

# Yonkers Odor Control Study

Yonkers Joint Water Resource Recovery Facility

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**CDM  
Smith**

# Introductions

## CDM Smith Presenters

- Christopher Korzenko, P.E. – Project Director
- William Nylic, P.E. – Project Manager

## Company Background

- Established in 1947
- More than 5,000 employees worldwide
- Services include consulting, engineering, construction, and operations
- Solutions in water, environment, transportation, energy, and facilities
- Experienced in the design and evaluation of odor control systems
  - Odor Source Surveys/Emissions Modeling/Dispersion Modeling
  - Technology Assessments
  - Process Cover Design/Odor Control Design
  - Construction Services

# Purpose of Odor Control Study

## Goal

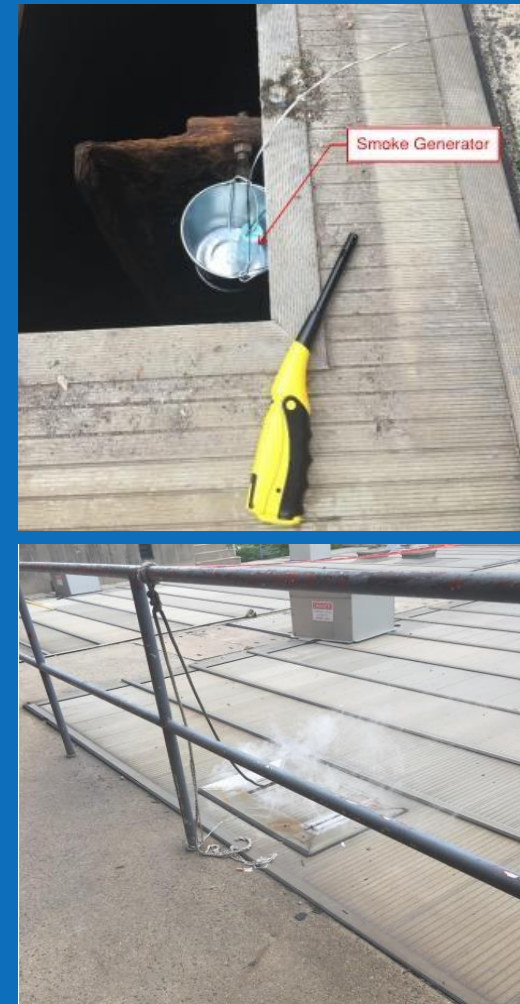
- Identify sources of odors and develop recommendations to reduce offsite impacts

## Areas of Focus

- Odors associated with taking tanks out of service
- Performance of Existing Odor Control Equipment
- Aeration Tank Odor Control
- Flare Operation
- Sludge Loading Bay

# Completed Tasks – Data Collection

- Preliminary Data Collection
  - Collaborative Review of Existing Data with Plant Staff
    - Interviews
    - Plant operations data
- Supplemental Data Collection
  - Liquid & Vapor Phase Data (sampling)
- Smoke Testing of Primary Covers



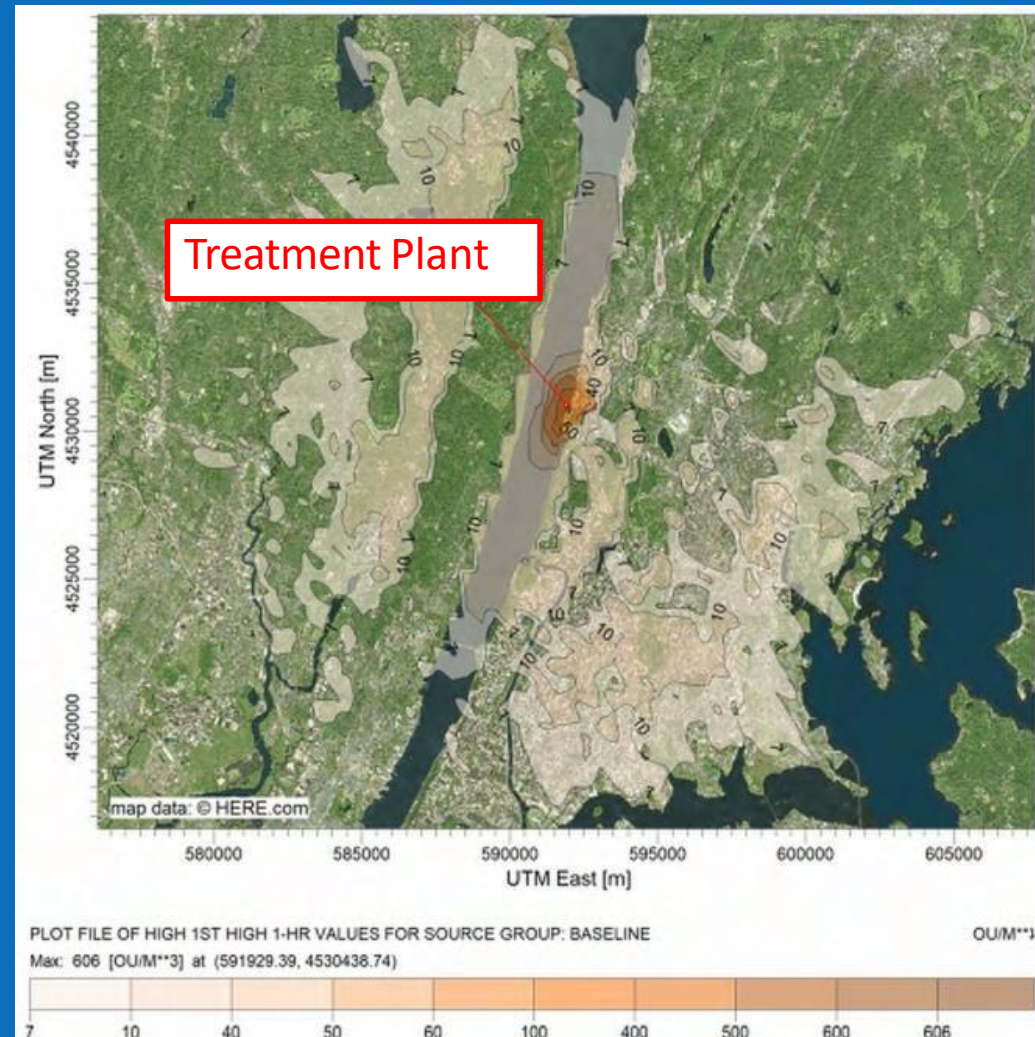
# Completed Tasks - Scrubber Inspections

- What is inspected?
  - Exterior
  - Interior
  - Anchors
  - Supports
  - Ladders
  - Accessways
  - Connected Piping
- Methods
  - Visual Observations
  - Barcol Hardness Tester
    - Ranges 0-100



# Completed Tasks - Modeling Results

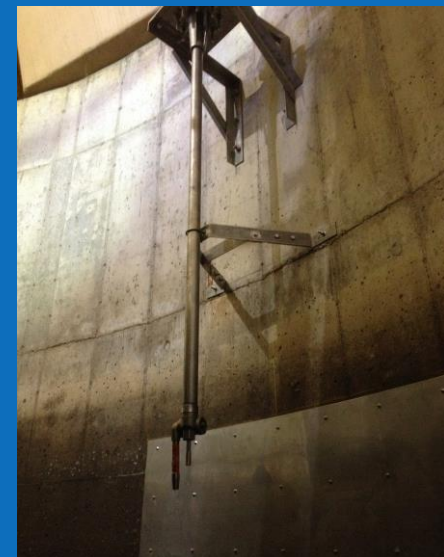
- Updated model using
  - Five Years of Wind Data
  - Collected Sampling Data
- Results
  - Highest Frequency Sources
    - Primary Settling Tank Scrubbers and Aeration Tanks
  - Highest Strength Sources
    - Aeration Tanks and Primary Setting Tank Scrubbers





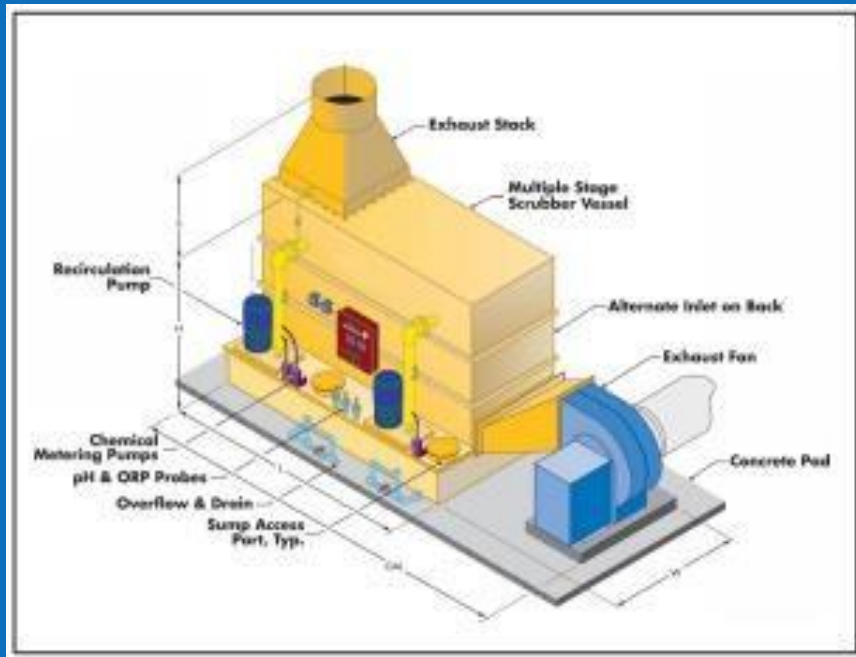
# Recommendations – Near Term

- Near Term
  - Recoat the exterior of Primary Thickener Scrubbers 2, 3, and 4
  - Address cover leaks identified with smoke testing
  - Install registers on the Sludge Loading Bay Supply Ducts
  - Install automated washdown stations
  - Retrofit existing Primary Settling Tank Scrubbers with packed media to increase efficiency



# Recommendations – Long Term

- Long Term – After completion of Near Term recommendations, collect additional samples and revise the modeling in order to evaluate the need to perform the following:
  - Replace Primary Settling Tank Scrubbers A, B, and C
  - Cover Aeration Tanks and add odor control systems to treat ventilated air





Questions?