr

Parkway Dr

Whitoughby Ave

Arlington Blvd

River Ave

Walmart Supercenter

Norway Ave

Campbell Dr

Explorer Academy

Sumner Ave

35/11

35/4

Ferguson Rd

Eastwood Dr

Hilber Ave

Saltwell Rd

1666 ft

Image © 2024 Airbus

Google Earth

# Huntington Alloys/Special Metals

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- Huntington Alloys, also known as Special Metals, has been in operation since the 1920s.
- Large rolling mill, specializing in nickel and high-nickel alloy products.
- Makes metal items such as blocks, thick and thin sheets, long bars, wires, and pipes in about 120 different metal mixtures. The facility uses around 200 different processes, including melting metals, rolling, shaping, cutting, cleaning, and testing them, as well as recycling waste materials.

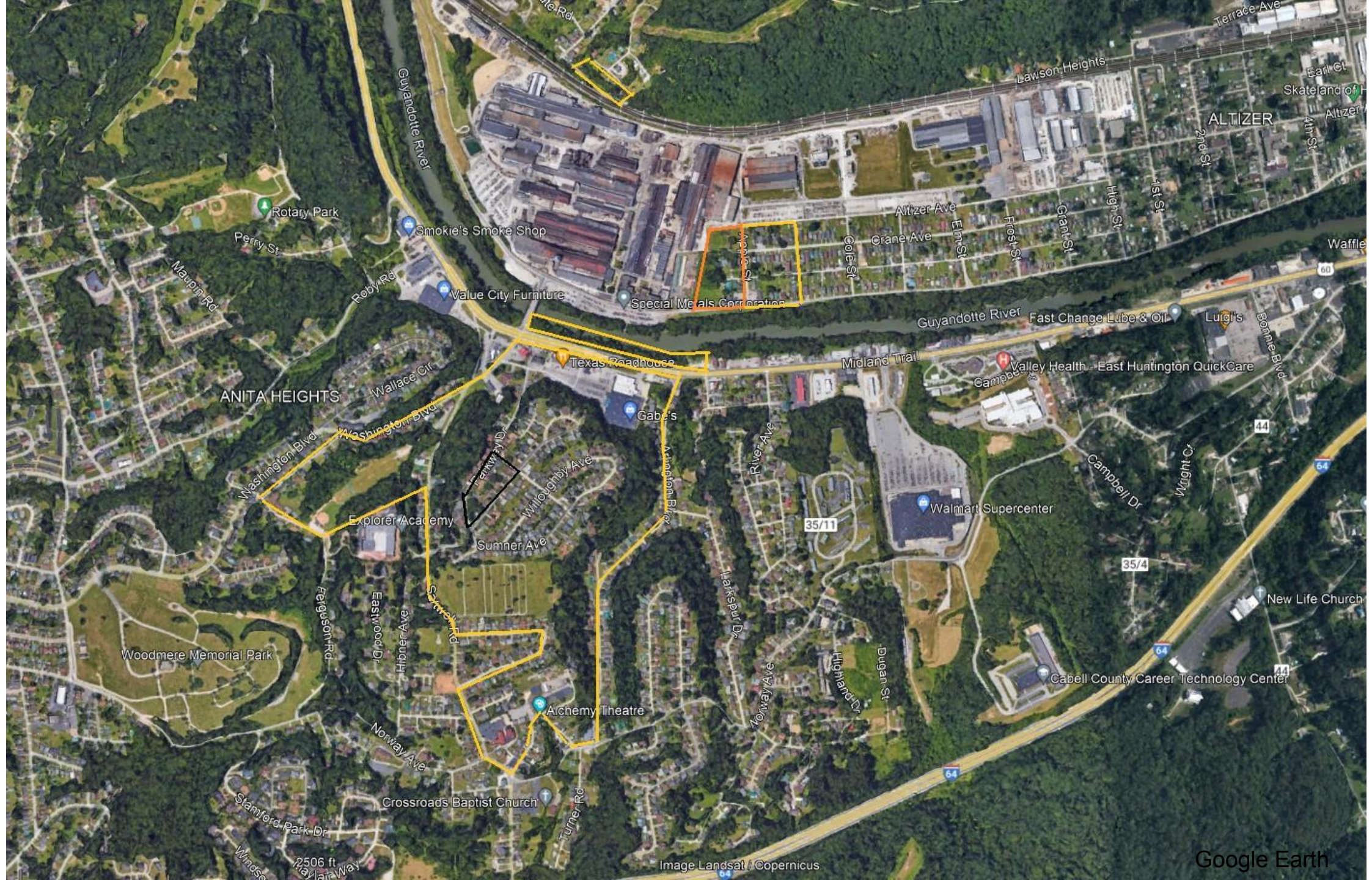


# AirToxScreen 2020 Results

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- AirToxScreen 2020 identified seven census blocks near the Huntington Alloys/Special Metals facility as having an increased potential lifetime cancer risk:
  - One census block shows a total potential risk of 200 in 1 million (26 residents).
  - Six census blocks show a total potential risk of 100 in 1 million (81 residents).





# AirToxScreen 2020 Results

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- Per EPA, human studies have identified an increased risk of nasal and lung cancers among workers exposed to nickel refinery dust.
- For one individual, a 100 in 1 million risk equals a 0.01% additional risk of developing cancer after 70 years of continuous exposure

<https://www.epa.gov/sites/default/files/2016-09/documents/nickle-compounds.pdf>





# AirToxScreen 2020 Results

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- The EPA also states that long-term inhalation exposure to nickel emissions can lead to non-cancer effects:
  - Risk of asthma
  - Decreased lung function
  - Bronchitis
- AirToxScreen 2020 identified 22 census blocks (374 residents) with an increased potential for these non-cancer effects.





ALTIZER

Texas Road houses

Walmart Supercenter

64

35/11

35/4

Google Earth

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# Current WVDEP Actions

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- WVDEP's Division of Air Quality (DAQ) contacted State Department of Health's Bureau of Public Health (BPH) to look for increased cases of nickel-related health issues.
- DAQ contacted and visited Huntington Alloys/Special Metals to look at the locations and types of nickel being emitted to more accurately assess risk.



# Current WVDEP Actions

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- The facility primarily uses 99.9% pure nickel or recycled nickel alloy.
- Nickel alloy emissions are 20,000 times less carcinogenic due to the tightly bound nature of nickel in the alloy, rendering it biologically inert.
- It is estimated that over 90% of the facility's emissions are nickel alloy emissions.
- Nickel is mixed with other metals and melted into an alloy, which is the only stage where different nickel forms might be emitted. This process accounts for less than 10% of total nickel emissions.





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Eastwood Dr

Hilber Ave

Saltwell Rd

1666 ft

Image © 2024 Airbus

Larkspur Dr

35/11

35/4

Google Earth

# Next Steps

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- DAQ is in discussions with Huntington Alloys/Special Metals to verify types of nickel emissions and about conducting a fence line air monitoring study for nickel.
- Set up webpage with current information and establish mailing list(s) to announce new information/future meetings.



# Summary

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- The EPA uses AirToxScreen to identify areas needing further review.
- For AirToxScreen 2020, EPA switched from using census tracts to census blocks and identified 7 census blocks in Huntington for further investigation.
- AirToxScreen assumes the highest risk value for all nickel emissions, treating them as nickel subsulfide.
- DAQ identified that more than 90% of Huntington Alloys/Special Metals' emissions are nickel alloy, which is 20,000 times less carcinogenic than nickel subsulfide.
- Less than 10% of emissions potentially being different forms of nickel, which puts all census blocks under the EPA's 100-in-1 million risk threshold.



# Contact Information

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