

Welcome to a discussion with the Oregon Department of Environmental Quality and Oregon Health Authority

An informational summary of ENTEK's health risk assessment

Presentation followed by Q&A

5:30-6:30pm

Please contact cleanerair@deq.oregon.gov

Using Zoom



Hear the audio through your computer or by calling the conference call line.

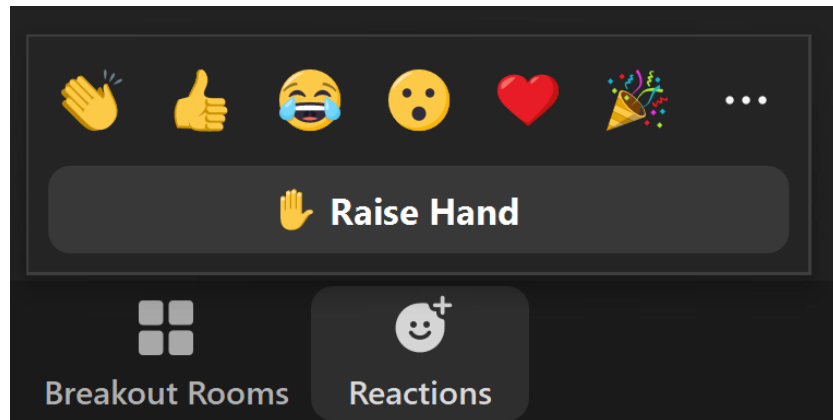


Dial: 669-444-9171 or 888-475-4499

Enter meeting ID: 826 1103 4083

Enter passcode: 564689

How to raise hand



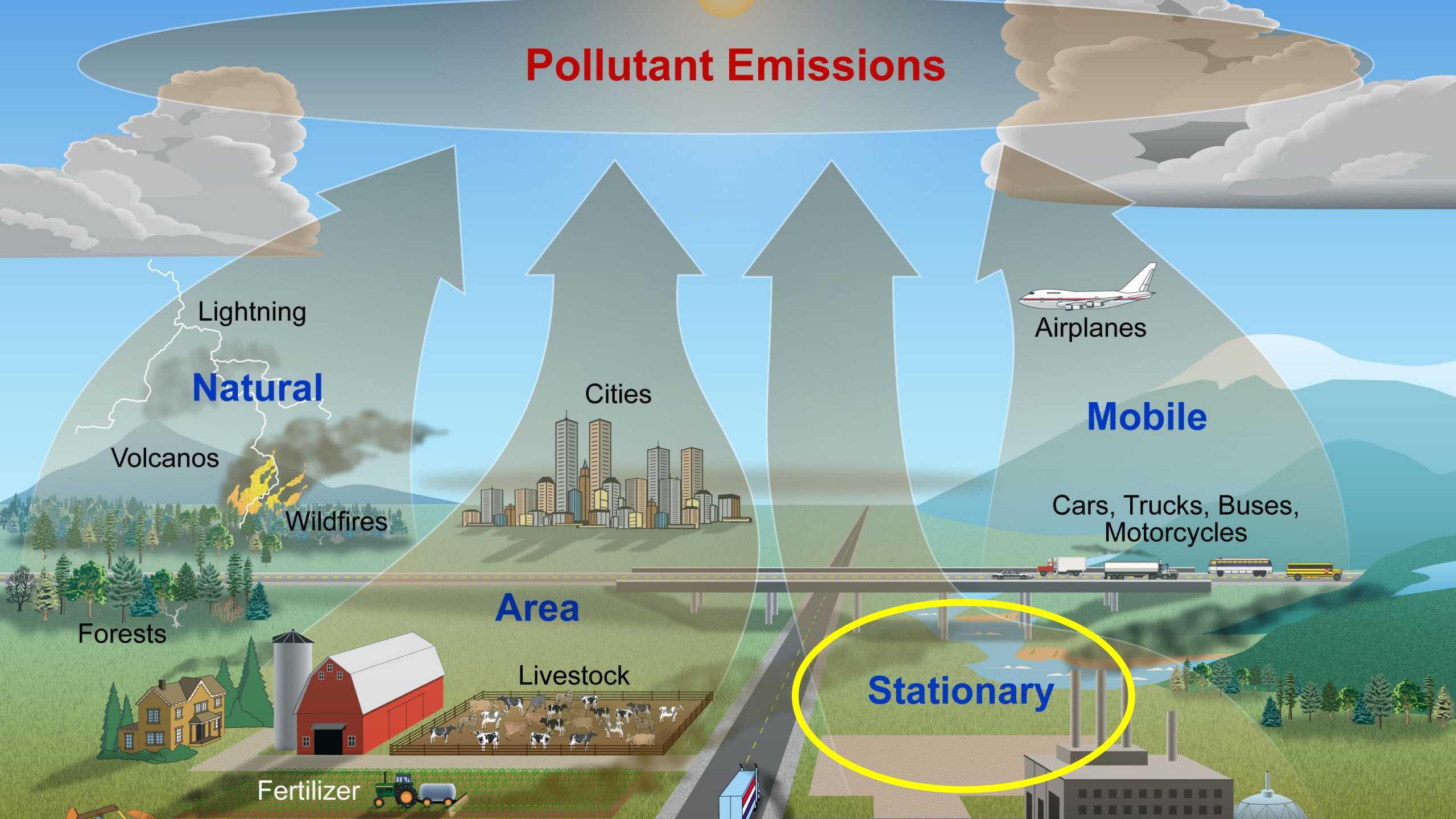
Cleaner Air Oregon

A summary of ENTEK's health risk assessment

November 30, 2023

Lebanon, Oregon

Pollutant Emissions



Lightning

Natural

Volcanos

Wildfires

Cities

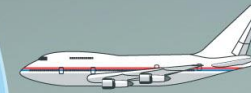


Area

Livestock



Fertilizer



Airplanes

Mobile

Cars, Trucks, Buses,
Motorcycles



Stationary



How the CAO program protects health



**Report toxic air
contaminants**

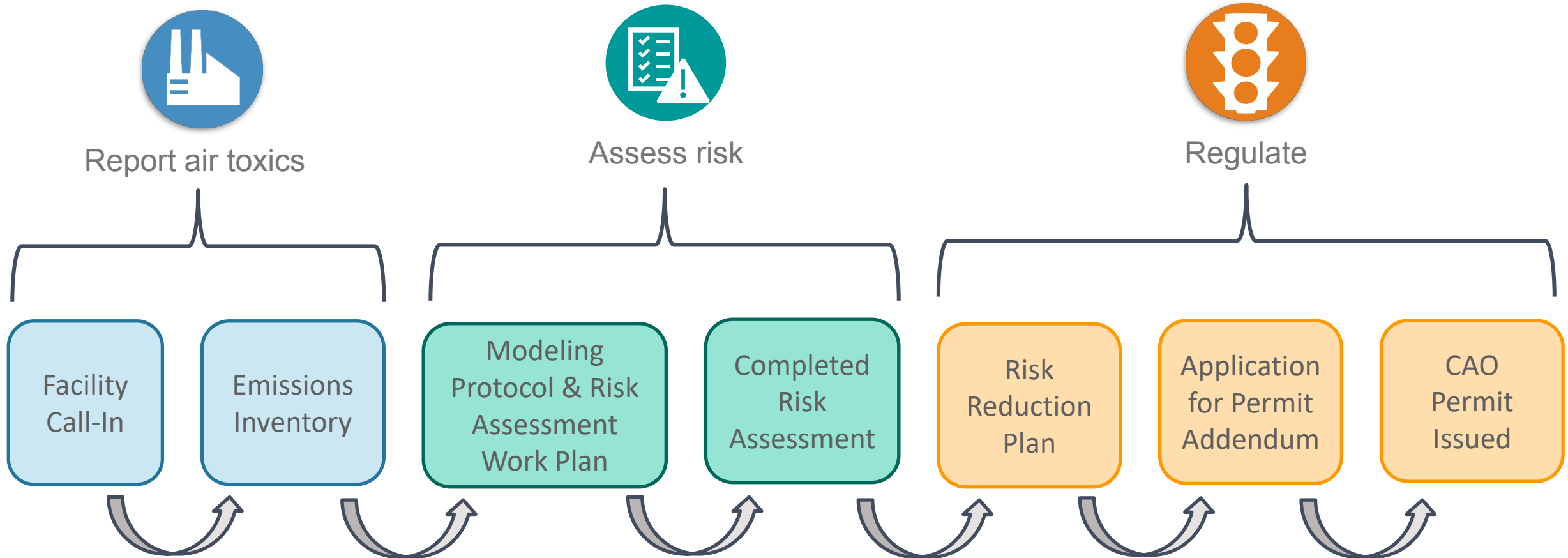


Assess risk



**Regulate to
reduce risk**

Steps involved in the CAO process



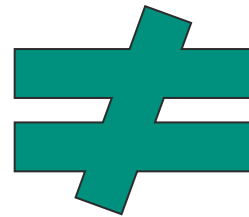
What is health risk?

How does CAO assess health risk?

Health risks vs. outcomes

Health Risk

Chance or probability of health problem happening



Health Outcome

Health problems that have happened

Key information for risk assessments

Toxicity

How harmful is a contaminant if someone's exposed to it?

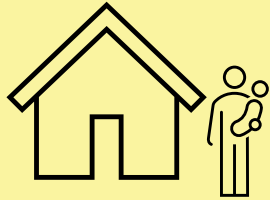


Exposure

How often and for how long is someone exposed to a contaminant?

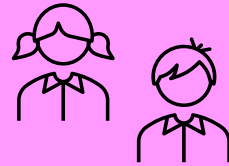
Locations where CAO risk is calculated

Chronic Exposure – Long Period of Time



Persons in Home

- 24 hours per day
- 365 days per year
- 70 years



Child at School or Child Care

- 8 hours per day
- 250 days per year
- 12 years



Worker

- 8 hours per day
- 250 days per year
- 25 years

Locations where CAO risk is calculated

Acute Exposure – Short Period of Time



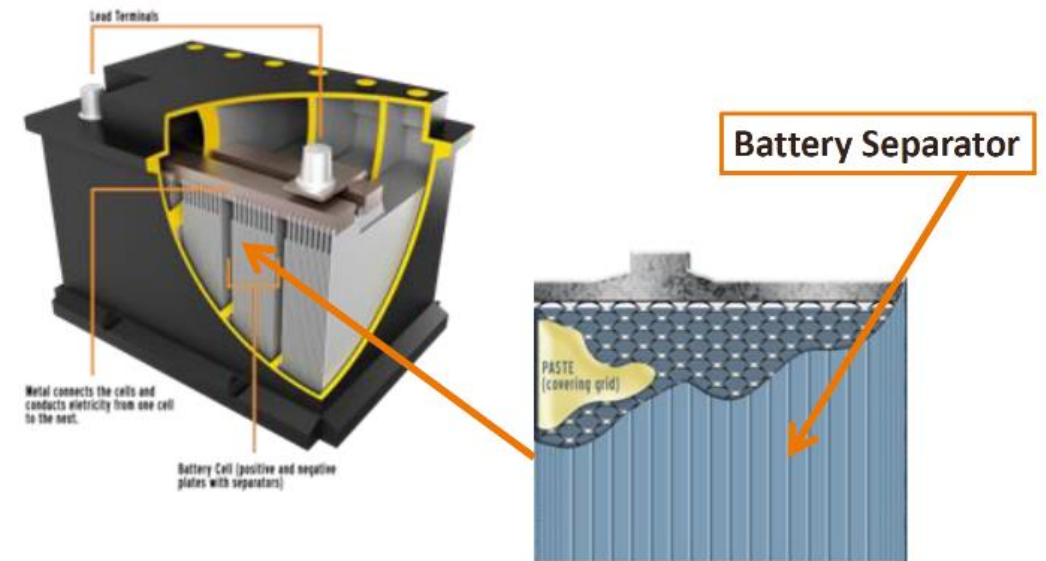
**Locations where
a person can
spend several
hours up to a day**

ENTEK's Approved Risk Assessment and Results

Pollutant of concern – TCE

- Trichloroethylene (TCE) is required for manufacture of battery separators
- Production facility emissions are controlled by carbon beds and emitted from a stack
- Warehouse emissions are emitted from a stack
- TCE fugitive emissions occur from service equipment leaks

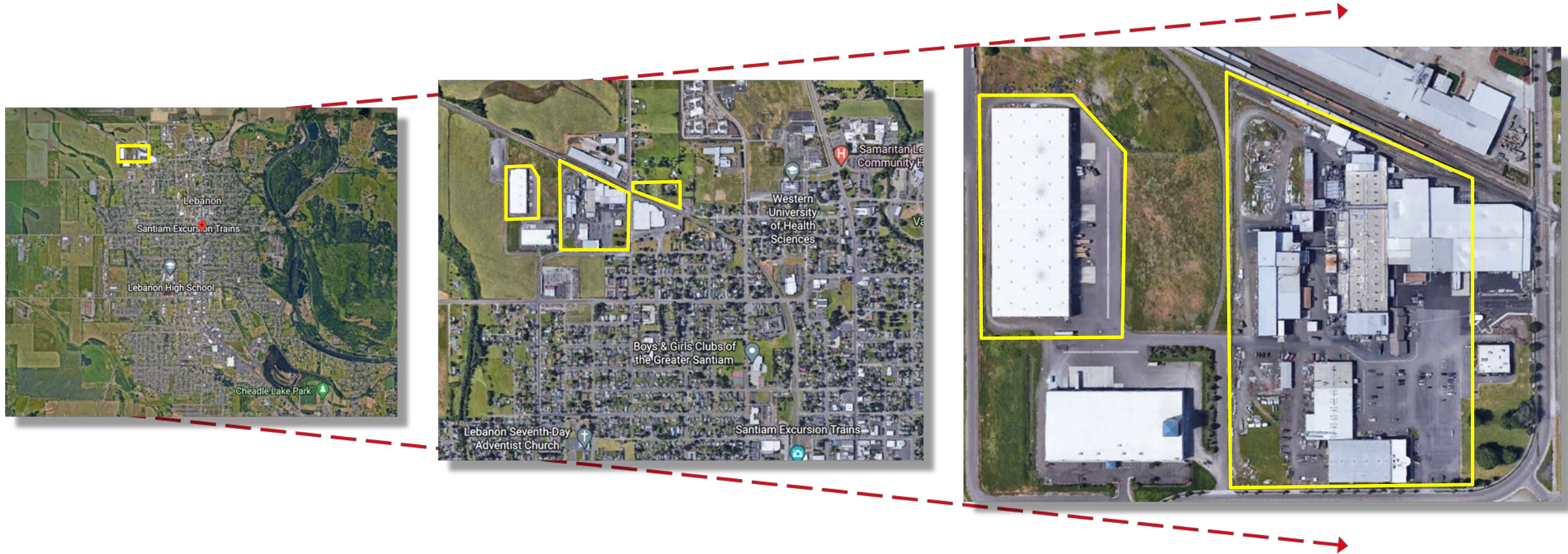
Vehicle Battery – Where does the separator go?



Facility improvements

- Production Facility
 - Increased stack height to disperse air emissions
 - Permanent Total Enclosure (PTE) to capture fugitive emissions
- Warehouse
 - Installed fan system to capture fugitive emissions and meet PTE criteria
 - Built 140-foot stack to disperse captured air emissions
- TCE Service Equipment
 - Identified and labelled all components that handle TCE
 - Revised facility Leak Detection and Repair program (LDAR)

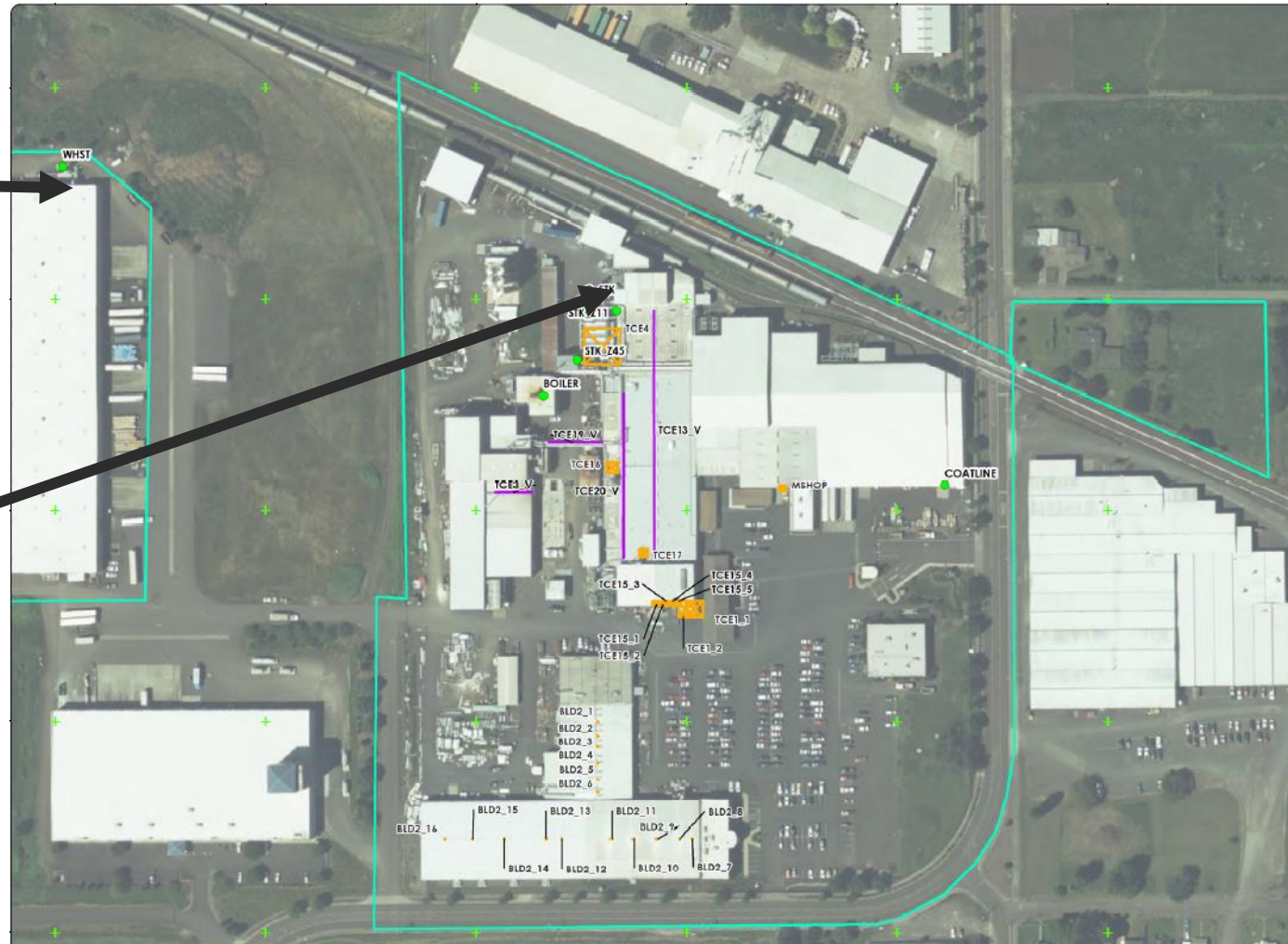
Facility location



Emission release points

Warehouse Stack

Production Facility Stack

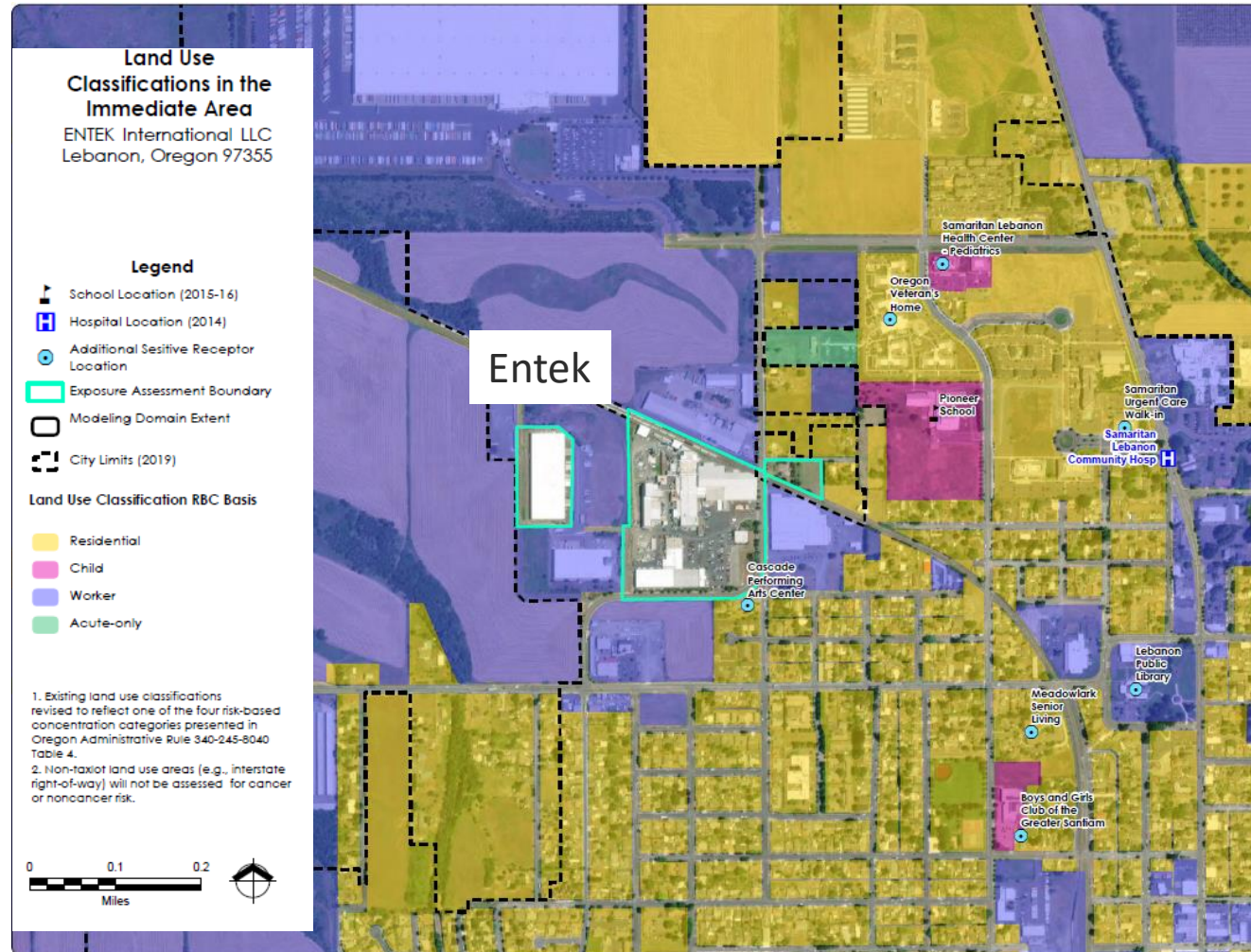


Emission Source Locations
 ENTEK International LLC
 Lebanon, Oregon 97355

- Legend**
- + UTM Grid Guideline
 - Point Source
 - Exposure Assessment Boundary
 - Volume Source
 - Line Source



Map of exposure locations

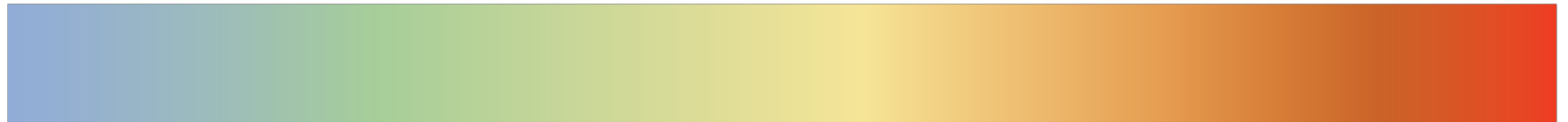


CAO Risk Action Levels

Additional actions required as health risk increases 

Low Risk

High Risk



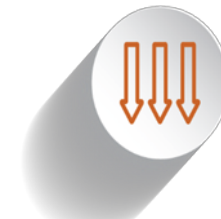
Source permit level



Community engagement level



Best available control technology level



Risk reduction level

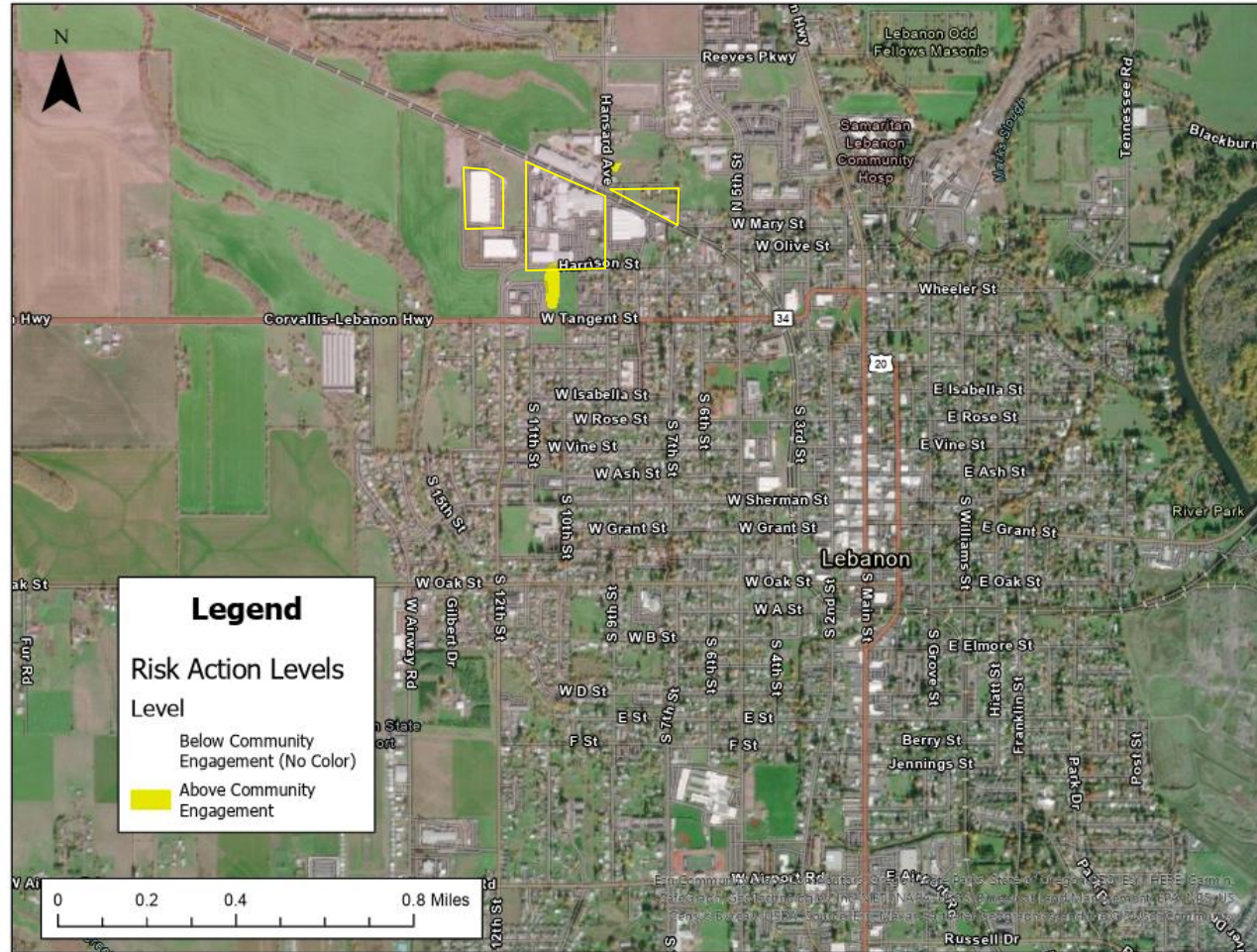


Immediate curtailment level

*ENTEK's
Chronic Risk
[Annual]*

*ENTEK's
Acute Risk
[24-hour]*

Health risk map from acute exposure



Health risk map from acute exposure



What do these results mean for my health?

Potential health effects from breathing harmful levels of TCE

Breathing TCE may cause health issues such as

- Headaches and dizziness from moderate exposure levels
- Nerve damage in face, liver damage, and kidney damage from high exposure levels
- Kidney cancer
- Heart issues in fetuses from low levels if exposure occurs at a certain time in development

Agency for Toxic Substances and
Disease Registry (ATSDR) 2019

How CAO regulates noncancer health risk

We use a Hazard Index calculation to determine whether health effects are possible.

Hazard Index
less than
or equal to

1

Health effects are not expected

Hazard Index
greater than

1

Health effects are possible, but not certain

Are health effects expected near ENTEK?

Hazard Index
less than
or equal to

1

Health effects are not expected

At all locations where we calculated risk from **long periods of time (chronic)**

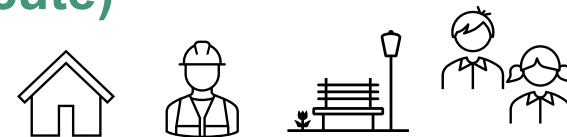


Hazard Index
greater than

1

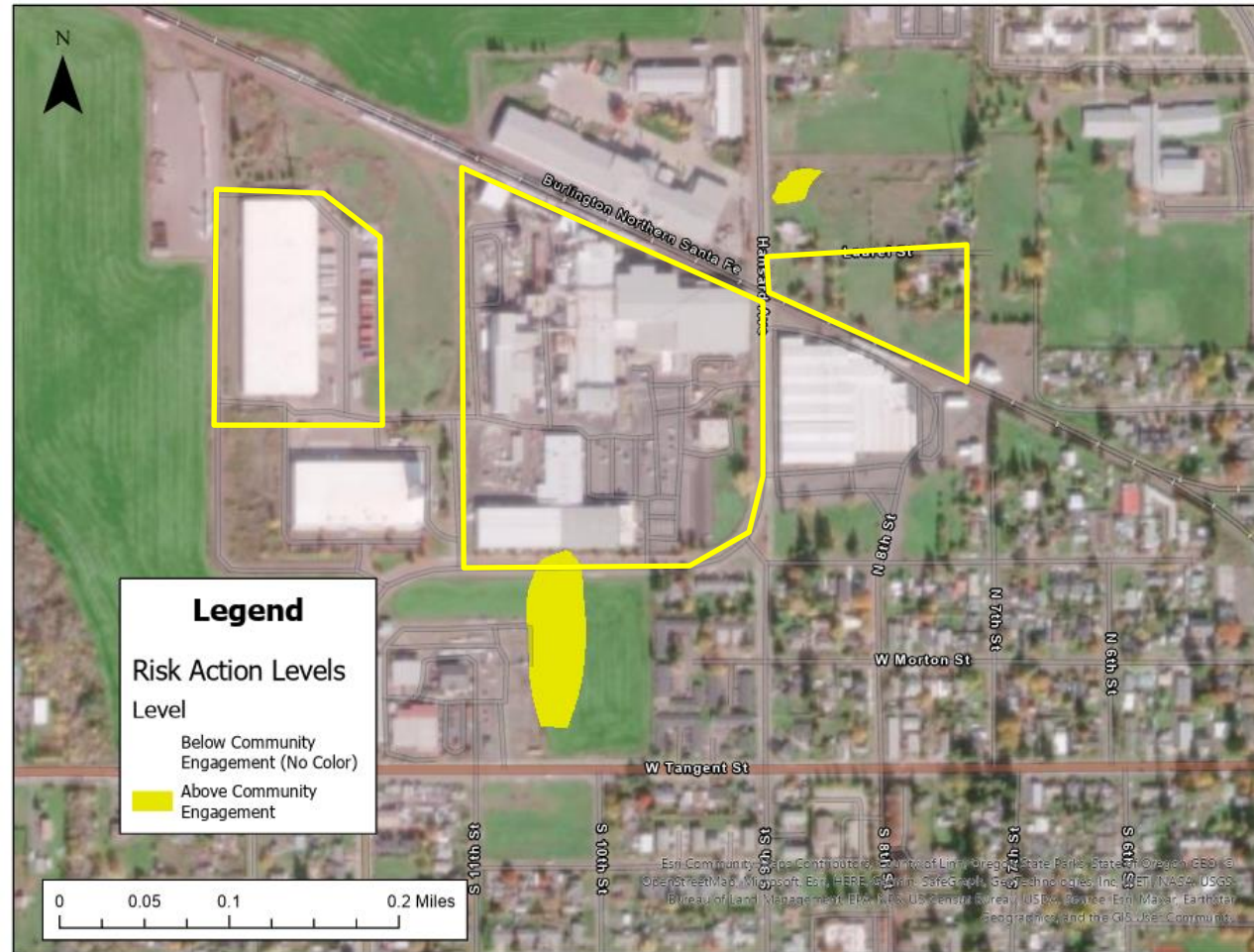
Health effects are possible, but not certain

At some locations where we calculated risk from **short-term periods of time (acute)**

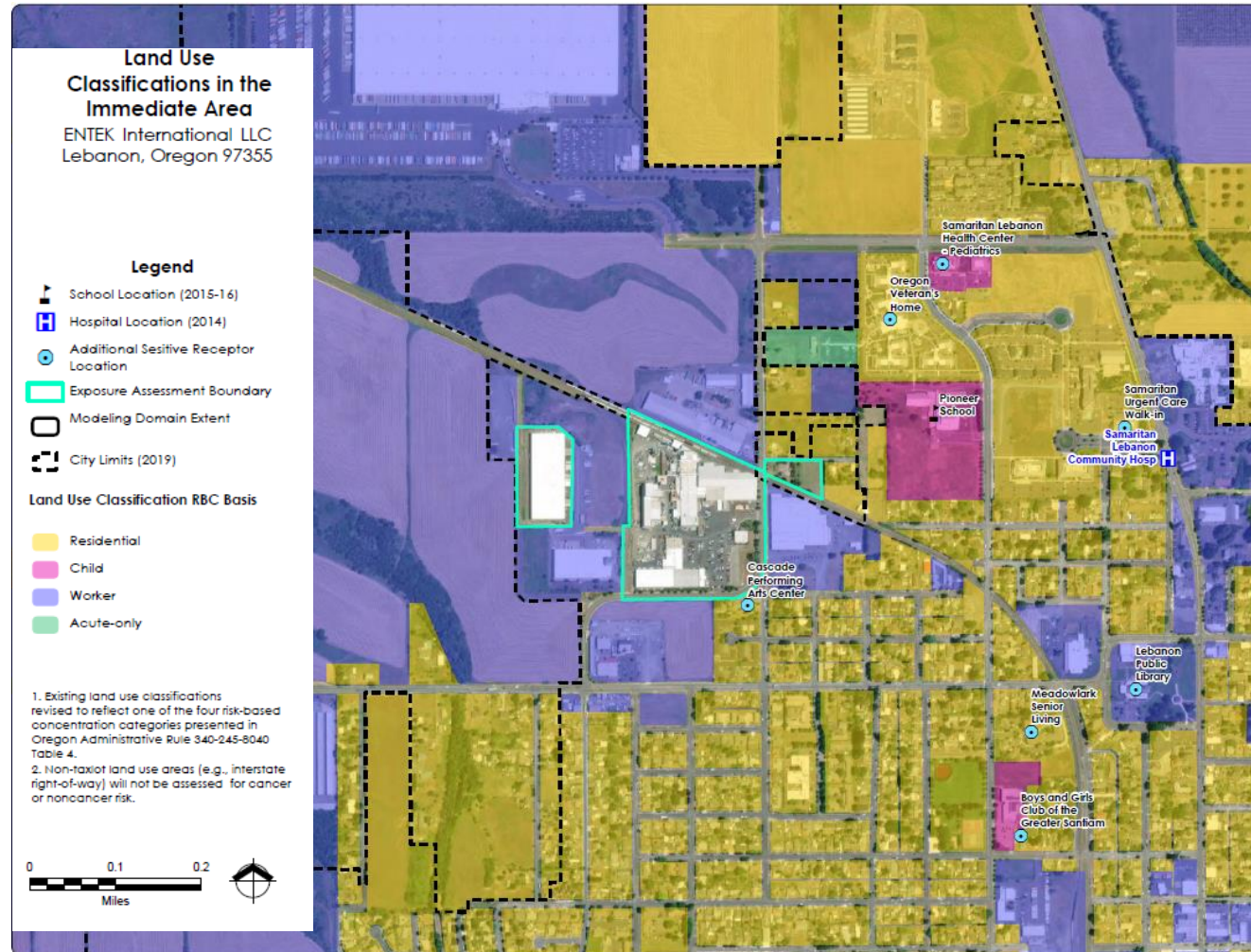


**Hazard
Index = 2**

Health risk map from acute exposure

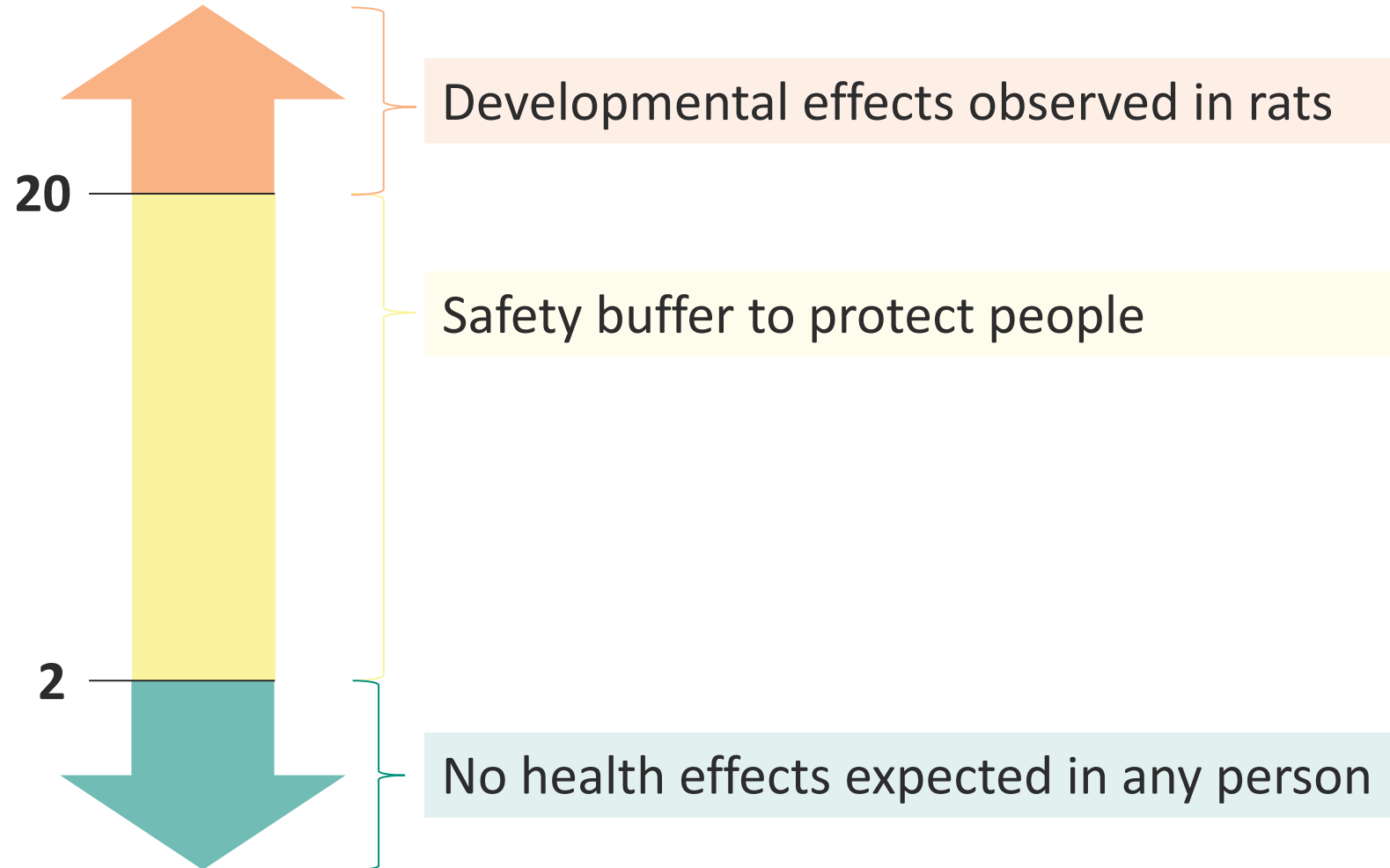


Map of exposure locations



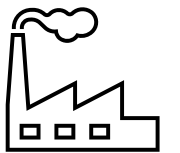
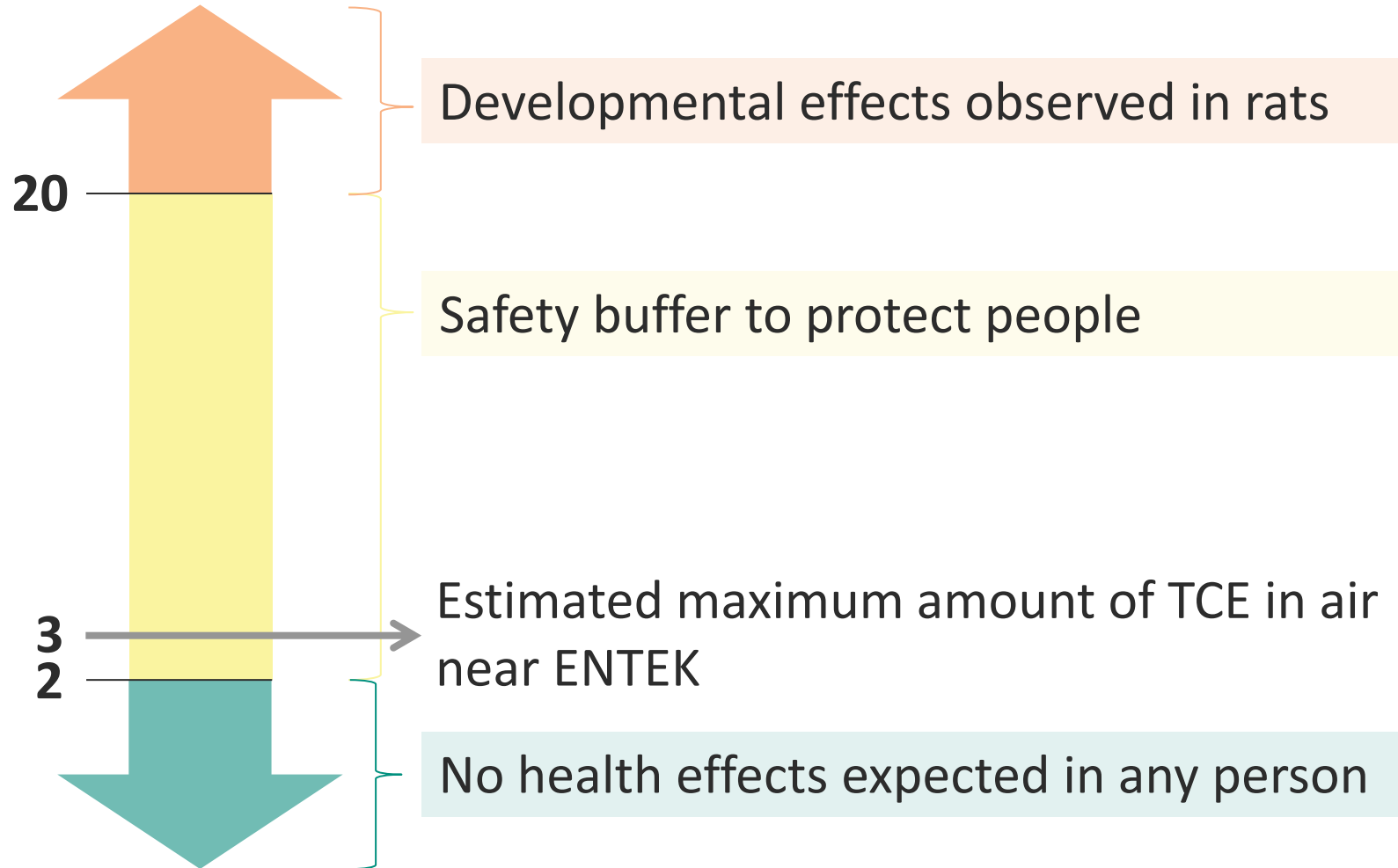
In-depth analysis of acute health risk from TCE

Amount of TCE
in Air ($\mu\text{g}/\text{m}^3$)

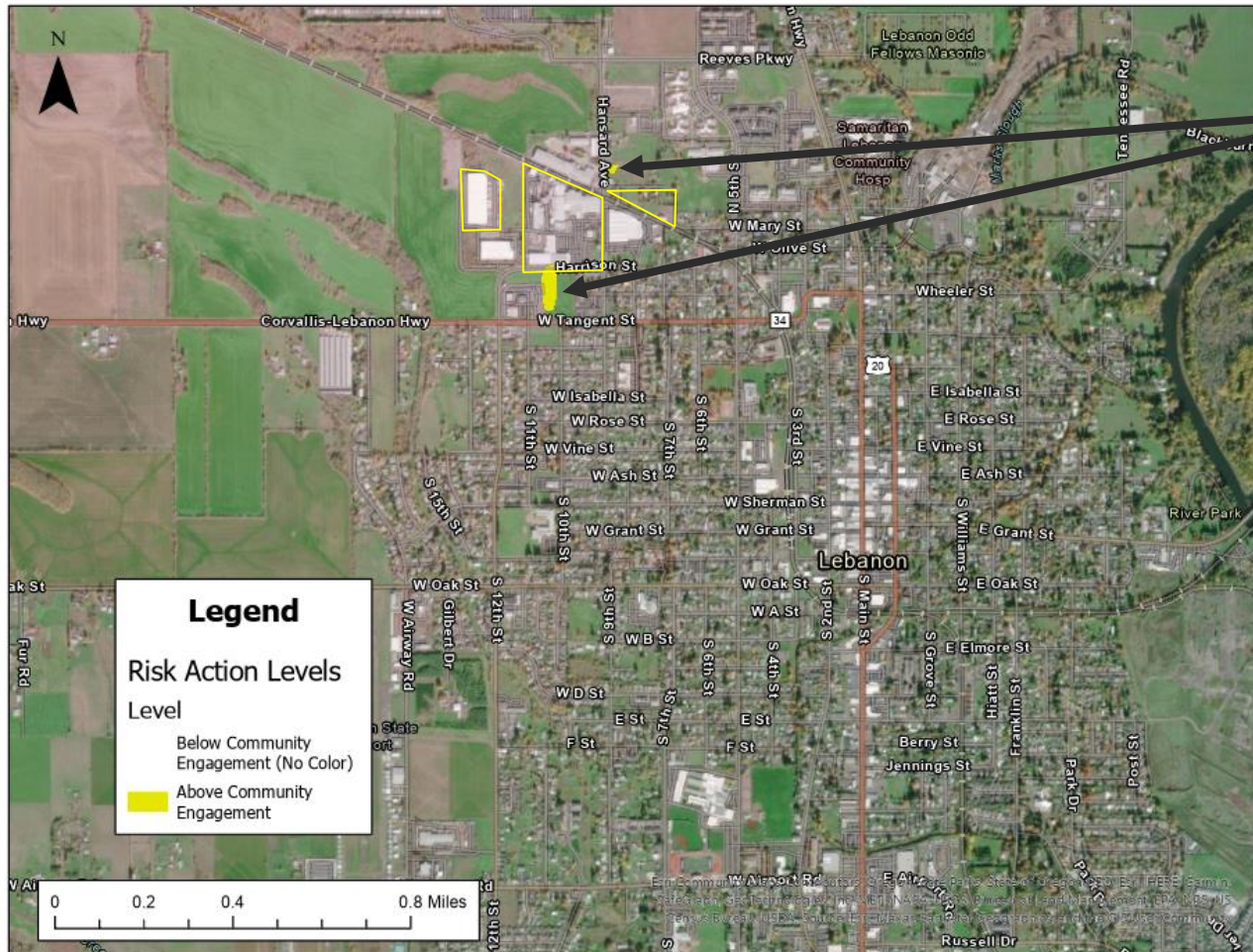


In-depth analysis of acute health risk from ENTEK

Amount of TCE
in Air ($\mu\text{g}/\text{m}^3$)



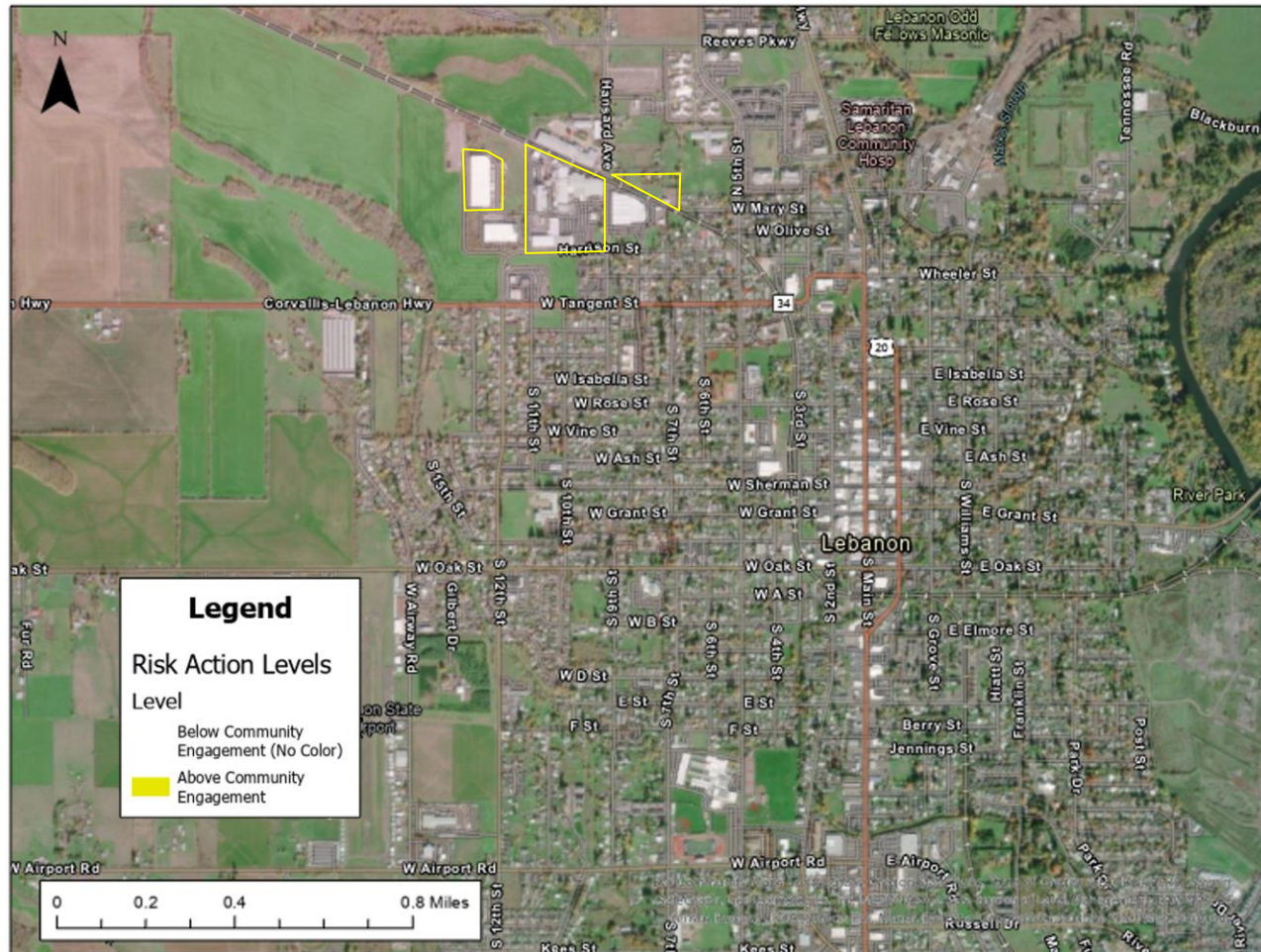
Acute risk assessment conclusions



Yellow areas
Low risk of health effects from acute (short term) exposure

All other areas
Health effects are **not** expected from acute (short term) exposure

Chronic risk assessment conclusions

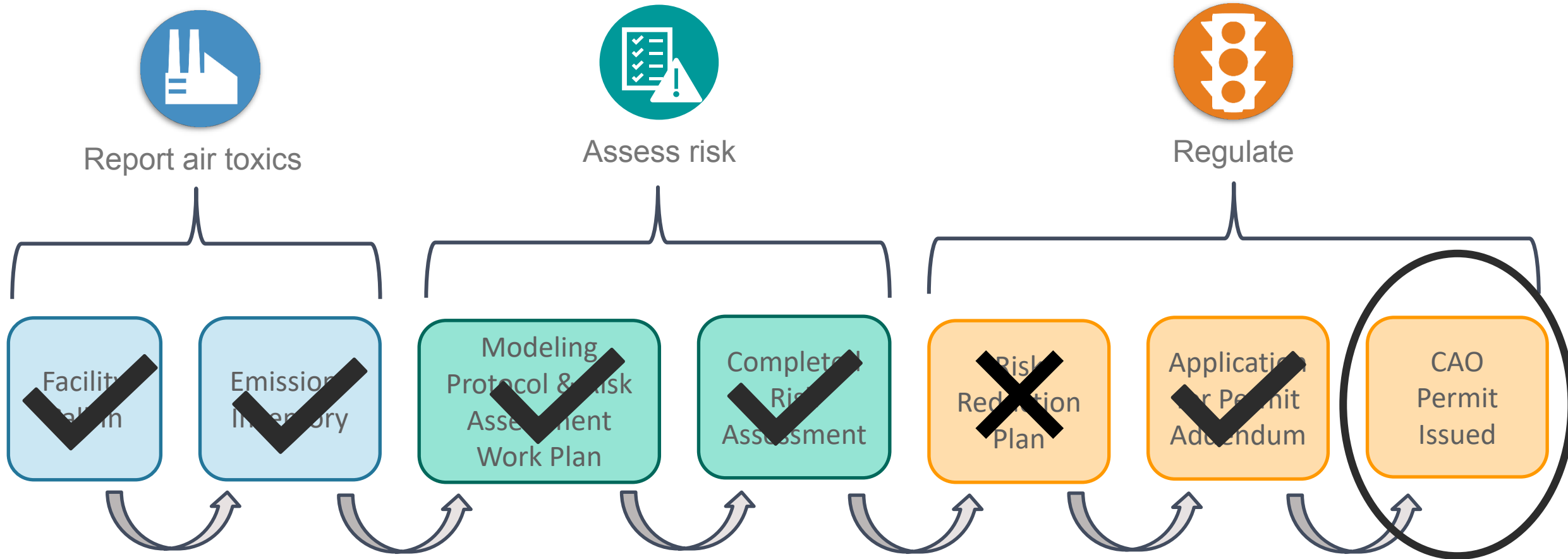


All areas

- Noncancer health effects are **not** expected from chronic (long term) exposure
- Cancer risk is **very low** from chronic exposure

ENTEK's draft permit conditions & next steps

Steps involved in the CAO process



Permit conditions

- I. Stack emission limits from production and warehouse facilities
 - Emission limits on TCE emissions
 - Continuous Emissions Monitoring System (CEMS)
 - Regular compliance testing of CEMS
- II. Fugitive emissions
 - Leak detection and repair program
 - Monitoring to ensure permanent and total enclosure

Next steps

- Process – what happens next with ENTEK's permit?
- Comments – how the public can submit comments to DEQ
- Resources – where public can go to receive info about health questions, CAO questions, other forms of support, etc.
 - **DEQ & OHA staff available after this presentation to answer questions one to one*

Thank you!

Questions?



More info: ordeq.org/CAO-ENTEK

Contact us at cleanerair@deq.oregon.gov