

### BETTER PERMITS MAKE BETTER EMISSION INVENTORIES

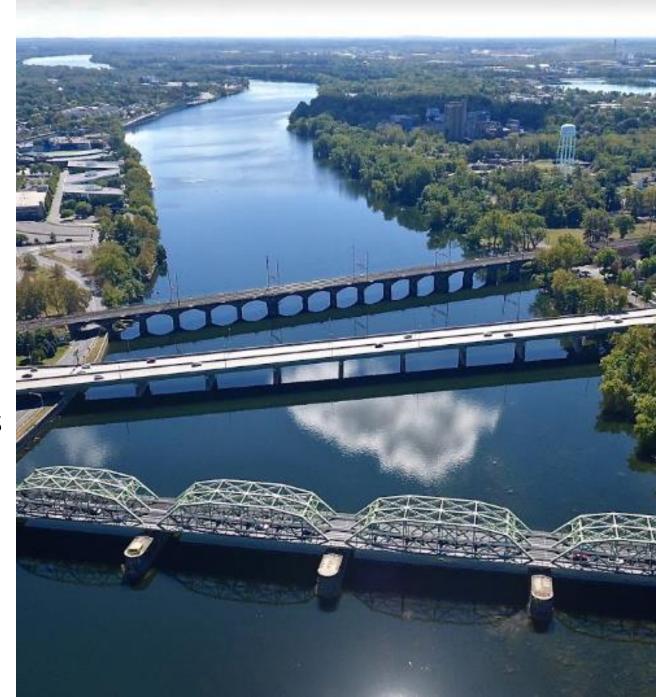
Warren Smith | K2 Environmental Consulting 2019 International Emission Inventory Conference



## **FULL CIRCLE**

ESSENTIAL ELEMENTS

- Good Rules
- Complete Permits
- Complete Emissions Statements
- Complete Emissions Inventories







#### **STRUCTURAL ISSUES**

- Equipment Details Accurate
- Emission Calculations
  - Based on operating time, or
  - Based on fuel use
- Logical, with one interpretation
- Worst Case vs Actual Emissions



#### **OPERATING SCENARIOS**

- Often Full Load is assumed
- More than one emission factor
- We want Actual Emissions
- Vapor Pressures
  - Higher for some crude oils
  - Lower now for many inks



## **Defining the Sources**

#### Equipment Issues

- Natural Gas Engines, 2-Stroke/4-Stroke, Rich Burn/Lean Burn
- Insignificant Equipment:
  - Boilers < 300,000 BTU/hr
  - Boilers 300,000 BTU/hr to 1 Million BTU/hr
- Exempt Equipment

#### **Fugitives**

- Roads left out of permits
- Material Handling



### **Accurate Emission Statements**

#### Pollutant Issues

- SO2
- Formaldehyde
- Material Handling Particulates
- Reporting Lead Emissions

- Exempt VOCs
- Ammonia
- Methane
- HAPS not in Permits

#### Most Unexpected Finds

• From 20 years of reviewing Emission Statements





#### **WARREN SMITH**

+1 (267) 394-1329

# **THANKYOU**

HTTP://WWW.K2EC.NET

