

# MIP Air and Noise Monitoring



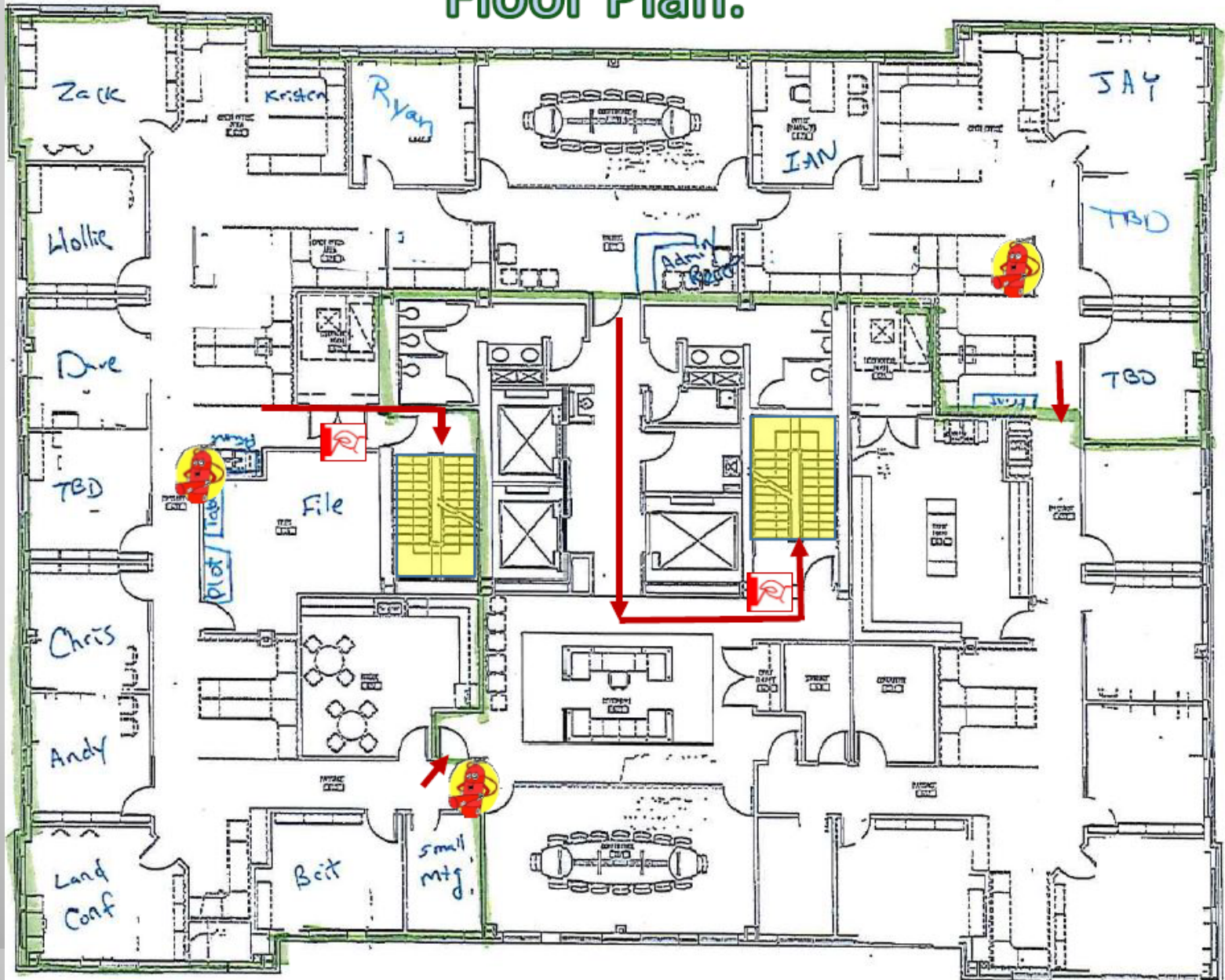


northeast  
NATURAL ENERGY

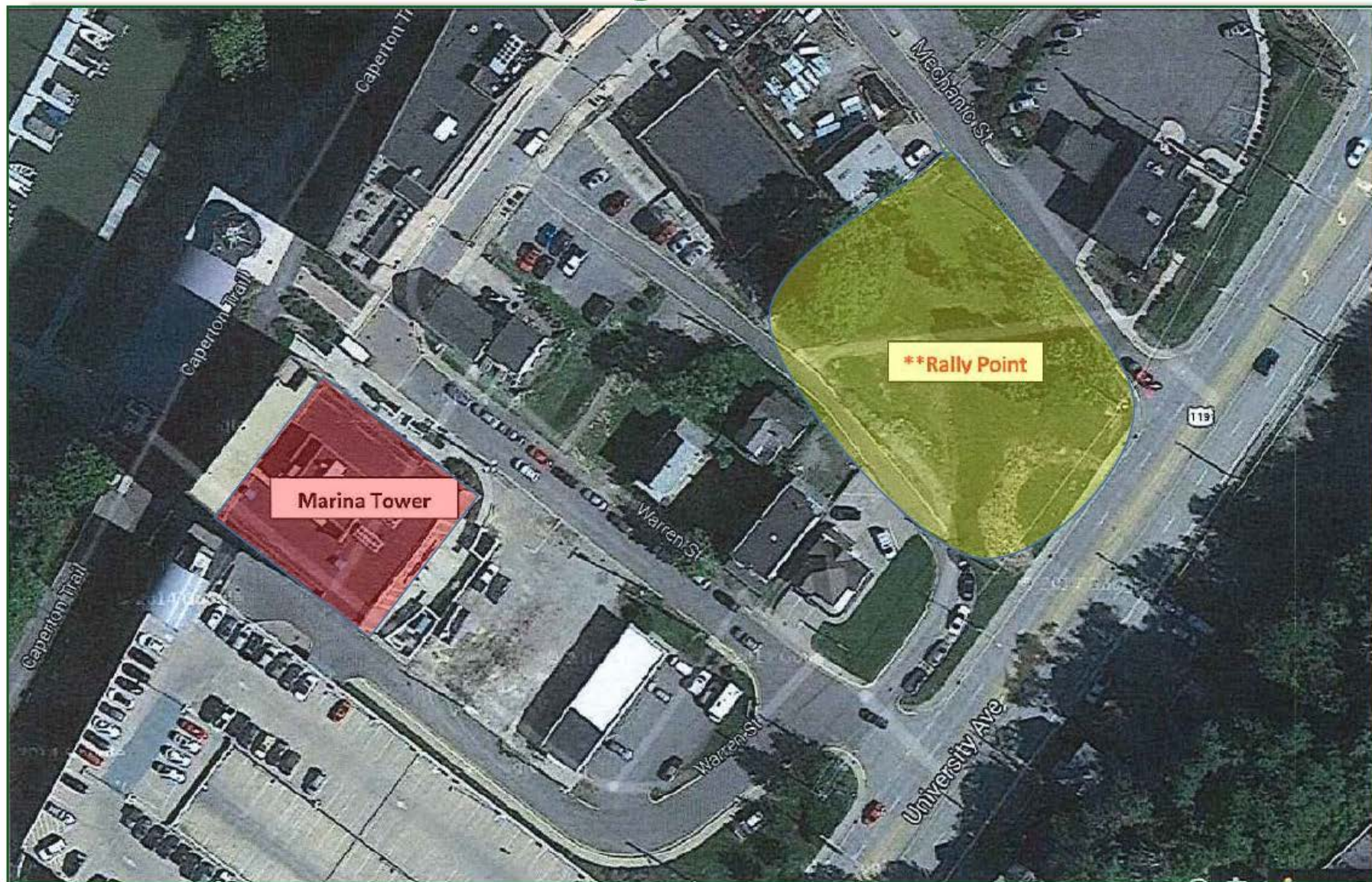
# Emergency Procedures



# Floor Plan:



# Rally Point:



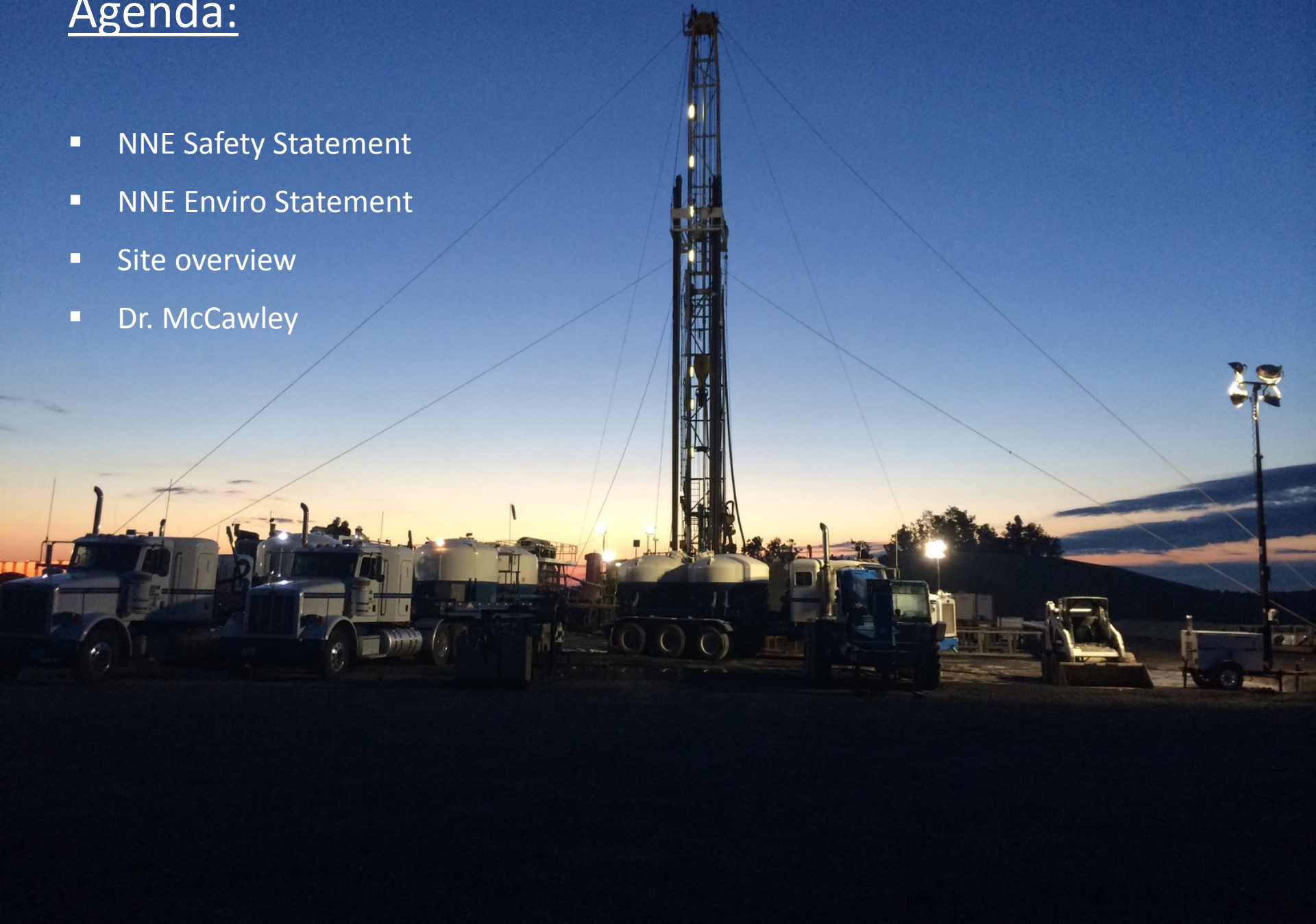


# Charleston

- **Charleston Office:** Chase Tower has two stairwells for use in emergency situations. When evacuation is required:
  1. DO NOT RUN, but move in a brisk, quick manner.
  2. Go to the nearest designated or safe stairwell or exit. **DO NOT USE THE ELEVATORS.**
  3. Floor Monitor will check the office to be certain employees have evacuated.
- Page 2 of 6
  
- 4. Remove high heels or other footwear that may inhibit walking safely down stairs. (Carry them with you for use once you leave the stairwell.)
- 5. Use the handrail on your right side.
- 6. Go to your predetermined Safe Refuge Area unless directed otherwise by the Fire Department or other appropriate emergency response personnel.
- 7. Allow room for others in an orderly flow as they enter the stairwell; however, do not hold up traffic unnecessarily.
- 8. Acquire assistance for those who are slower moving or handicapped.
- 9. Dispel any rumors or false information to reduce panic.
- 10. Any injuries occurring in the stairwell should be treated at the nearest floor landing, if required, and when practical.
- 11. Stay together and be aware of incoming emergency response vehicles.
  
- The Safe Refuge Area is located at the west end of Haddad Riverfront Park or other locations as directed by the Fire Department or other appropriate emergency response personnel directing the evacuation.

# Agenda:

- NNE Safety Statement
- NNE Enviro Statement
- Site overview
- Dr. McCawley



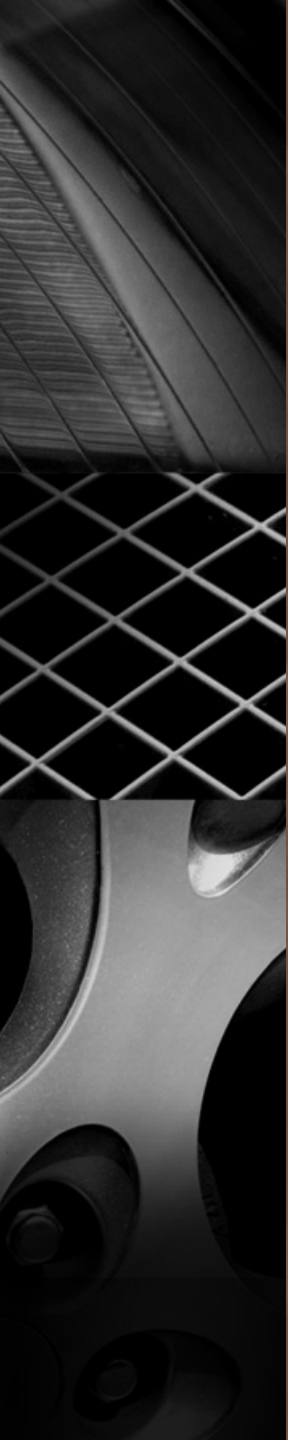
- NNE is dedicated to developing a safe and healthy environment for all employees and contractors through the combination of engineering design, practicality, and a hands on approach.



- NNE is committed to protecting the environment by maintaining a strong anti-pollution and spill prevention program in all areas where it operates









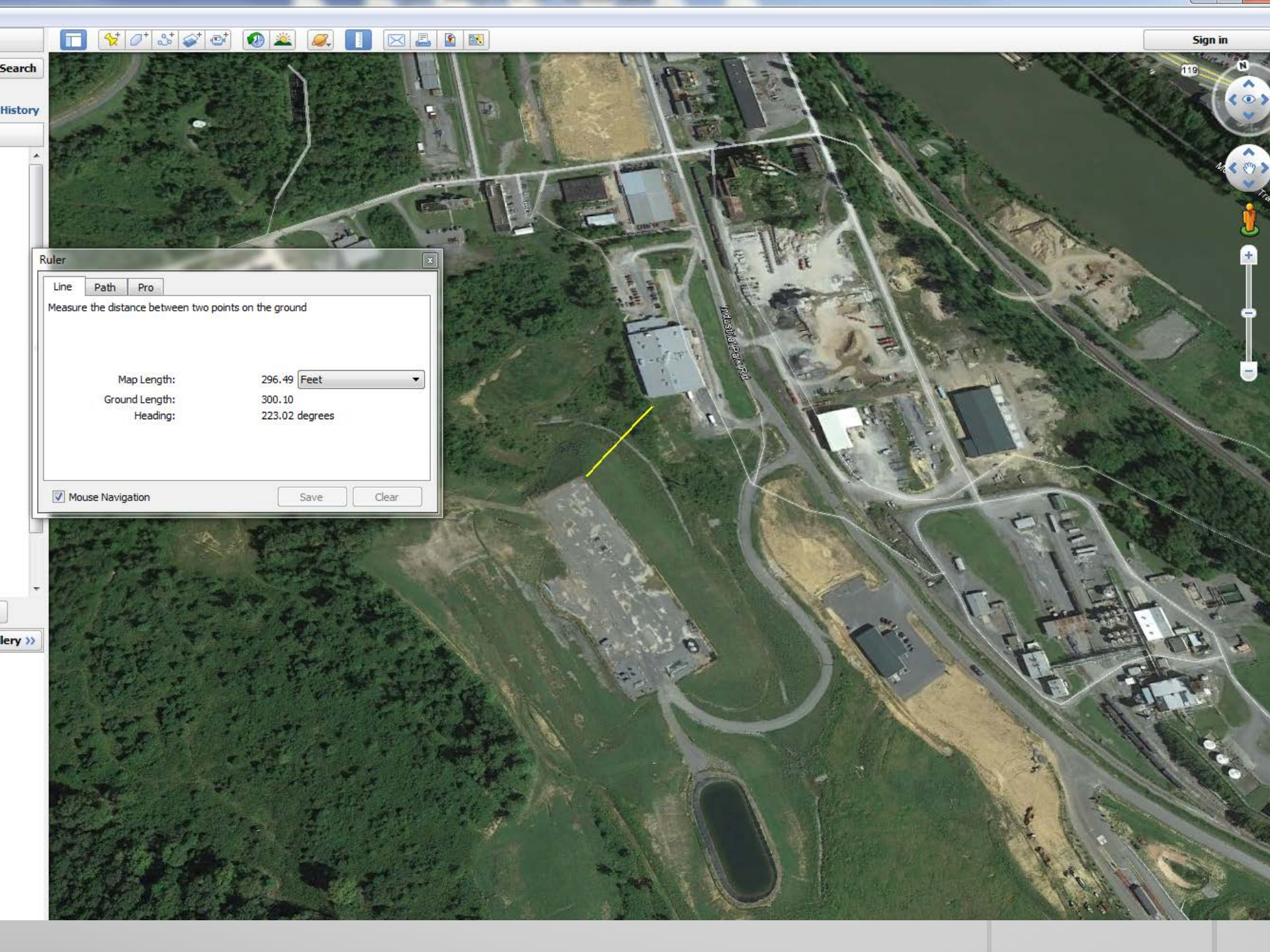
2

19/19

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ers and other items in the 3D viewer

Tour Guide



Sign in

Search

History

Ruler

Line Path Pro

Measure the distance between two points on the ground

Map Length: 296.49 Feet

Ground Length: 300.10

Heading: 223.02 degrees

Mouse Navigation

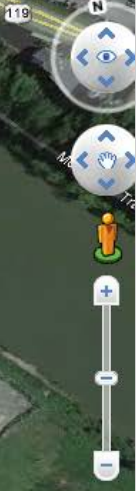
Save

Clear

Library >>



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Ruler

Line Path Pro

Measure the distance between two points on the ground

Map Length: 750.84 Feet

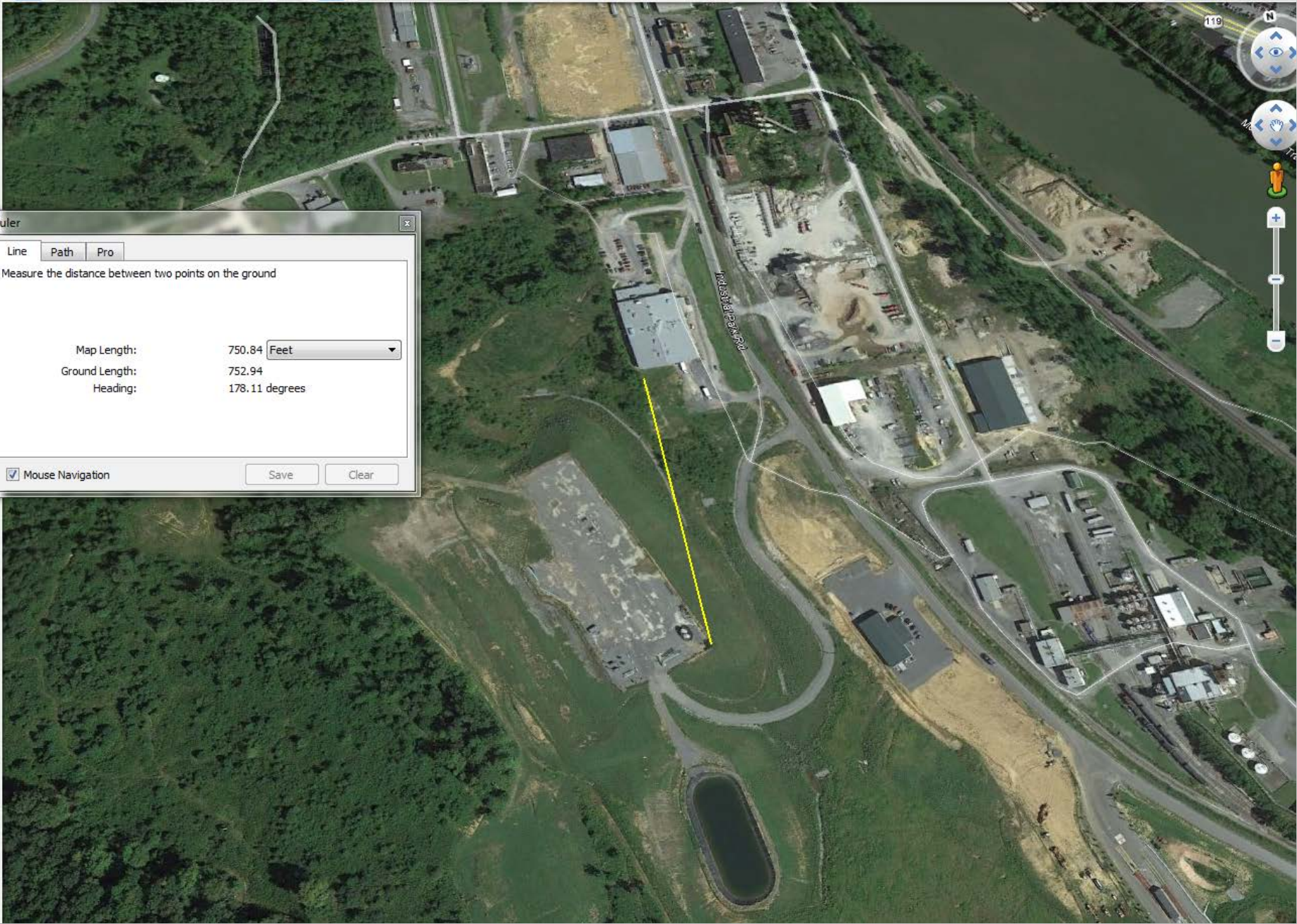
Ground Length: 752.94

Heading: 178.11 degrees

Mouse Navigation

Save Clear

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Ruler

Line Path Pro

Measure the distance between two points on the ground

Map Length:	857.64	Feet
Ground Length:	863.32	
Heading:	192.21	degrees

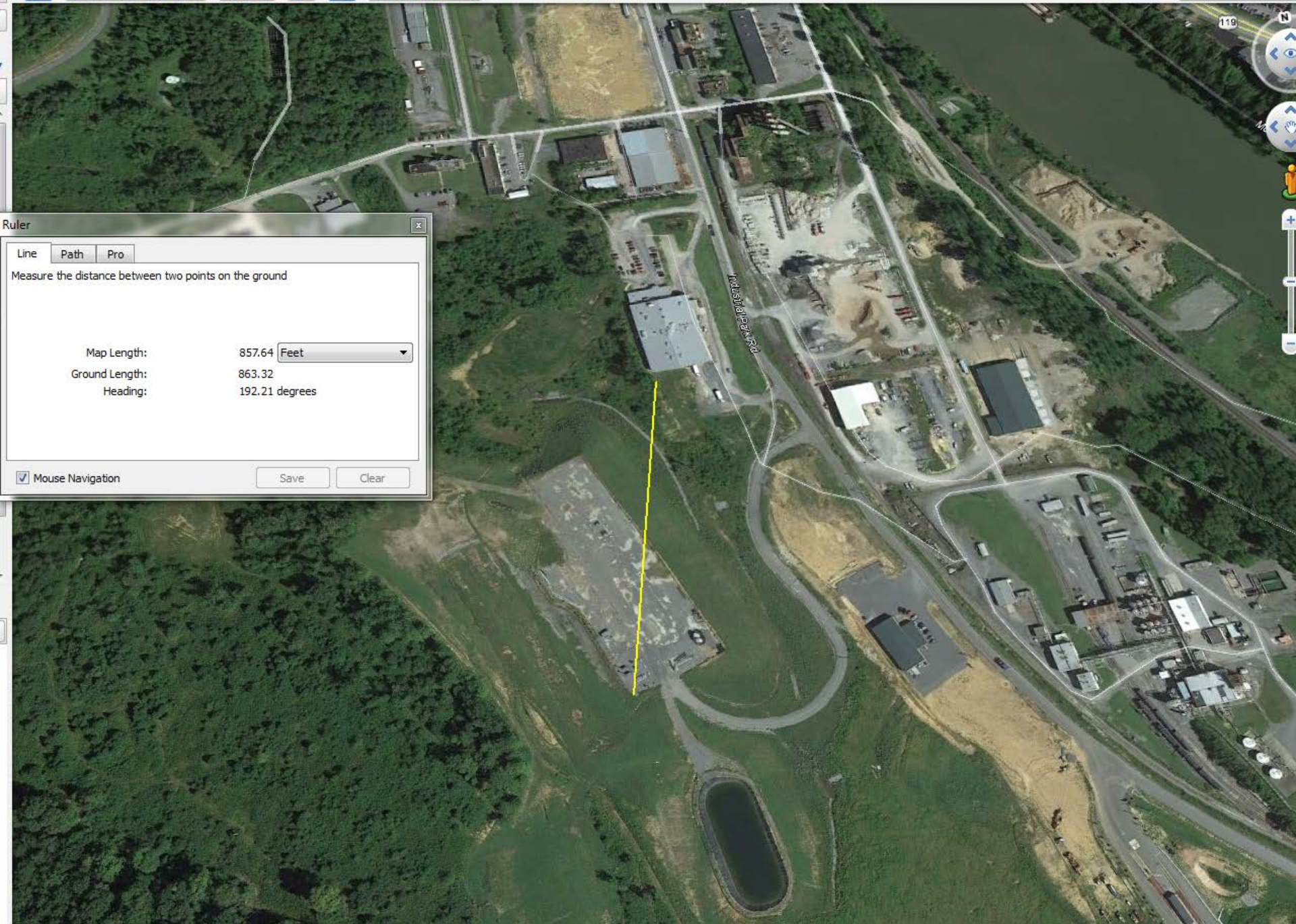
Mouse Navigation

Save Clear

119



Washburn Rd

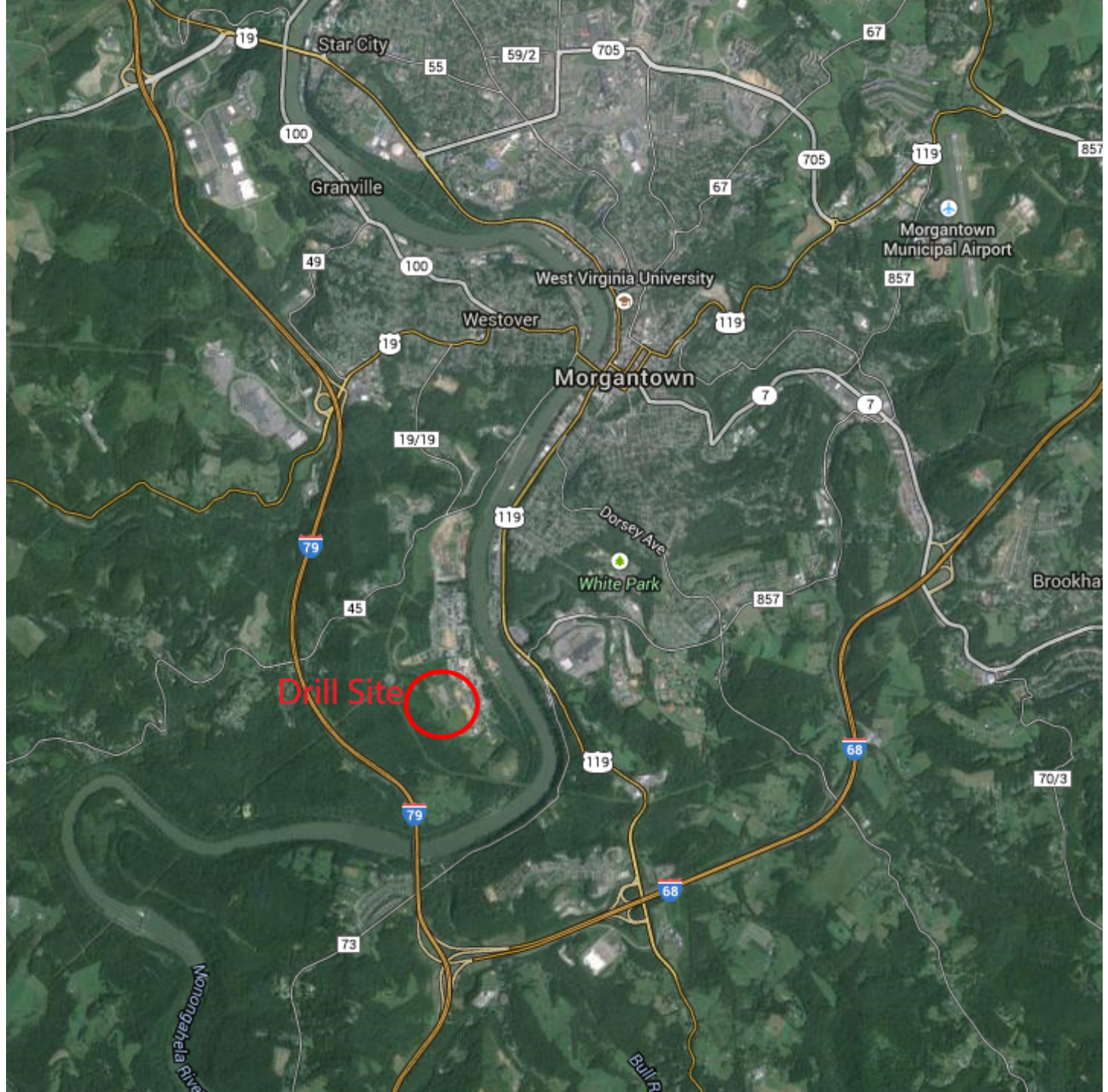




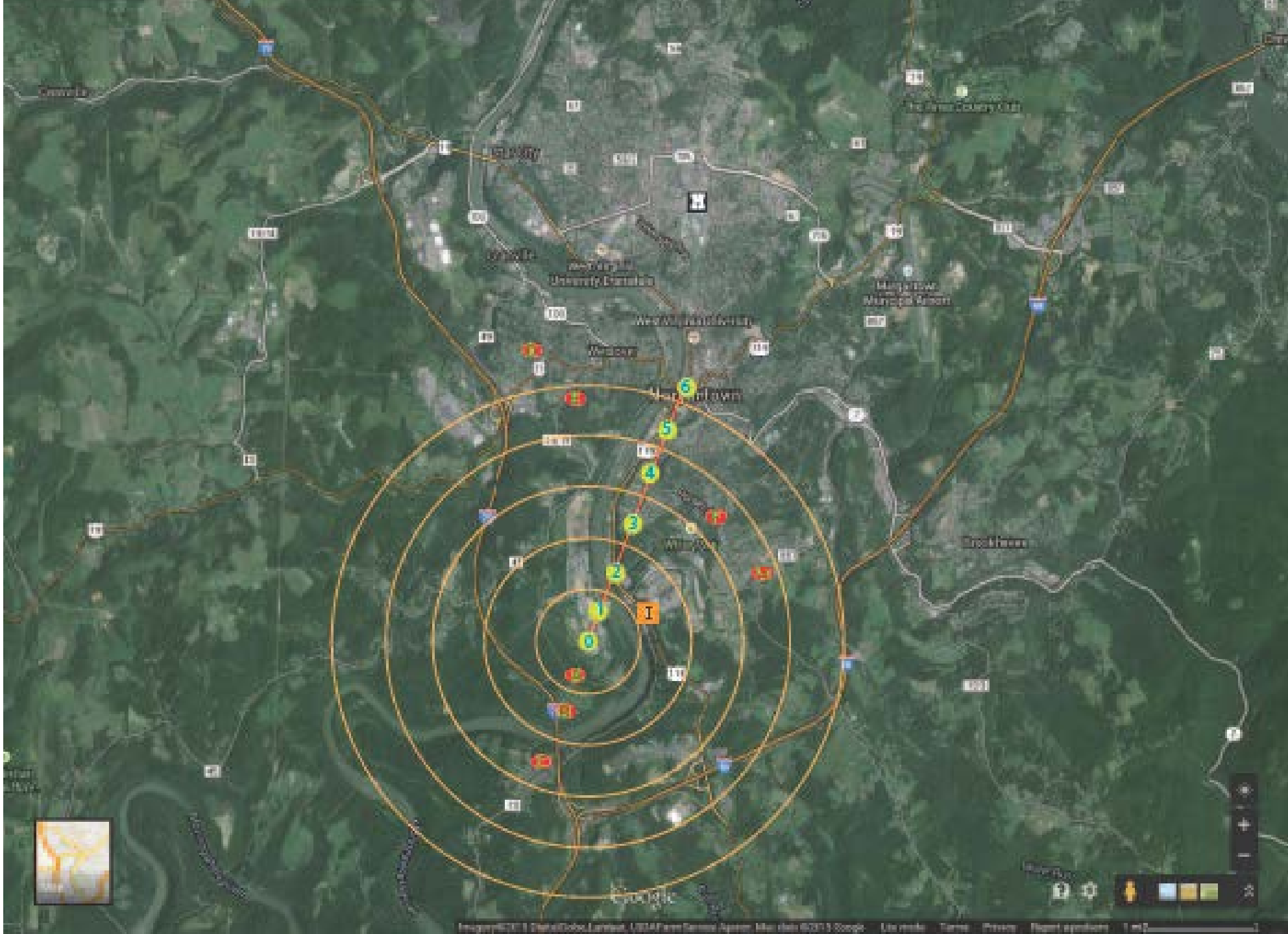
# Air and Noise Sampling

M.McCawley

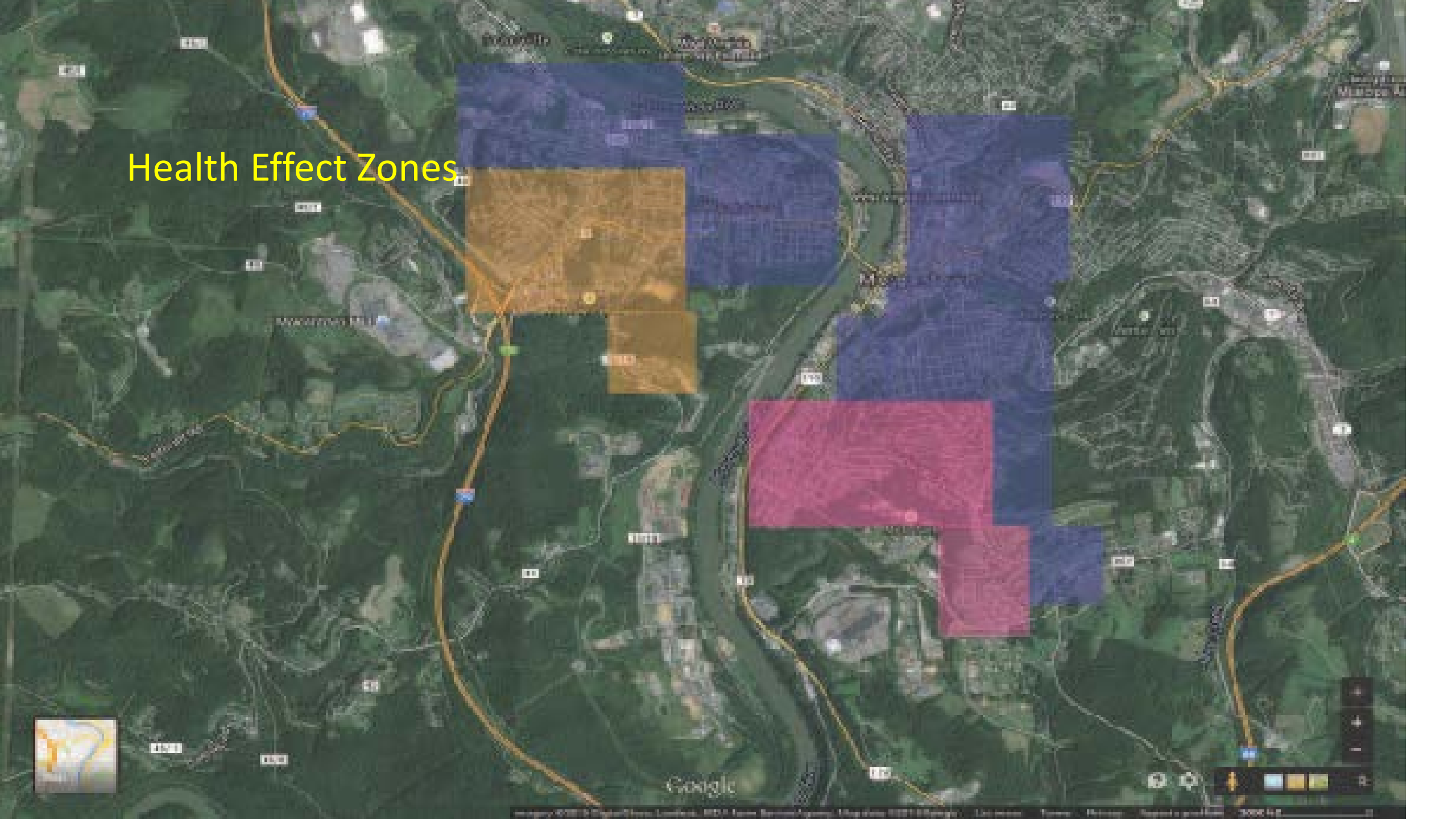
School of Public Health







# Health Effect Zones



# Noise Monitoring

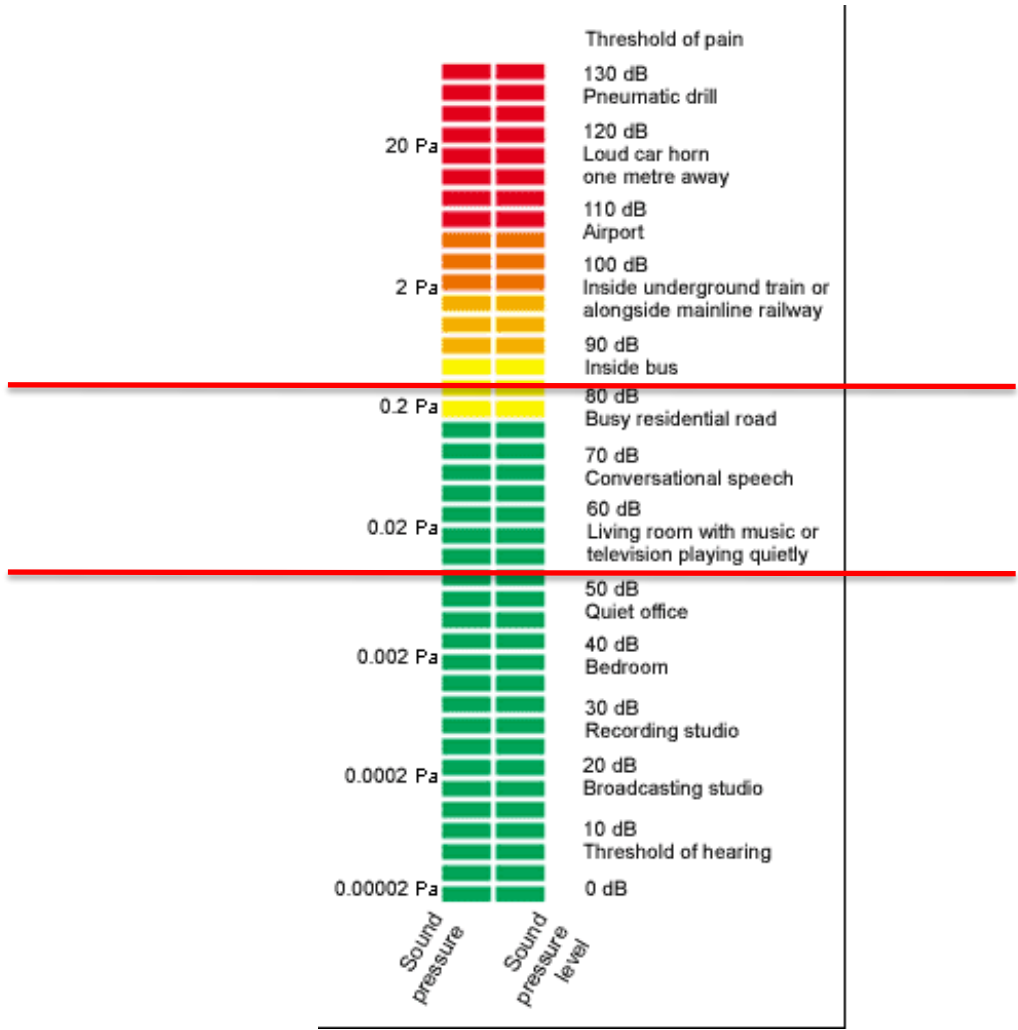
Area

Personal\*

Brandon C. Takacs, CSHM

[brandon.takacs@mail.wvu.edu](mailto:brandon.takacs@mail.wvu.edu)





Occupational Hearing Loss – 8 hours

Environmental Noise Limits – 24 hours

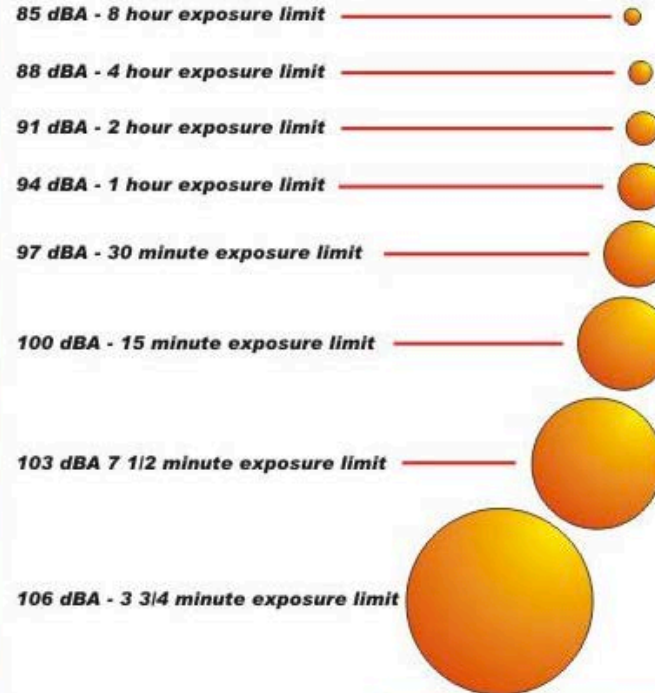
- worker noise exposures should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss.



## HOW TO "LOOK" AT NOISE

INTENSITY COMPARISONS WITH NIOSH  
RECOMMENDED PERMISSIBLE EXPOSURE TIME

Note: For every 3dB the energy doubles.



### NOTE:

Noise Levels for the Following:

- 91dB - Orbital Sander
- 96 dB - Router
- 101 dB - Circular Saw



# Examples of noise levels measured near oil and gas sites

- West Virginia (2013) one-hour noise measurements at several of 7 well pads exceeded 55 dB annual 24 hour average
- New York (2011) up to 102 dBA during fracking at 50-500 feet
- New York (2011) 72 to 90 dBA during fracking at 250-2,000 feet
- New York (2011) 44 to 68 dBA during drilling at 250-2,000 feet
- Fort Worth (2006) 102 dBA rig generator at 10 feet;
- Fort Worth (2006) 71-79 dBA drilling noise at 200 feet from well

# Area Noise Monitoring



Noise  
Monitors

- Pad
- Perimeter



Power  
Source



# Equipment – protective case, mic stand, telescoping stand, power source





# Site Locations

## Available stations

[Larson Davis - Provo - USA SN 1549](#)

[Dalimar Instruments Inc - Quebec - Canada SN 1001](#)

[GROM Acustica Vibracao - Rio de Janeiro - Brazil SN 2487](#)

[PCB - Farmington Hills - Michigan, USA SN 1184](#)

[Dalimar Instruments Inc - Toronto - Ontario, Canada SN 2409](#)

[PCB Piezotronics - Provo - Utah, USA SN 2557](#)

[PCB Piezotronics - Innsbruck - Austria SN 3242](#)

[PCB Piezotronics - Farmington Hills - Michigan, USA SN 2559](#)

[Dalimar Instruments Inc - Calgary, Alberta - Canada SN 2780](#)

[Dalimar Instruments Inc - Sidney, British Columbia - Canada SN 2569](#)

[Thermo Fisher - Scoresby - Australia SN 2879](#)

[PCB - Depew, NY - USA SN 2247](#)

[PCB Piezotronics - Grosse Ile - Michigan, USA SN 1038](#)

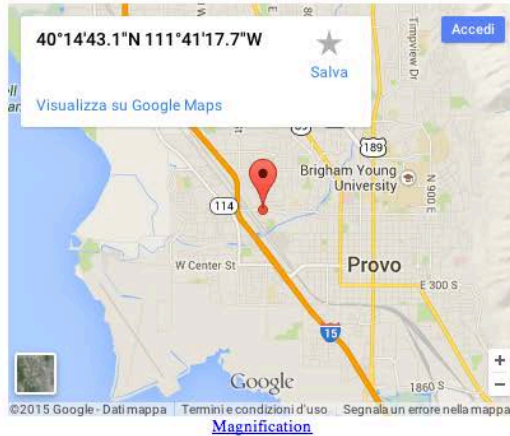
[Larson Davis Engineering - Provo - UT, USA SN 2523](#)

[PCB Europe / Synotech - Huckelhoven - Germany SN 1722](#)

# Instrument Location

Sound Level Meter: 831 S/N: 2523

Larson Davis Stations 10 Minutes 1 Hour 1 Day Weekly Monthly Event



Location : Provo

Larson Davis Engineering

UT, USA

Coordinate : 40.245296, -111.688256

Connection Type : Lan

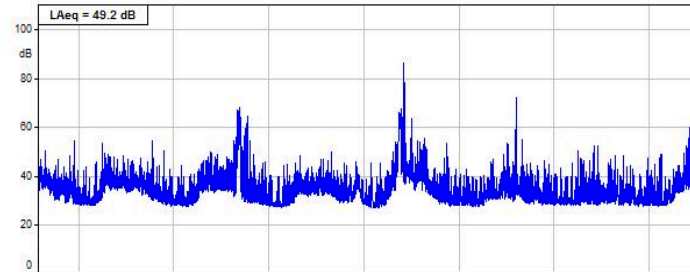
# Data Output – Decibels ( $\text{dB}_C$ , $\text{dB}_A$ , peak)

Larson Davis   Main   10 Minutes   1 Hour   1 Day   Monthly   Event

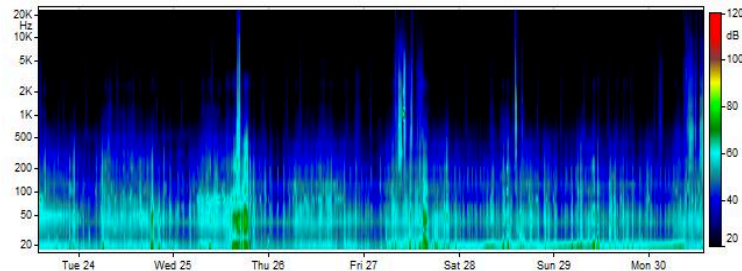
## Measured levels during the last week

Calgary, Alberta   Dalimar Instruments Inc   Canada

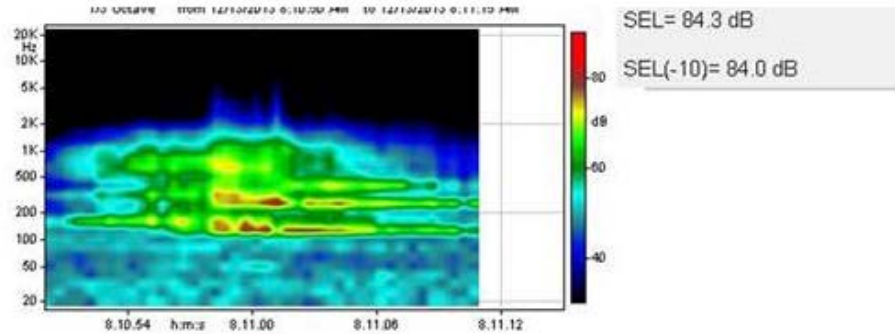
L<sub>Aeq,1m</sub> from 4/23/2012 1:40:00 PM to 4/30/2012 1:40:00 PM



1/3 Octave from 4/23/2012 1:40:00 PM to 4/30/2012 1:40:00 PM



# Event



# Data Output – Decibels ( $\text{dB}_A$ , peak)

