



# Keith Middle School/New Bedford High School



Public Information Plan Meeting

May 3, 2007



THE SCIENCE  
COLLABORATIVE  
NORTH SHORE

# Agenda

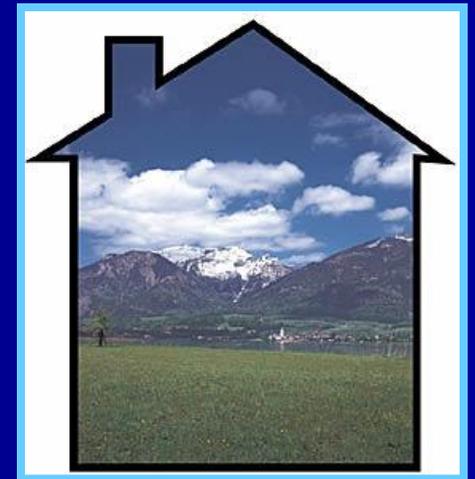
- Vent Remediation Status - NBHS
  - D. Sullivan, LSP, CHMM
- NBHS/Area Invest./Remediation Status
  - D. Sullivan, LSP, CHMM
- TRC Air Monitoring at KMS with Perspective
  - G. Hunt, QEP

# Agenda (cont.)

- Slope Failure at KMS
  - G. Mischel, PE
  
- Exposure to PCBs and Home Gardening
  - D. Vorhees, Sc.D.

# Vent Remediation Status

- Tour of facility – October 2006
- Draft Specs - October 2006
- Finalized – March 2007
- Advertised - March 29, 2007
- Bid Walk – April 17, 2007



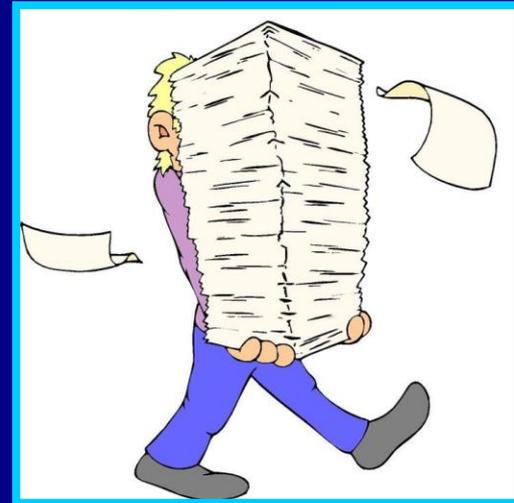
# Estimated Schedule - Vents

- Bid Walk – April 17, 2007
- Bids Due – May 1, 2007
- (To be rescheduled)
- Project Award – May 8, 2007 (To be rescheduled)
- Project Start – June 2007



# NBHS/Area Investigation and Remediation Status

- Finalize task order contract.
- Finalize investigation proposal.
- Obtain subcontractor quotes.



# NBHS/Area Investigation Components

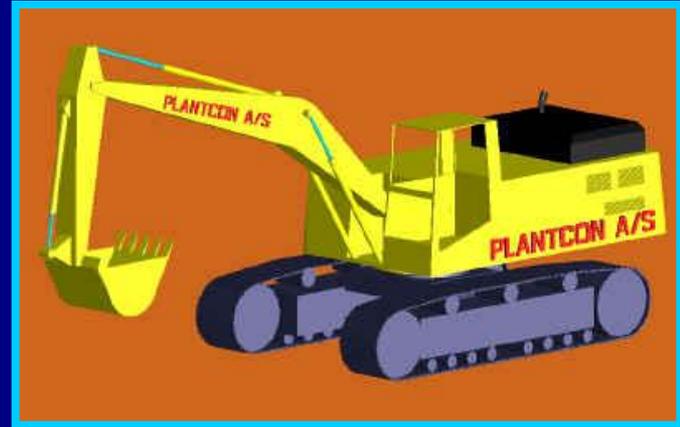
- Over 250 soil borings (NBHS/Area)
  - Includes subslab borings in NBHS
- 11 monitoring wells
  - Includes 2 to 3 subslab wells in NBHS
- 10 surface soil samples near school building
  - Potential deteriorated caulking and sealants.





# NBHS/Area Investigation – Anticipated Remedial Elements

- Material removal
- Clean soil cover
- Excavation and consolidation with clean cover
- Activity and use limitations (AULs)



# NBHS/Area Time Line

- Drilling/sampling – May/June
- Lab analysis – May/June/July
- Remedial analysis/design - Ongoing
- Public Bidding – August
- Initiate Remedy – September

# Gary Hunt, QEP

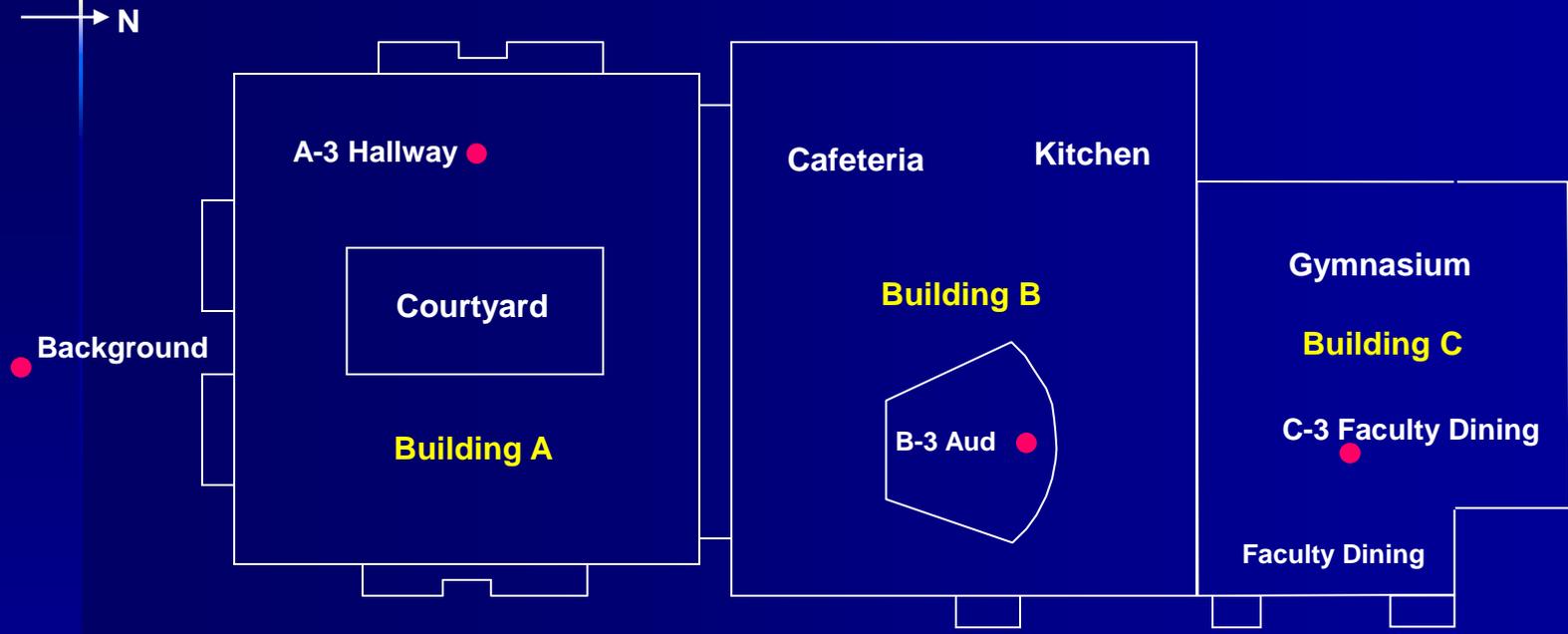
- ***BS Chemistry 1974 Villanova***
- ***MS Environmental Sciences 1977 Rutgers***
- ***1975-1976 PCBs NJ Fish Population***
- ***1976-1977 Research Assistant-WHOI- PCBs New Bedford Mussels***
- ***1982-1984 GCA Technology-Project Mgr EPA OSW PCBs in New Bedford (ambient air, Acushnet R sediments, POTW and Sullivan's Ledge)***
- ***Expert Witness for EPA/DOJ US vs Cornell and Aerovox***
- ***30 Years Professional Experience (GCA/ENSR/TRC)***
- ***Hudson River PCBs Remediation-2005-Present***
- ***New Bedford HS/MS- PCBs Schools 2006-Present***
- ***> 100 Publications/Presentations POPs/Toxics in Environment***

# PCB Measurements

## Summary of Findings

- ⇒ *PCBs Keith MS Indoor Air Equivalent or < Background Air*
- ⇒ *PCBs Well Below EPA Action Level 0.050 ug/m<sup>3</sup>*
- ⇒ *PCBs Present in Vent Samples Periodically*
- ⇒ *PCBs in Vents Equivalent to Background*

# KMS Indoor Air Sampling Locations

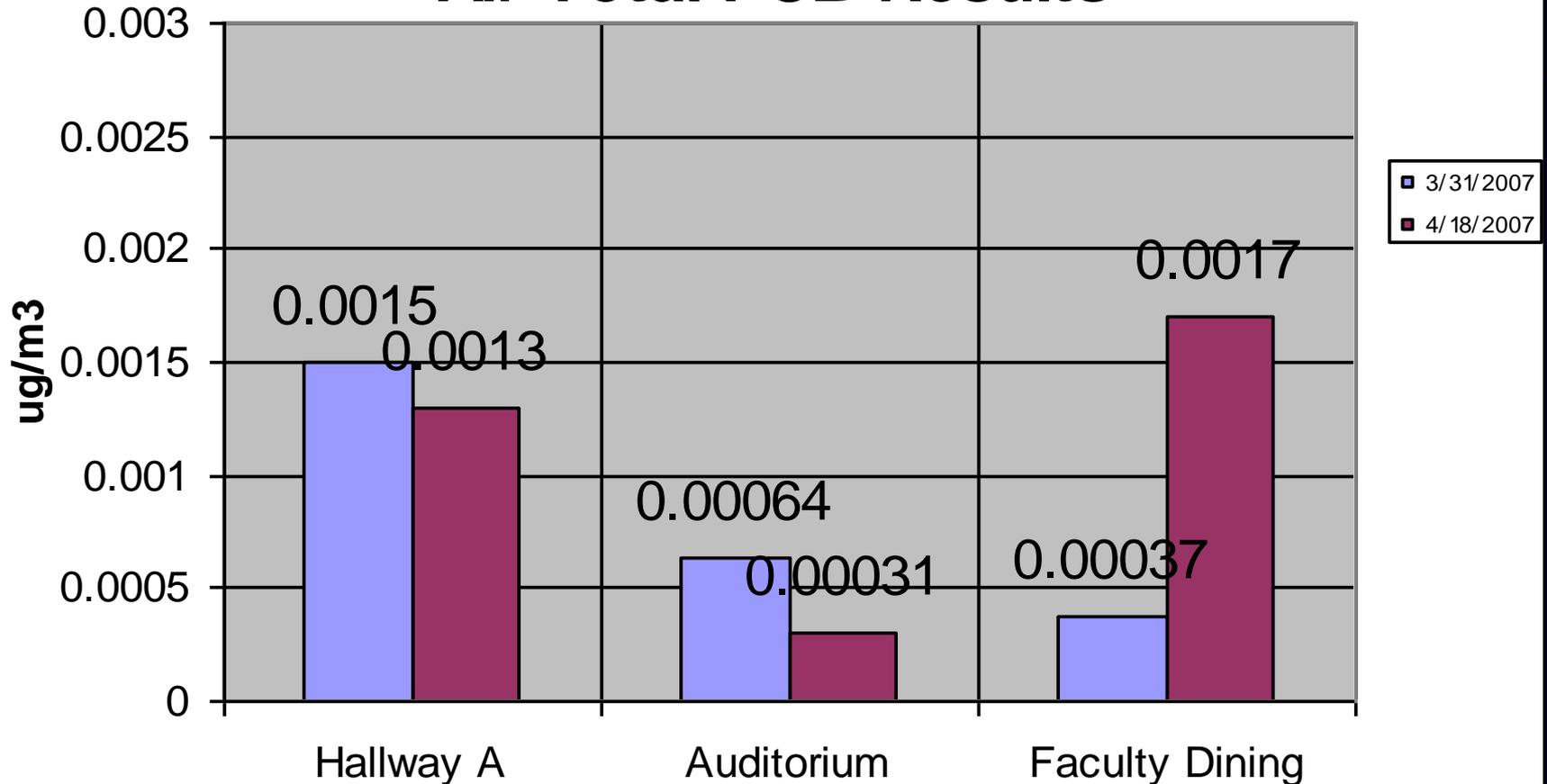


Hathaway Boulevard

● = Indoor Air Sampling Point

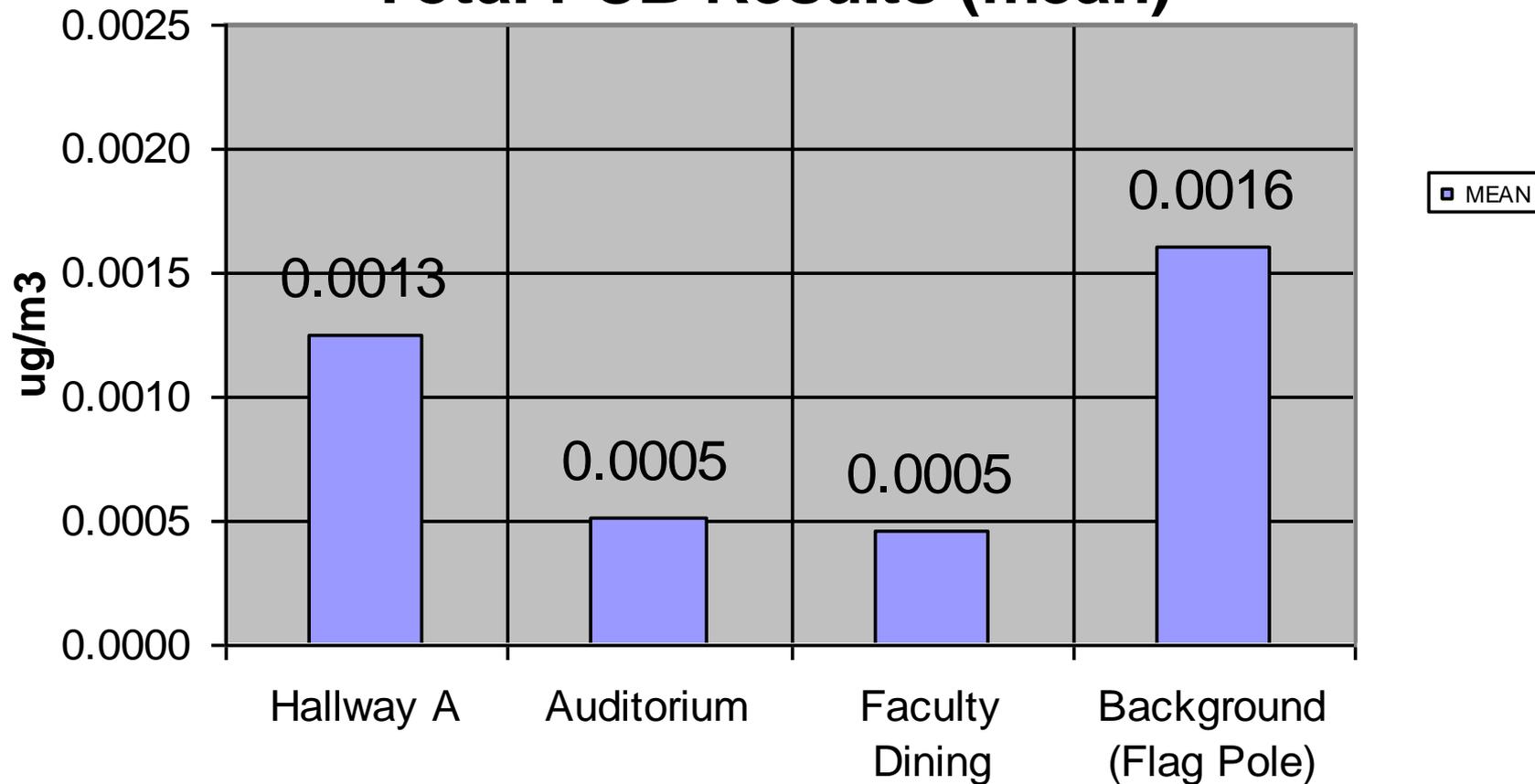


# March/April 2007 KMS Indoor Air Total PCB Results



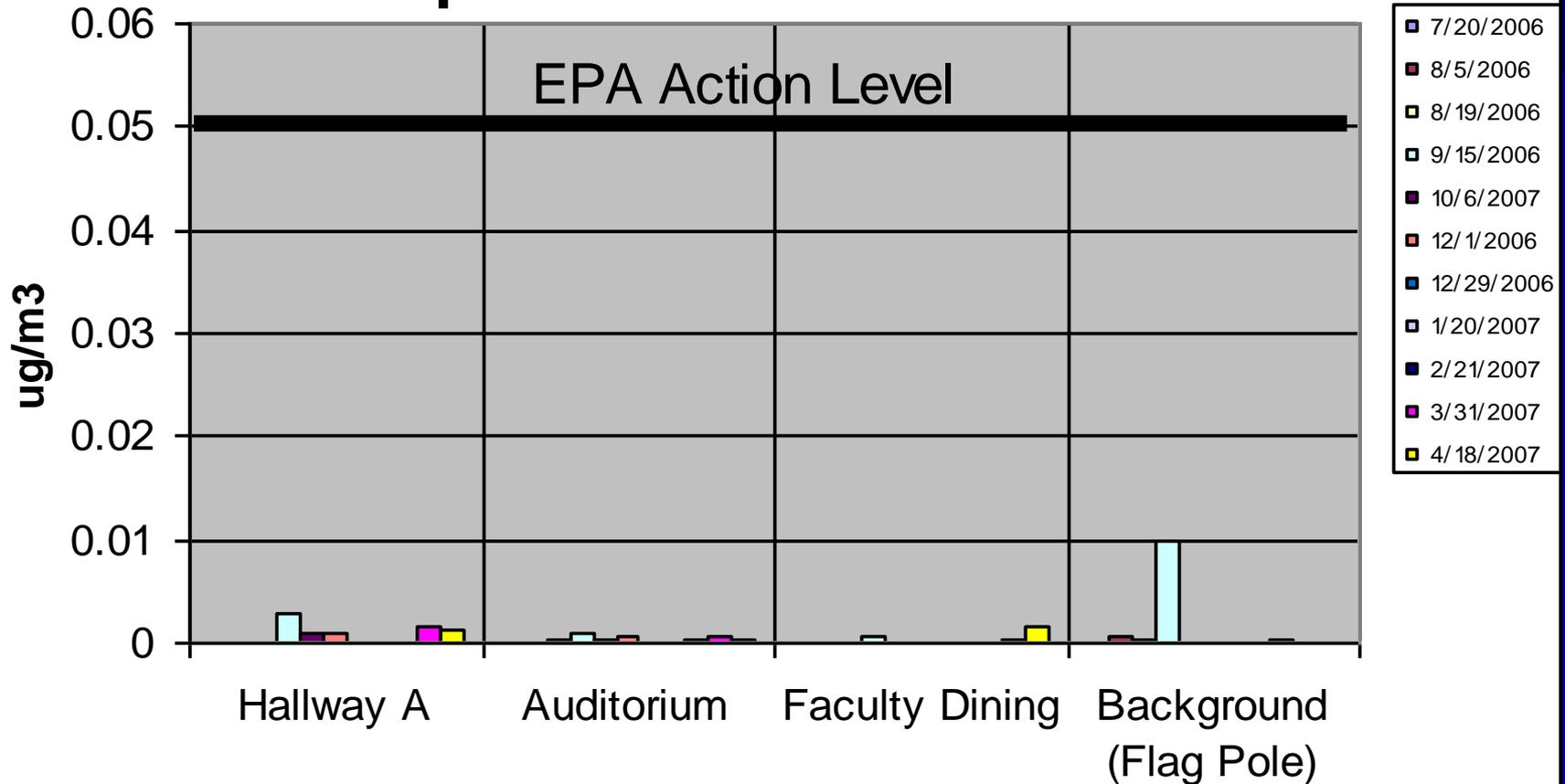
EPA Action Level = 0.05 ug/m<sup>3</sup>

## Historical KMS Indoor Air Total PCB Results (mean)

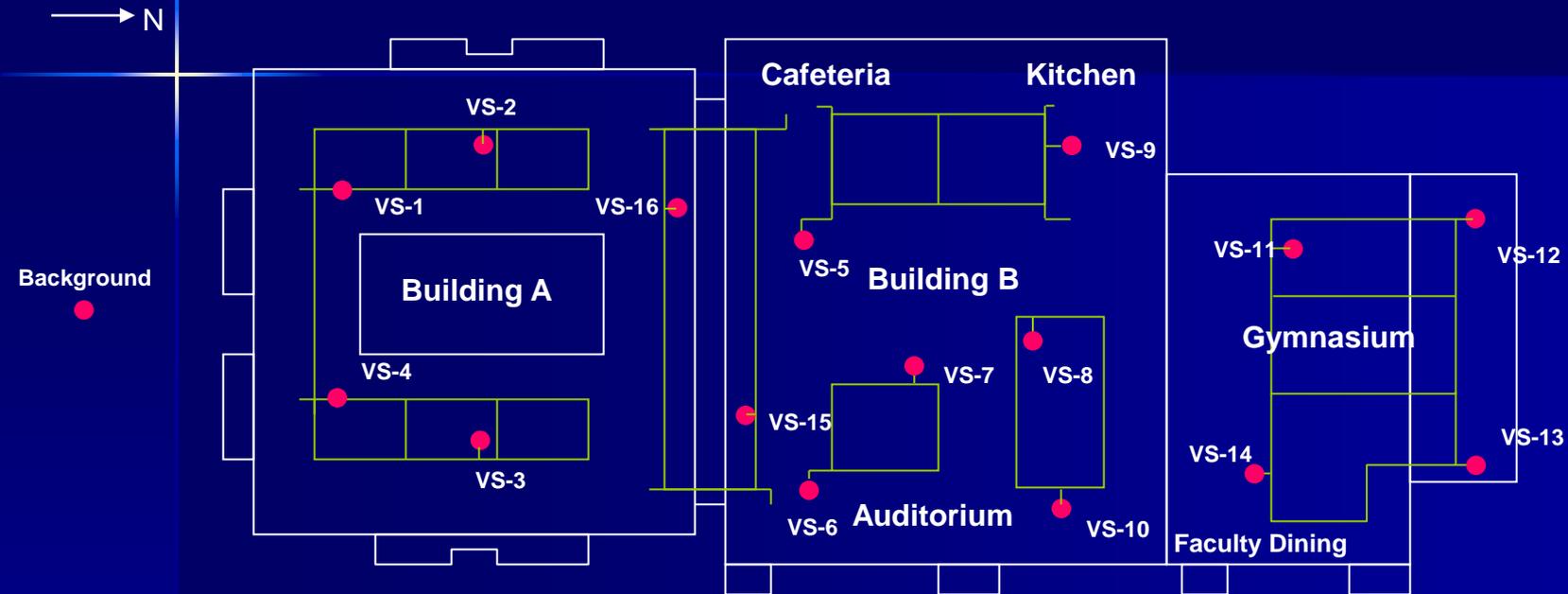


**EPA Action Level = 0.05 ug/m<sup>3</sup>**

# KMS Indoor Air PCB Results Compared to EPA Action Level



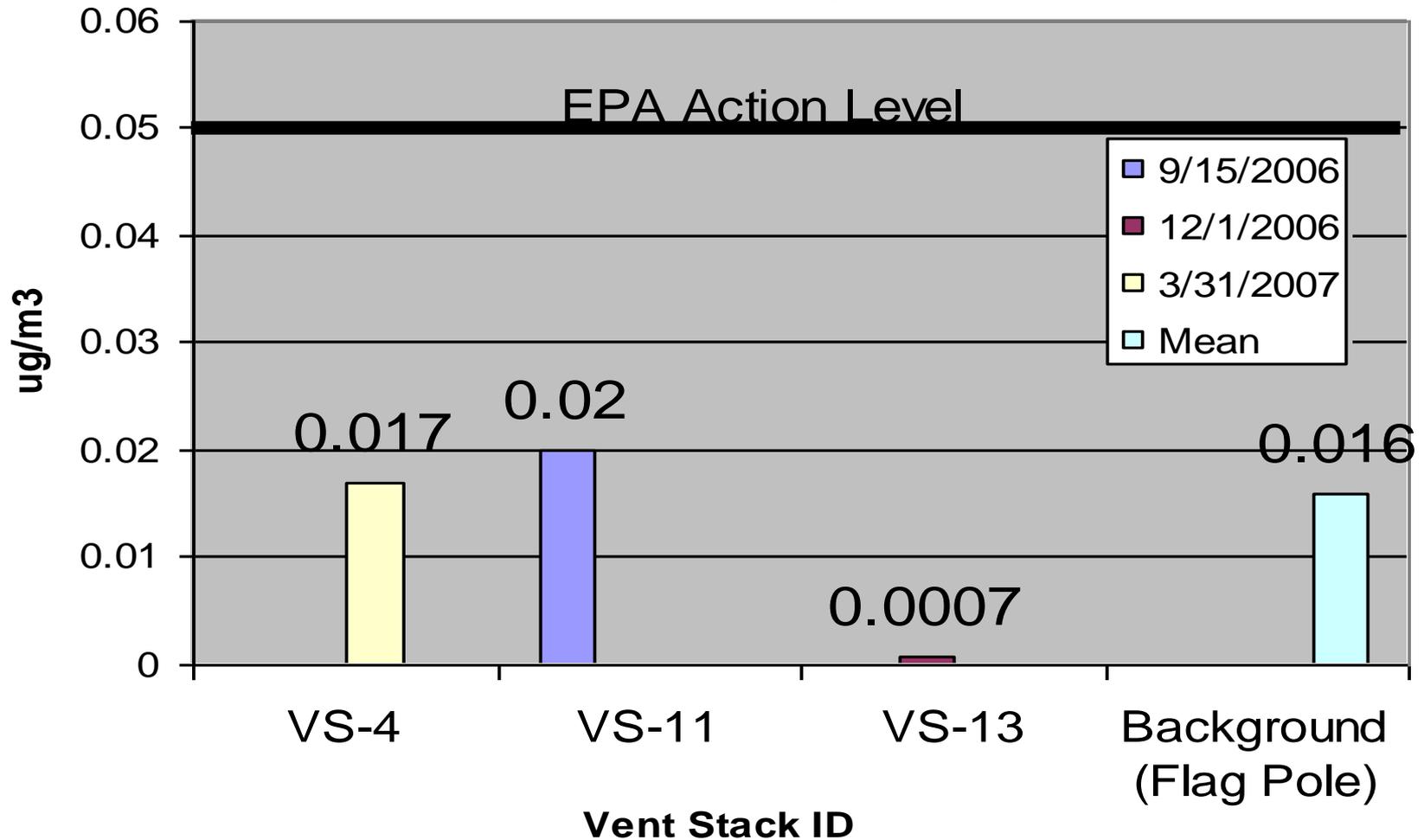
# Foundation Vent Stack Sampling Locations



● = Vent Riser

— = Passive Venting  
and Collection System

# Historical Total PCB Results From Vent Stacks

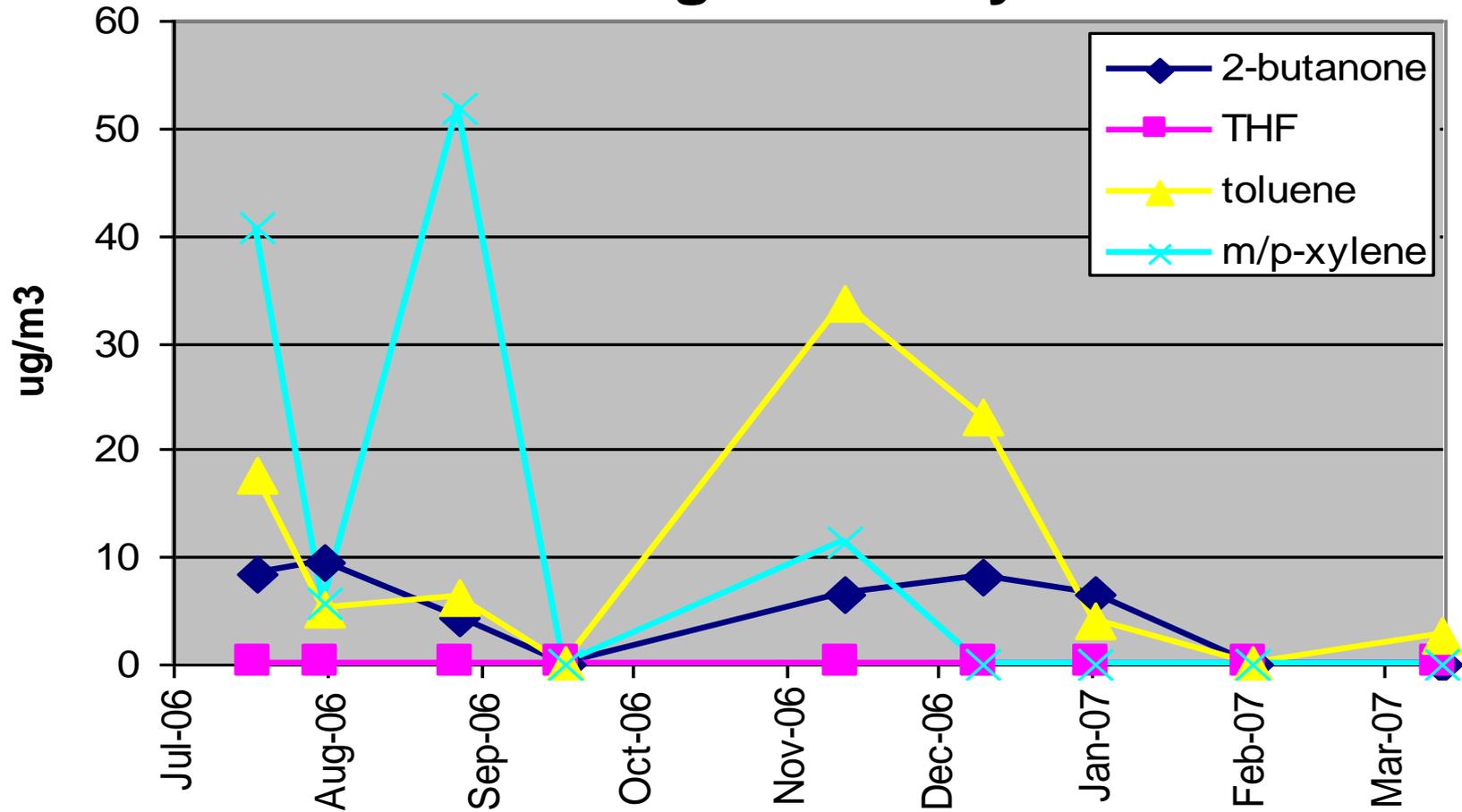


# VOC Measurements

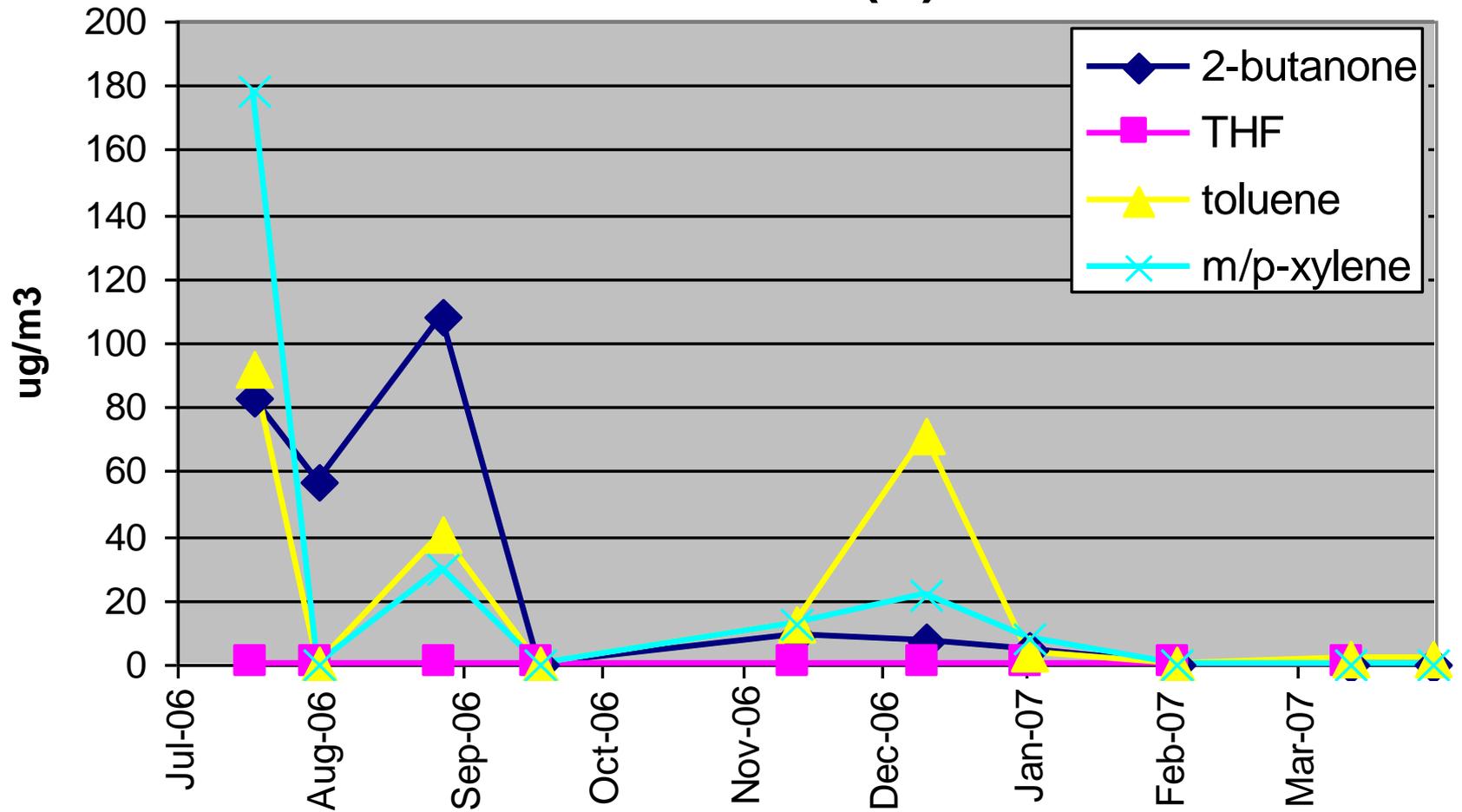
## Summary of Findings

- ⇒ *VOCs Present in Vents Consistently*
- ⇒ *VOCs in Vents Decreasing in Concentration Over Time*
- ⇒ *VOCs Keith MS Indoor Air at Background Concentrations or Attributable to Maintenance Activities*

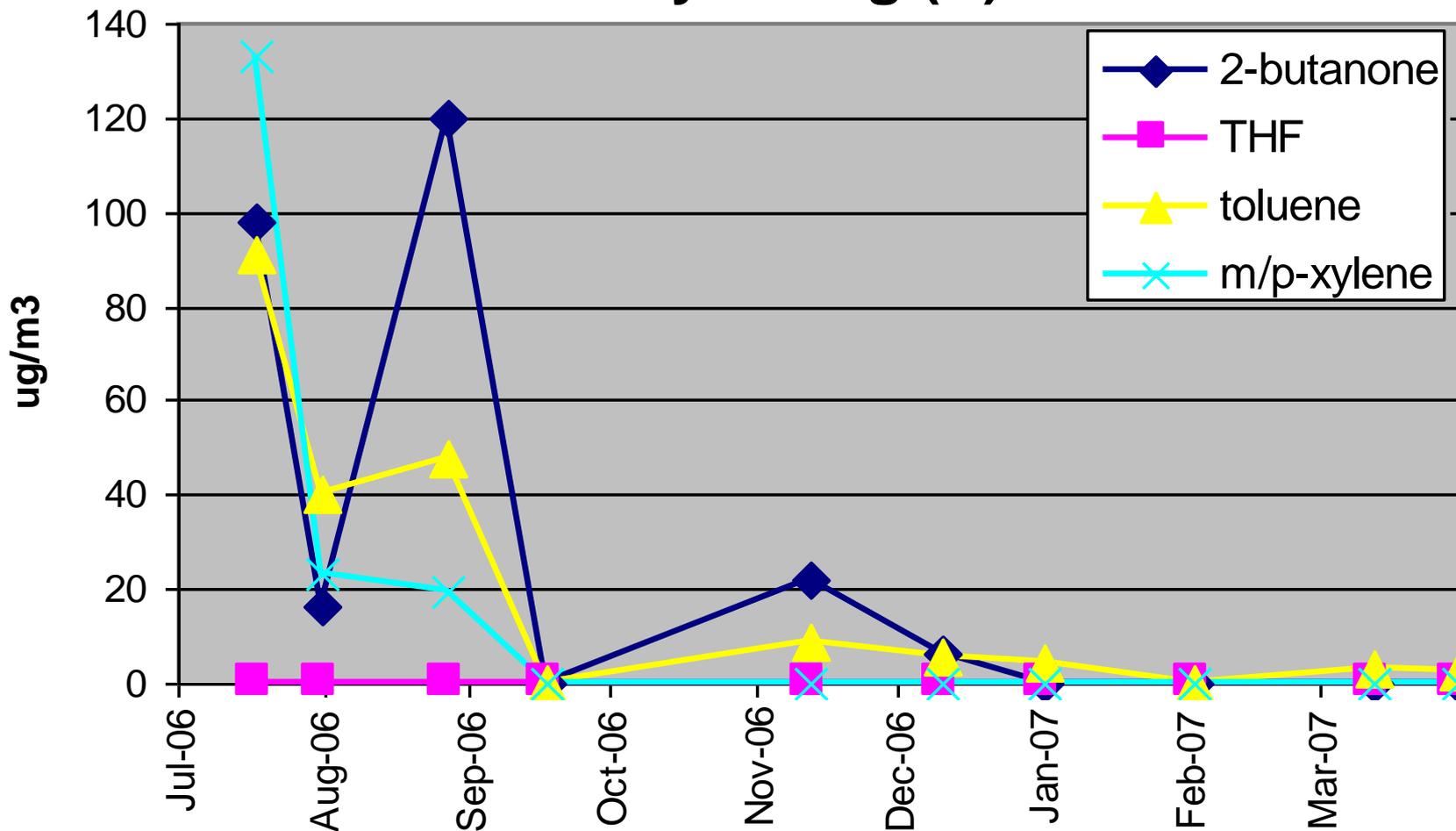
# Historical Results Building A Hallway



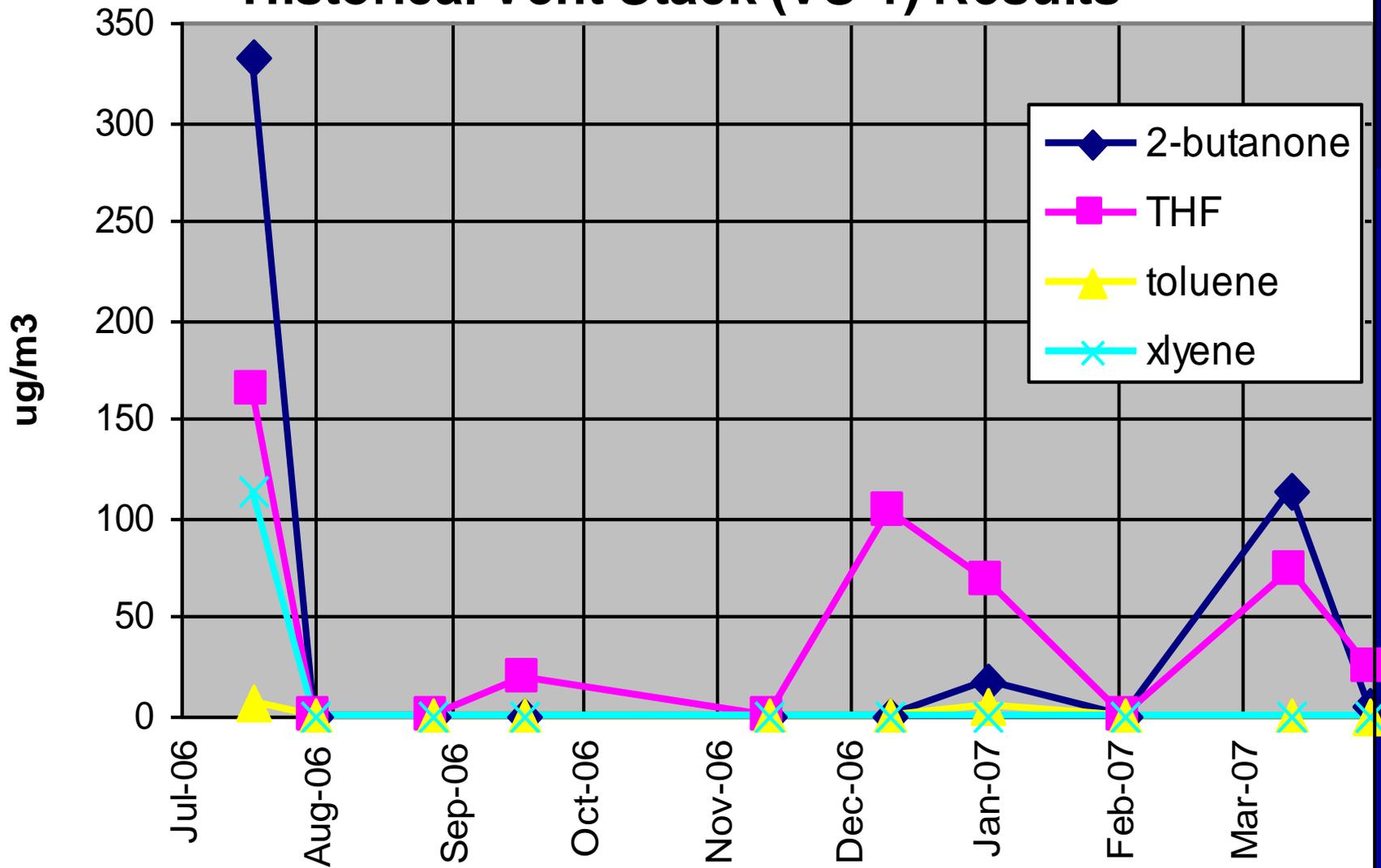
# Historical Results Auditorium (B)



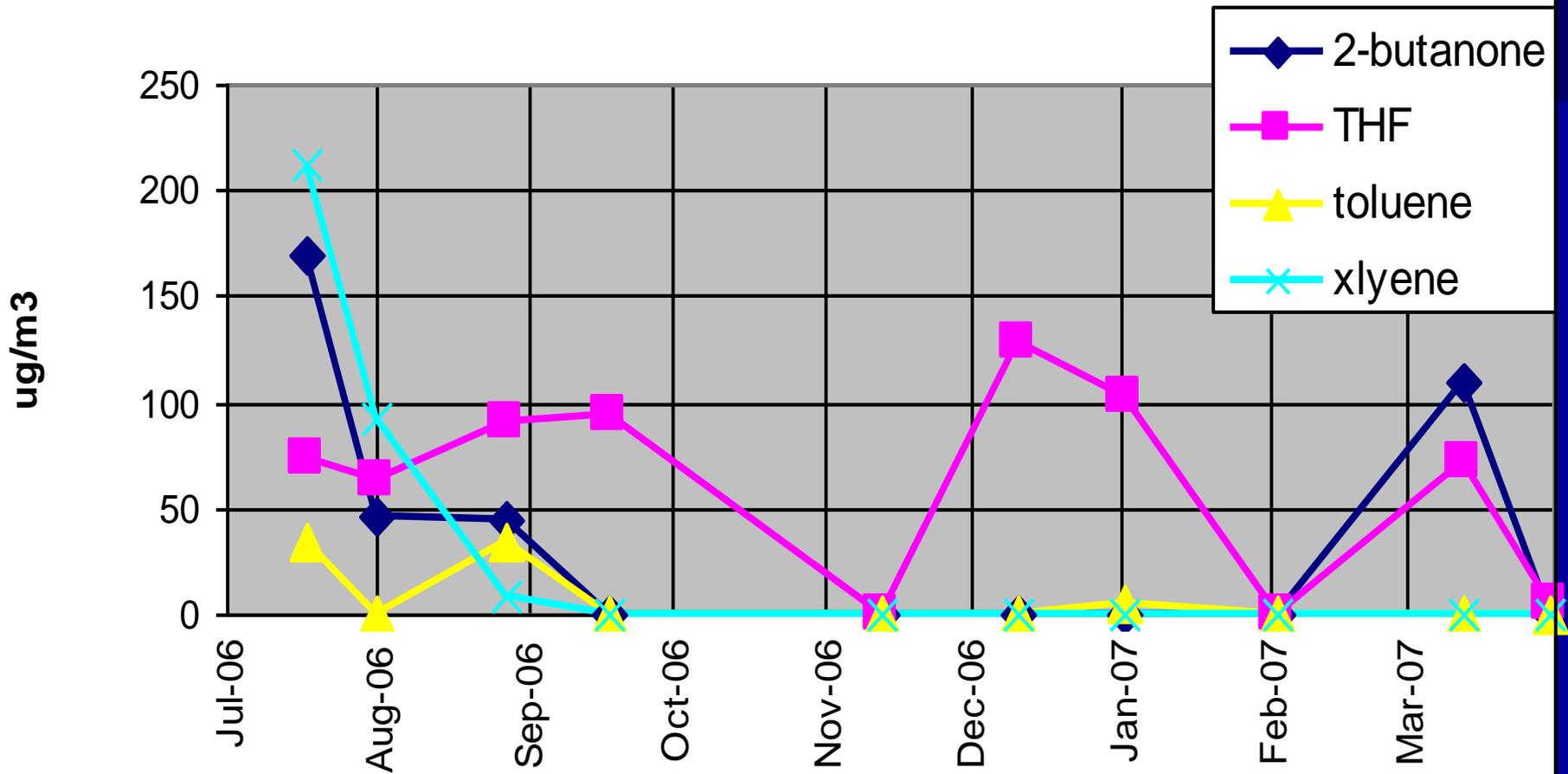
# Historical Results Faculty Dining (C)



# Historical Vent Stack (VS-1) Results



# Historical Vent Stack (VS-4) Results



# Slope Failure Status

- Slope failed April 5, 2007.
- Temporary repair completed.
- Design change for final repair being reviewed.
- No impacted soil exposed.



# Greg Mischel, P.E.

- B.S. Geology 1986, M.S. Geotechnical Engineering 1998
- 20 years in business, 10 as engineer with TRC
- Seven Superfund Landfills
- Designed four cleanups involving caps

# What Happened

- Shallow slump in topsoil.
- Clean granular fill exposed.
- No impacted soil exposed.
- Excess water likely cause.



# Temporary Repair

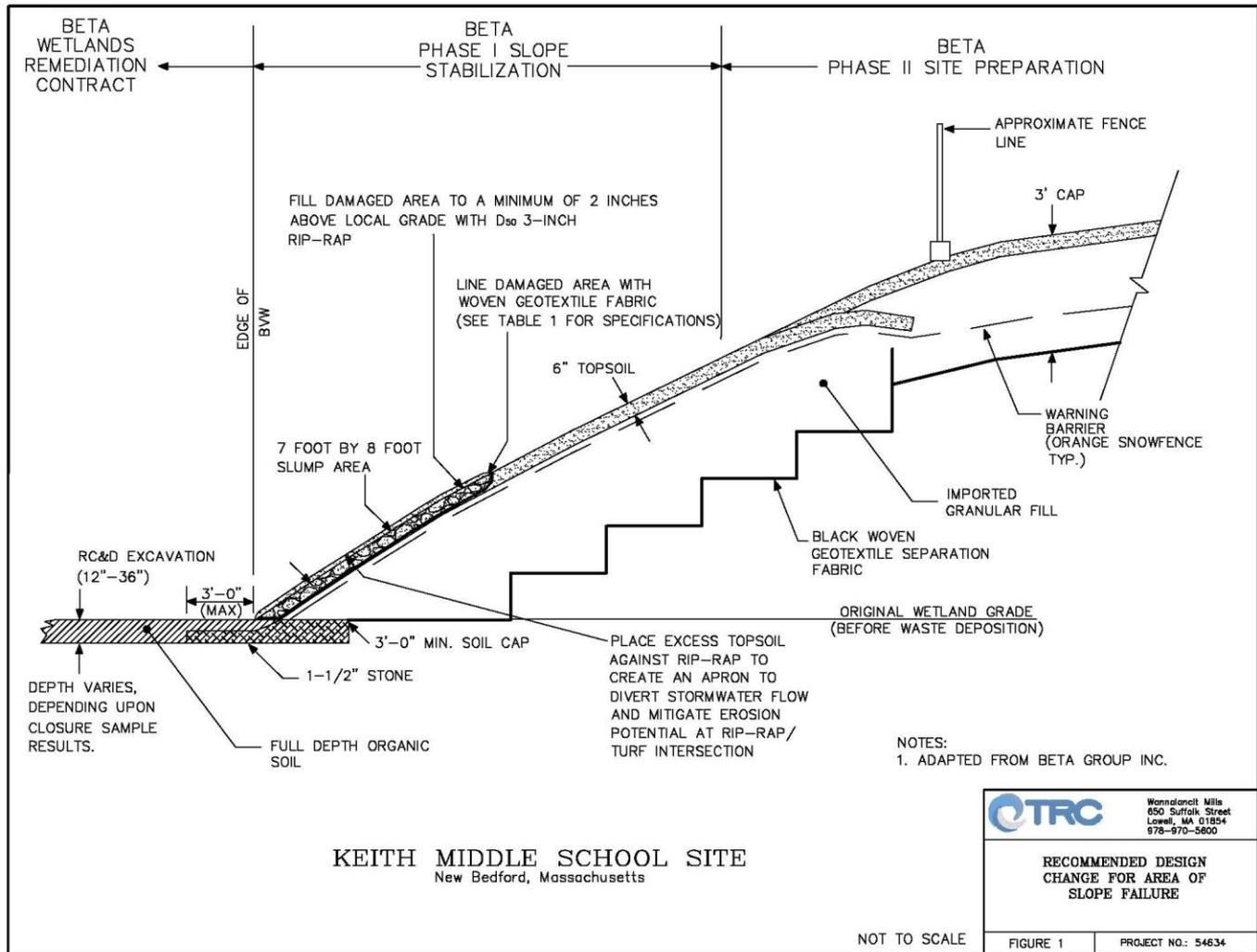
- Divert storm water flow and prevent erosion.
- Hay bales and silt fence.
- Geotextile fabric.



# Proposed Final Repair

- Remove excess topsoil and line with geotextile.
- Replace slumped topsoil with riprap.
- Install seed and ECB to stabilize bare soil.
- Subject to EPA approval.

# Proposed Repair Design



# Cap Inspection

- Completed 4/17/07.
- Building floor in good shape.
- Single slope failure 4/5/07.
- Minor erosion on south slope.
- Cap inspection report being finalized.

# Exposure to PCBs and Home Gardens

Donna J. Vorhees, Sc.D.



**Question:** Is it safe for people to eat fruits and vegetables from home gardens in the New Bedford Area?

**Answer:** Generally speaking, yes

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**Basis for this answer:**

- (1) Two studies in which tomatoes, lettuce, potatoes, and carrots were sampled from New Bedford area farms and gardens and analyzed for PCBs
- (2) Scientific literature describing how PCBs move through the environment

**Caveat:** Answer depends on how closely the two studies and literature reflect actual gardens and vegetable consumption patterns in the New Bedford area

# Conclusions from two New Bedford area vegetable studies

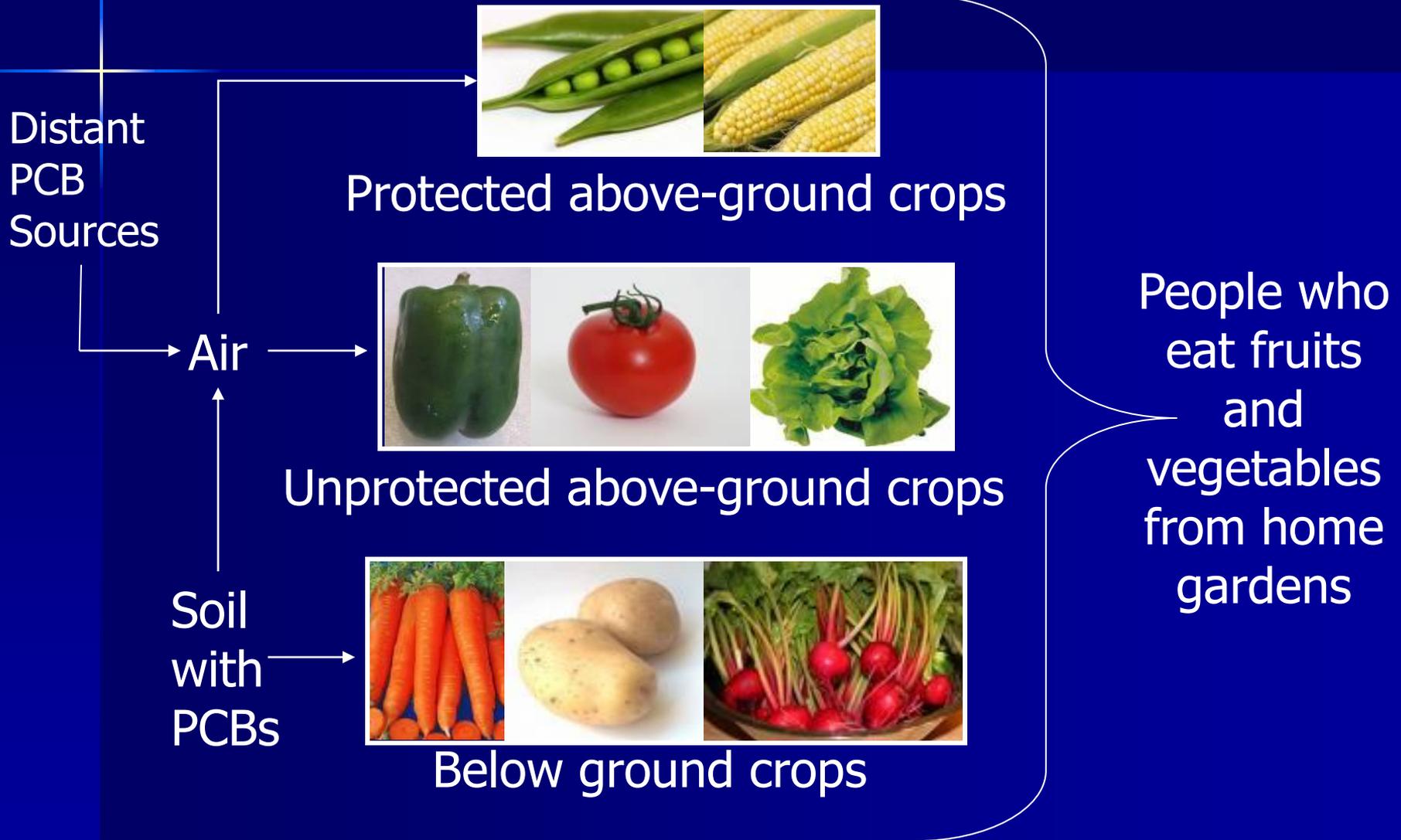
## ■ EPA study

- Human health risk from PCBs in tomatoes “well within the EPA acceptable range.”

## ■ Harvard study

- Tomato concentrations were lower than those measured in the EPA study
- An adult would have to eat about 49 pounds of tomatoes with the maximum PCB concentration detected in this study each year for 30 years to increase the risk of getting cancer by 1 in one million

# How do PCBs get into garden produce?



# How can you reduce exposure to PCBs in food from your garden?

- Wash off soil particles with water or very mild soap solution
- Peel vegetables

# Keith Middle School/ New Bedford High School

May 3, 2007 Public Information  
Plan (PIP) Meeting

*Thank you for coming!*

*Questions are welcome!*

