

# Update on Consent Decree Activities

Citizens Coordinating Council Meeting

January 18, 2006

# Activities Planned for 2006

- 1.5 Mile Reach river remediation (EPA)
- Floodplains adjacent to 1.5 Mile Reach
- Lyman Street commercial properties
- Oxbows J&K & Oxbows A&C
- Newell Street commercial properties
- Newell II
- Additional building demolition on GE property
- 1-acre pilot capping project at Silver Lake





# I.5 Mile Reach

East Street

Lyman Street

Lyman Street  
Commercial Properties

Oxbows A&C

Elm Street

Dawes Avenue

Pomeroy Avenue

GE Floodplain Remediation

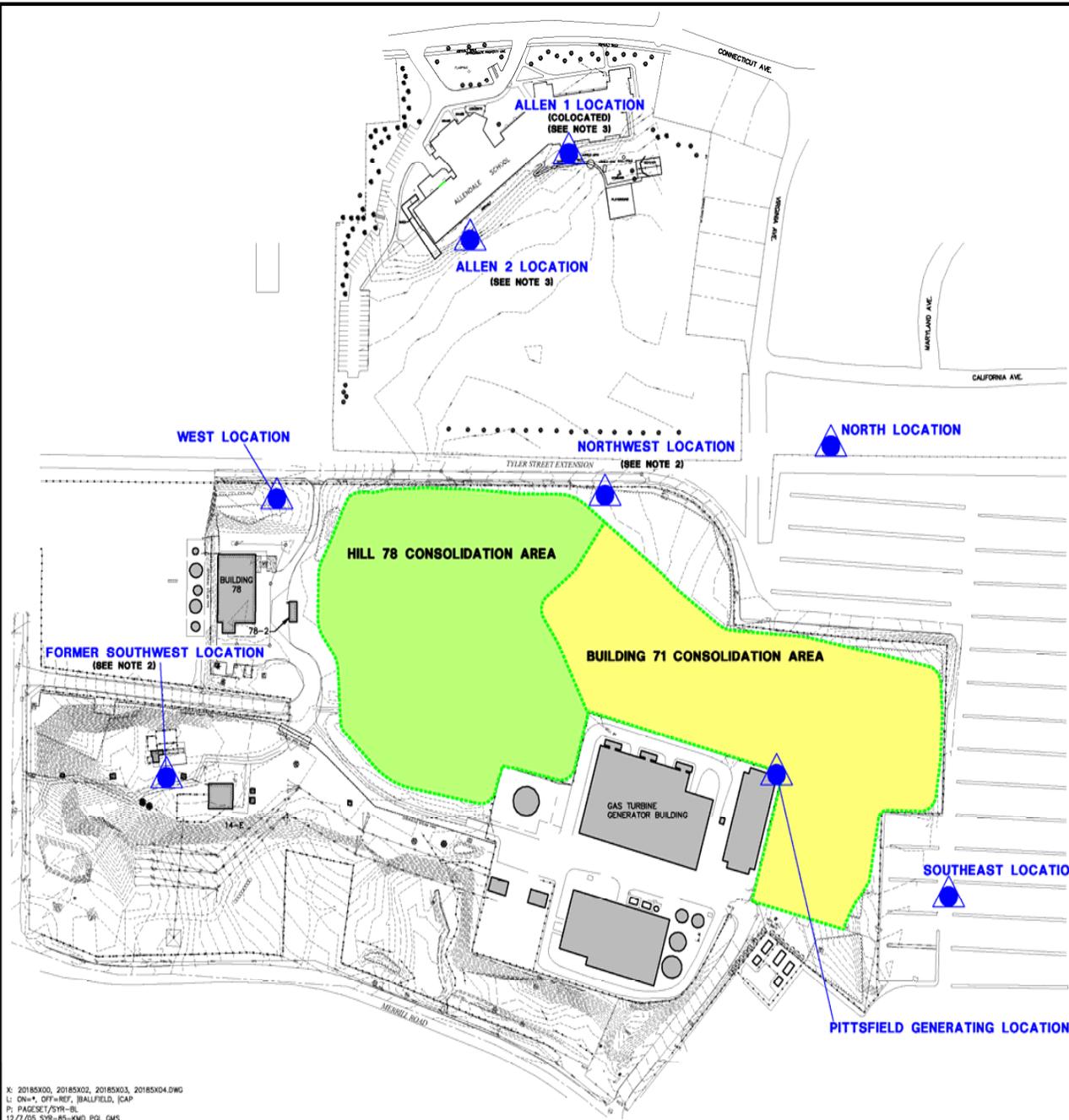


# Update on Air Monitoring at the OPCAs and Allendale School

January 18, 2006

# Air Data at Fenceline of OPCAs

- 7 years of data (1999 – 2005)
- 5 monitoring locations
- 46 sampling events (over 220 individual air samples)

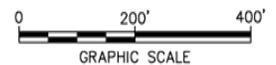


**LEGEND:**

-  EXISTING BUILDING OR STRUCTURE
-  EXISTING ROADS
-  EXISTING FENCE
-  APPROXIMATE LOCATION OF PCB AIR MONITORING STATIONS
-  APPROXIMATE LIMIT OF ANTICIPATED FUTURE CONSOLIDATION AREA FOOTPRINT

**NOTE:**

1. NOT ALL PHYSICAL FEATURES ARE SHOWN.
2. THE SOUTHWEST PCB AIR MONITORING STATION WAS MOVED TO THE NORTHWEST LOCATION ON NOVEMBER 21, 2005.
3. THE PCB AIR MONITORING STATIONS ADJACENT TO THE ALLEDALE SCHOOL WERE INSTALLED ON DECEMBER 5, 2005.



GENERAL ELECTRIC COMPANY, PITTSFIELD MASSACHUSETTS <b>BUILDING 71 AND HILL 78 ON-PLANT          CONSOLIDATION AREAS</b>	
<b>APPROXIMATE LOCATION OF PCB          AIR MONITORING STATIONS</b>	
 <small>BUSLAND, BOICK &amp; LEE, INC.          engineers, scientists, economists</small>	FIGURE <b>1</b>

X: 20185X00, 20185X02, 20185X03, 20185X04.DWG  
 L: DM+, OFP+HFZ, BALLFIELD, ICAP  
 P: PAGESET/SYR-BL  
 12/7/05 SYR-85-KMG PGL GMS  
 C/20185003/REPORT/20185018.DWG

# Average Annual PCB Air Concentrations (ug/m<sup>3</sup>)

	West	North	Background at GE Facility
1999	0.0022	0.0022	-----
2000	0.0076	0.0095	0.0069
2001	0.0010	0.0004	0.0022
2002	0.0007	0.0004	0.0012
2003	0.0025	0.0013	0.0040
2004	0.0018	0.0010	0.0019
2005	0.0026	0.0027	0.0021
<b>7-yr Avg.</b>	<b>0.0026</b>	<b>0.0025</b>	<b>0.0031</b>

# Relocated OPCA Monitoring Station

- Identified as the Northwest Location
- Sampling started on November 22, 2005  
(includes a co-located sampler)
- Data received for 5 sampling rounds  
performed to date
- Average concentration of 0.0009 ug/m<sup>3</sup>
- Maximum concentration of 0.0024 ug/m<sup>3</sup>

# EPA Air Sampling at Allendale School

- Two sample locations (plus one co-located sampler)
- Sampling started on December 6, 2005
- Data received for 3 sampling rounds performed to date
- 9 samples, 5 nondetect (at  $0.0004 \text{ ug/m}^3$ )
- Maximum concentration of  $0.0009 \text{ ug/m}^3$
- Average concentration of  $0.0004 \text{ ug/m}^3$

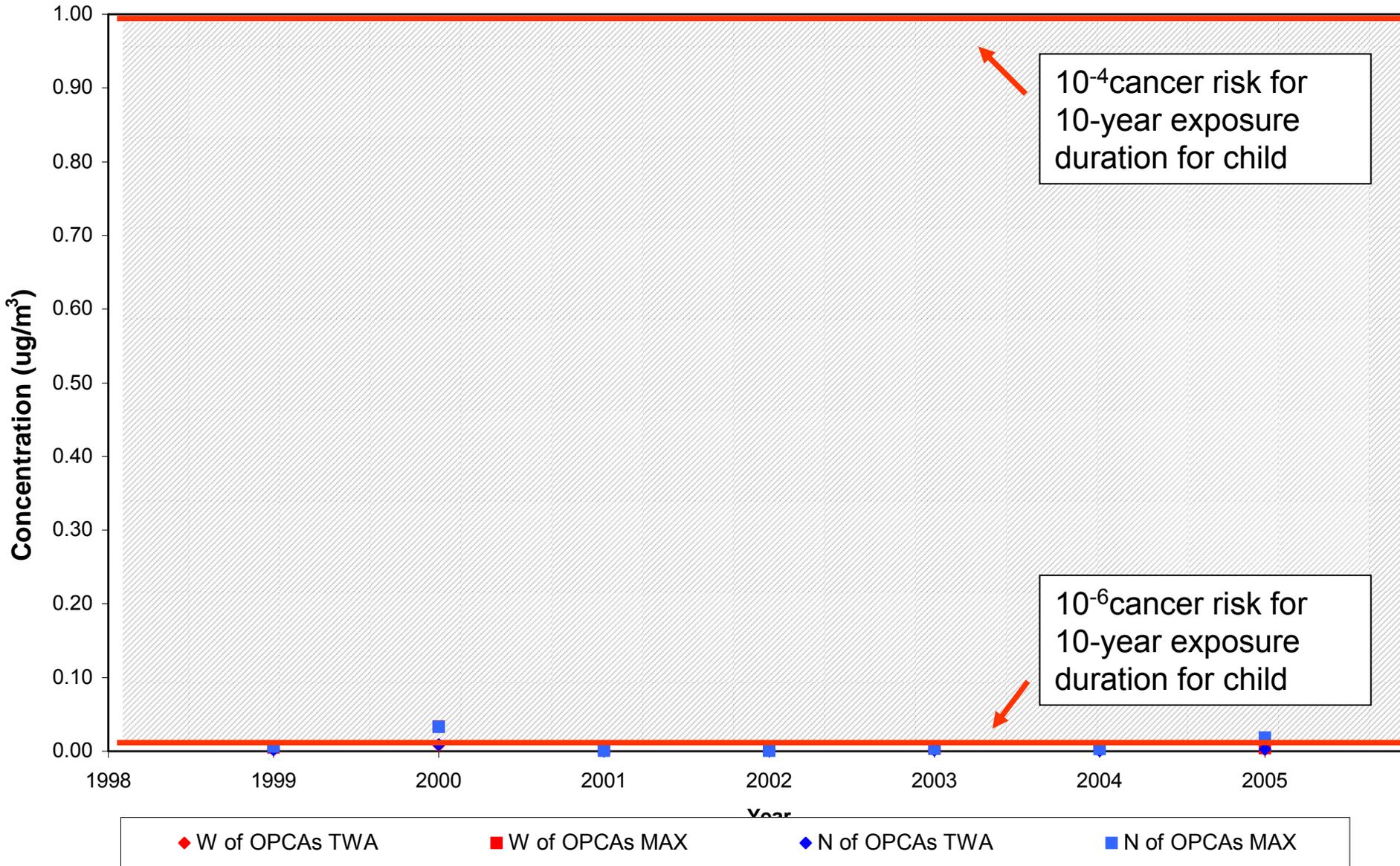
# Risk Assessment for Air Exposure OPCAs

- Incremental cancer risks
- Noncancer hazards
- Comparison to EPA and MDEP acceptable risk levels

# Calculation of Cancer Risk

- Conservative scenario
- Based on 10-year duration (child)
- EPA acceptable risk range:  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ 
  - Corresponding concentrations: **1.0 ug/m<sup>3</sup>** to **0.01 ug/m<sup>3</sup>**
- MDEP protective risk level:  $1 \times 10^{-5}$ 
  - Corresponding concentration: **0.1 ug/m<sup>3</sup>**
- Compare to Time Weighted Average (TWA) exposure concentration

# Ambient Air Monitoring Data for OPCAs



TWA = Time-weighted average concentration  
MAX = Maximum concentration detected

## Cancer Risks

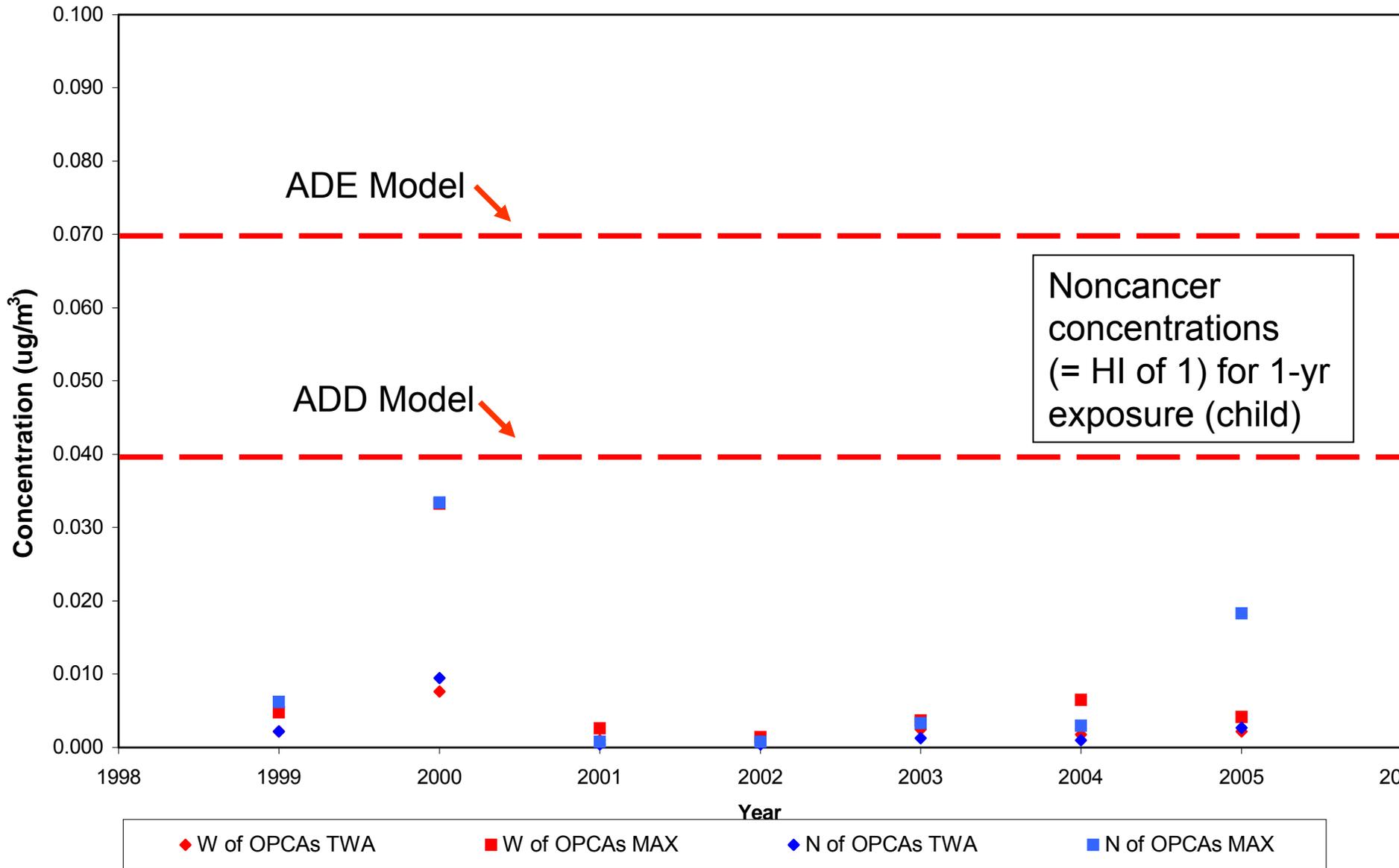
# Calculation of Noncancer Hazard Index

- Hazard Index =  $\frac{\text{exposure concentration}}{\text{Reference Dose}}$
- For  $HI \leq 1$ , adverse noncancer health effects are unlikely to occur

# Calculation of Noncancer Hazard

- Conservative scenario
  - Exposure to a child over a one-year period
- HI = 1 calculated by two accepted methods
  - Method 1:  $0.07 \text{ ug/m}^3$  (average daily exposure [ADE] model)
  - Method 2:  $0.04 \text{ ug/m}^3$  (average daily dose [ADD] model)
- Difference between the two approaches

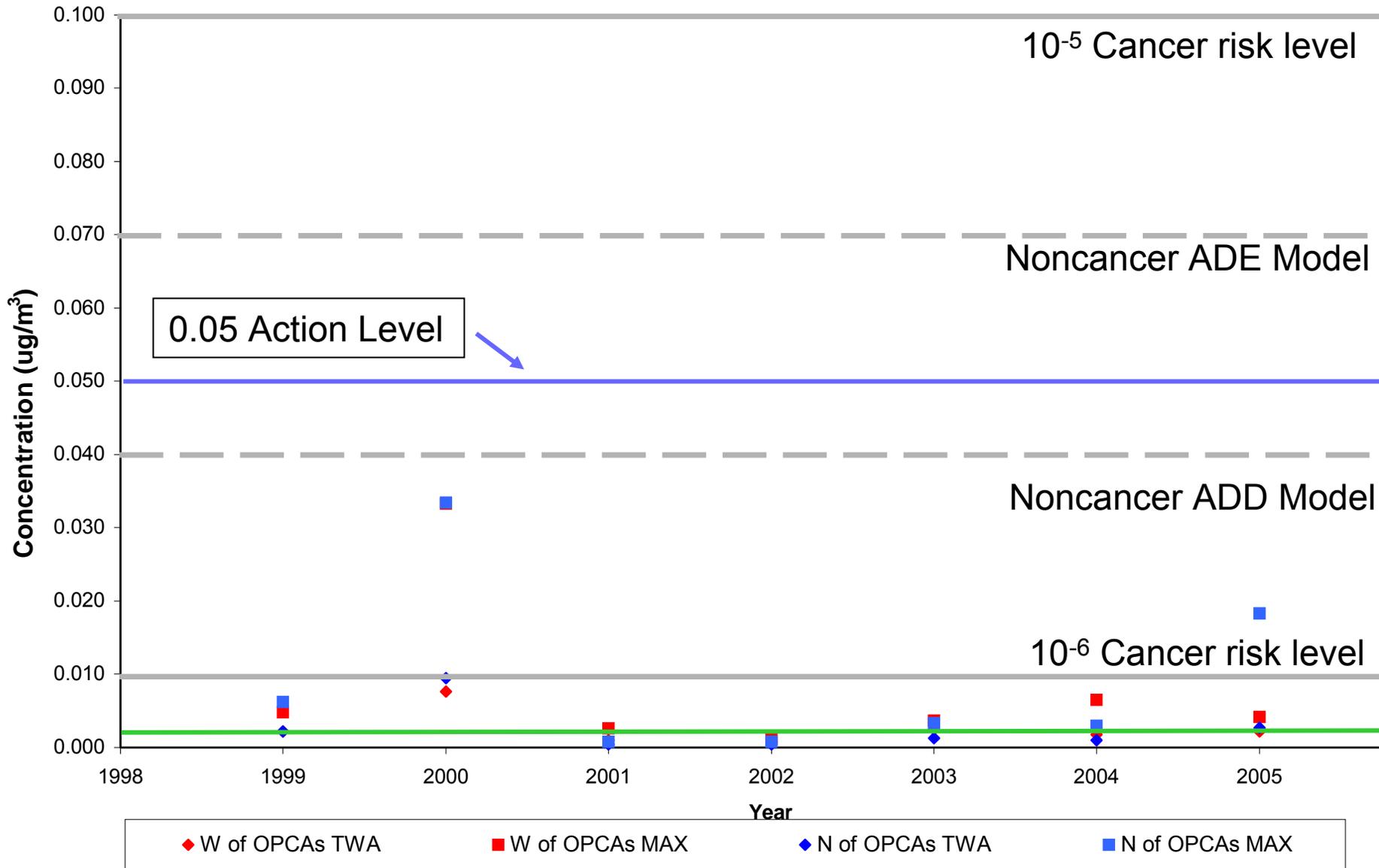
# Ambient Air Monitoring Data for OPCAs



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## Noncancer Hazard

# Ambient Air Monitoring Data for OPCAs



TWA = Time-weighted average concentration  
MAX = Maximum concentration detected

7-yr Avg. – North and West Sampling Locations

# Summary of OPCA Data

- 7-year average concentrations 3.8 to 4.0 (N and W respectively) times lower than the  $10^{-6}$  cancer risk level and 380 to 400 times lower than the  $10^{-4}$  cancer risk level.
- Annual average concentrations 4 to 100 (N and W) times less than the concentration for the lower of the 2 noncancer Hazard Indices = 1

# Allendale School Air Data

- Average concentrations 25 times lower than the  $1 \times 10^{-6}$  cancer risk level and 2,500 times lower than the  $1 \times 10^{-4}$  cancer risk level
- Average concentrations are 100 times less than the concentration for the lower of the 2 noncancer hazard indices = 1